Prof Alejandro F **Frangi** *FREng FIEEE FSPIE FMICCAI*

Bicentenary Turing Chair in Computational Medicine · Royal Academy of Engineering Chair in Emerging Technologies

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Suaviter in modo, fortiter in re – C Acquaviva (1543-1615)

Executive Summary

Alejandro (Alex) was born in La Plata, Argentina. In 1991, he moved to Barcelona, Spain, where he obtained his undergraduate degree in Telecommunication Engineering from the Technical University of Catalonia (Barcelona) in 1996. Then, he researched electrical impedance tomography for image reconstruction and noise characterisation at the same institution under a CIRIT grant. In 1997, he received a grant from the Dutch Ministry of Economic Affairs to pursue his PhD in medicine, focusing on model-based cardiovascular image analysis, at the Image Sciences Institute of the University Medical Centre Utrecht. During this period, he visited a researcher at Imperial College in London, UK, and Philips Medical Systems BV, the Netherlands. Prof Frangi is the Bicentenary Turing Chair in Computational Medicine at the University of Manchester, Manchester, UK, with joint appointments at the Computer Science and Health Science Schools. He is also the Royal Academy of Engineering Chair in Emerging Technologies, with a focus on precision computational medicine for medical devices in silico trials. His research vision was recently awarded an Advanced Grant from the European Research Council in Computer Science and Informatics. He was an Alan Turing Institute Fellow (2021-2024). He is the director of Christabel Pankhurst Institute for Health Technology Research and Innovation. Prof. Frangi holds visiting positions at KU Leuven, the Cixi Institute of Biomedical Engineering, Chinese Academy of Sciences (Ningbo), ShanghaiTech (Shanghai), Shenzhen University (Shenzhen), and Beijing Institute of Technology (Beijing). At the national level, Prof. Frangi leads InSilicoUK Innovation Network, spearheading in silico methods as a source of regulatory evidence and accelerating innovation in the life sciences sector. Prof. Frangi is among the top 100, Computer Scientists in the UK, edited several books, published seven editorial articles and more than 320, journal articles in key international journals of his research field, and more than 200 book chapters and international conference articles with an h-index 83, and more than 39,300, citations according to Google Scholar. He has been a guest editor three times in special issues of IEEE Trans Med Imaging, one of IEEE Trans Biomed Eng, and one of Medical Image Analysis journals. He was chair of the Third International Conference on Functional Imaging and Modelling of the Heart (FIMH05) held in Barcelona in June 2005, Publications Chair of the IEEE International Symposium in Biomedical Imaging (ISBI 2006), Programme Committee Member of various editions of the Intl Conf on Medical Image Computing and Computer Assisted Interventions (MICCAI) (Brisbane, AU, 2007; Beijing CN, 2010; Toronto CA 2011; Nice FR 2012; Nagoya JP 2013), International Liaison of ISBI 2009, Tutorials Co-Chair of MICCAI 2010 and Programme Co-chair of MICCAI 2015. He was also the General Chair of ISBI 2012, held in Barcelona; MICCAI 2018, held in Granada, Spain; and Information Processing in Medical Imaging (IPMI) 2023 in Bariloche, Argentina.

Prof Frangi is Chair of the Editorial Board of the MICCAI-Elsevier Book Series (2017-2020), is Associate Editor-in-Chief of Progress in Bioengineering (IOP Press), and serves as Associate Editor of IEEE Trans on Medical Imaging, Medical Image Analysis, SIAM Journal Imaging Sciences, Computer Vision, and Image Understanding journals. Prof Frangi was a foreign member of the Review College of the Engineering and Physical Sciences Research Council (EPSRC, 2006-10) in the UK. He is a recipient of the IEEE Engineering in Medicine and Biology Technical Achievement (2021) and Early Career (2006) Awards, the ICT Knowledge Transfer Prize (2008) and two Teaching Excellence Prizes (2008 and 2010) by the Social Council of the Universitat Pompeu Fabra. He also received the UPF Medal (2011) for his service as Dean of the Escuela Politècnica Superior. He was awarded the ICREA-Academia Prize by the Institució Catalana de Recerca i Estudis Avançats (ICREA) in 2008, a President's International Initiative Award in 2019 by the Chinese Academy of Science, and a Pengcheng Scholar Programme Distinguished Professor at Shenzhen University by the Shenzhen Education Bureau. Prof Frangi is an IEEE Fellow (2014), EAMBES Fellow (2013), SPIE Fellow (2020), AAIA-AI Fellow (2021), MICCAI Fellow (2021), ATI Fellow (2021), MICCAI Fellow (2021), and SIAM and IET Member. He was elected to the Board of Directors of the Medical Image Computing and Computer-Assisted Interventions Society (MICCAI) (2014-2019). Prof. Frangi served on the Scientific Advisory Board of the European Institute for Biomedical Imaging Research (EIBIR, 2014-2018) and chaired the Fellows Committee of the IEEE Engineering in Medicine and Biology Society (2017-2018). Under his leadership, CISTIB develops GIMIAS (Graphical Interface for Medical Image Analysis and Simulation), an open-source platform to rapidly develop pre-competitive software prototypes in the areas of image computing and image-based computational physiology modelling, and MULTI-X (Health Data Analytics and Modelling As a Service Platform), a cloud-based platform for computational phenomics, *in silico* medicine, and *in silico* clinical trials. The research and development carried out in his group led to three spin-off companies (GalgoMedical SA 2013, adsilico Ltd 2022, and OculomeX Ltd 2024).

Work Experience

Current Positions

The University of Manchester — *Manchester, UK*

Bicentennial Turing Chair in Computational Medicine — *Jul 2023 - today*

- Professor, Department of Computer Science, School of Engineering, Faculty of Science and Engineering
- Professor, Division of Informatics, Imaging and Data Science, School of Health Sciences, Faculty of Biology, Medicine and Health
- Founding Director, CIMIM Centre for Computational Imaging and Modelling in Medicine, (2001-)
- Director (40% FTE), The Christabel Pankhurst Institute for Health Technology Research and Innovation, (2023-)

adsilico Ltd — *Leeds, UK*

Co-founder, Board Member, Chief Scientific Advisor — *Jun 2023 -*

- Provide scientific oversight and advice to the company Board, CEO, CTO, and CSO, ensuring the founding vision and scientific integrity are maintained across all research and development activities.
- Offer early insights on the validity and viability of proposed projects and play an active advisory role throughout the R&D lifecycle, contributing to the review and technical validation of information and establishing research standards.
- Support recruiting high-quality technical and R&D personnel and assist the CEO, CTO, and CSO in business development, understanding product requirements, and road mapping activities.

OculomeX Health Ltd — *Manchester, UK*

Co-founder, Board Member, Chief Scientific Advisor — *Oct 2024 -*

- Provide scientific oversight and advice to the company Board and CEO.

Katholieke Universiteit Leuven — *Leuven, BE*

Honorary Professor — *Dec 2019 - today*

- Department of Cardiovascular Sciences
- Department of Electrical Engineering

Past Positions

Department for Science, Innovation and Technology, UK Government — *London, UK*

AI and Regulatory Science Advisor — *Mar 2024 - Jan 2025*

- Secondment (20% FTE), Office for Life Sciences, Department of Science, Innovation, and Technology

Chinese Academy of Science — *Ningbo, CN*

Distinguished Visiting Scientist, Presidential International Fellowship Initiative — *Feb 14-26 2025*

- Cixi Institute of Bioengineering

Alan Turing Institute — *London, UK*

Turing Fellow — *Oct 2021 - Oct 2024*

- Leading the way in research excellence in data science, AI, and innovation.
- Driving groundbreaking research and expanding the horizons of scientific discovery.
- Catalysts for new ideas and growth within the Turing Institute's dynamic community.

University of Leeds — *Leeds, UK*

Diamond Jubilee Chair in Computational Medicine — *Aug 2018 - Jun 2023*

- Professor (60% FTE), School of Computing, Faculty of Engineering and Physical Sciences
- Professor (40% FTE), Leeds Institute of Cardiovascular and Metabolic Medicine, Faculty of Medicine and Health

University of Leeds — *Leeds, UK*

Director Research & Innovation — *Dec 2020 - Dec 2022*

- Director R&I (20% FTE), Leeds Institute for Data Analytics

Shenzhen University — *Shenzhen, CN*

Distinguished Visiting Professor, Pengcheng Scholar Program — *Jul 2020 - Jun 2023*

- Shenzhen University funded by Shenzhen Education Bureau

Leeds Teaching Hospitals NHS Trust — *Leeds, UK*

Honorary Data Scientist — *Aug 2018 - Jun 2023*

University of Leeds & Leeds Teaching Hospitals NHS Trust — *Leeds, UK*

Scientific Director — *Aug 2020 - Jan 2023*

- Scientific Director (20% FTE), Leeds Centre for HealthTech Innovation

Beijing Institute of Technology — *Beijing, CN*

Academic Master — *Feb 2018 - Feb 2020*

- Academic Master, Program 111 for Introducing Talents of Discipline in Medical Optics and Medical Imaging

Zhejiang University of Technology — *Hangzhou, CN*

Honorary Professor — *Sep 2018 - Aug 2020*

- Institute of Computer Vision, College of Computer Science and Technology

Chinese Academy of Science — *Ningbo, CN*

Visiting Scientist, Presidential International Fellowship Initiative — *Feb 2019 - Apr 2020*

- Cixi Institute of Bioengineering

University of Sheffield
Sheffield, UK

Visiting Professor on Biomedical Image Computing
Aug 2018 - Aug 2020

- Visiting Professor, Electronic and Electrical Engineering Department

University of Sheffield
Sheffield, UK

Professor on Biomedical Image Computing
Oct 2011 - Jul 2018

- Professor, Electronic and Electrical Engineering Department
- Director, CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine
- Academic Director, MSc Bioengineering: Imaging & Sensing

Universitat Pompeu Fabra
Barcelona, Spain

Associate Professor
Aug 2004 - Sep 2011

- Associate Professor, Information & Communications Technologies Department, 2007-2012
- Director, CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine, 2004-2011
- Dean (by Election), Escuela Superior Politécnica, 2008–2011
- Dean (Acting), Escuela Superior Politécnica, 2008–2008. Designated by the Rector.
- Dean of the Studies of Telecommunications Engineering, Escuela Superior Politécnica, 2007–2008. Designated by the Rector.
- Ramón y Cajal Research Fellow, 2004–2007

Institucio Catalana de Recerca i Estudis Avançats
Barcelona, Spain

ICREA-Academia Researcher
Jan 2009 - Sep 2012

- Selected by the ICREA-Academia Program to conduct intensive research with very reduced teaching.

University of Zaragoza
Zaragoza, Spain

Ramón y Cajal Research Fellow
May 2001 - Aug 2004

- Ramón y Cajal Research Fellow, Electronic and Communications Department, Oct 2003 – Sep 2004
- Group Leader, Computer Vision Lab, Electronic and Communications Department, Sep 2001 – Aug 2004
- Assistant Professor, Electronic and Communications Department, Sep 2001 to Sep 2003
- Post-doctoral researcher, Electronic and Communications Department, May 2001 to Sep 2001

Imperial College London
London, UK

Visiting Graduate Scholar
Jul 2000, Sep - Dec 2000

- Visiting PhD Student in the groups of Prof D Rueckert and Prof Dave Hawkes.

University of Utrecht
Utrecht, The Netherlands

PhD Student
Sep 1997 - Aug 2001

- Researcher in Training at the Image Sciences Institute, Utrecht University Medical Centre
- Scholarship Holder by Innovatiegericht Onderzoeksprogramma (IOP)

Universitat Politècnica de Catalunya
Barcelona, Spain

PhD Student
Sep 1996 - Aug 1997

- Researcher in Training
- Scholarship Holder by Comisión Interministerial de Ciencia y Tecnología (CIRIT)

Education & Habilitations

Spanish Ministry of Education and Sciences
Madrid, Spain

Full Professor Habilitation
2010

- National Habilitation in Signal Theory and Communications

Spanish Ministry of Education and Sciences
Madrid, Spain

Associate Professor Habilitation
2005

- National Habilitation in Signal Theory and Communications

Utrecht University
Utrecht, The Netherlands

PhD Medicine
2001

- PhD in Radiology and Imaging Sciences, Utrecht University Medical Center, 1997-2001
- PhD Thesis on *Three-dimensional model-based analysis of vascular and cardiac images*

Universitat Poliècnica de Catalunya
Barcelona, Spain

BSc/MSc Telecommunications Engineering
1996

- BSc/MSc in Electronics Speciality with Bioengineering, 1992-1996
- MSc Thesis on *Quantification and Noise Modelling in Electrical Impedance Tomography*

Scholarships & Fellowships

2024–29 **European Research Council (Advanced Grant): Frontier Research Guarantee**, University of Manchester; funded by Engineering and Physical Research Council. *Manchester, UK*

2019–29 **Royal Academy of Engineering Chair in Emerging Technologies**, University of Leeds; funded by Royal Academy of Engineering. *Leeds, UK*

2004–07 **Ramón y Cajal Research Fellowship**, Universitat Pompeu Fabra; funded by Spanish Ministry of Science and Technology. *Barcelona, Spain*

2003–04 **Ramón y Cajal Research Fellowship**, Universidad de Zaragoza; funded by Spanish Ministry of Science and Technology. *Zaragoza, Spain*

2000 **Innovatiegericht Onderzoek Programma (IOP) Visiting Scholar**, Department of Computing, Imperial College London; funded by the Dutch Ministry of Economic Affairs. *London, UK*

1997–01 **Predoctoral Scholarship (Assistant in Opleiding)**, Image Sciences Institute, Department of Radiology and Nuclear Medicine, University Medical Center, Utrecht University; funded by Innovatiegericht Onderzoeks Program (IOP). Dutch Ministry of Economic Affairs. *Utrecht, The Netherlands*

1997 **Predoctoral Scholarship for Training of Future Scientists**, Department of Electronic Engineering, Technical University of Catalonia; funded by the Commission for Universities and Research, Government of Catalonia. *Barcelona, Spain*

1996–97 **Undergraduate Researcher**, Department of Electronic Engineering, Technical University of Catalonia; funded by Spanish Ministry of Education and Culture. *Barcelona, Spain*

1993–96 **Undergraduate Studies Scholarship**, Technical University of Catalonia; funded by Spanish Ministry of Science and Education. *Barcelona, Spain*

Languages

Spanish excellent level written, spoken, reading and understanding – mother tongue

German can read and understand – Zertifikat Deutsch als Fremdsprache (ZdaF), Goethe Institut, 1990

Catalan can read and speak fluently, write basic – lived in Catalonia 10+ years, 1992

English excellent level written, spoken, reading and understanding – Cambridge First Certificate, 1994

English excellent level written, spoken, reading and understanding – Test of English as Foreign Language, 1996

Dutch basic reading, speaking, understanding, lived in NL ca. 4 years – A1 and A2 levels, Boswell Instituut, 1997

Honors & Awards

International

2023 **FREng, Royal Academy of Engineering**, Annually, up to 60 Fellows are typically elected to the Fellowship, recognising their outstanding and continuing contributions to the profession. They are distinguished by the FREng postnominal and join a community of almost 1,700 eminent engineers on a mission to use the power of engineering to build a sustainable society and create an inclusive economy that works for everyone. New Fellows are nominated and elected by existing Fellows. *London, UK*

2023 **Highly Commended Paper, National Centre for 3Rs (NC3R)**, The highly commended paper reports the first in silico clinical trial for a medical device, exemplifying the potential of computer-based testing and trials to replace the use of animals and accurately predict the safety and efficacy of medical devices. *London, UK*

2021 **MICCAI Fellow, Medical Image Computing and Computer-Assisted Interventions Society**, *"For outstanding contributions to computational medical imaging."*. MICCAI Fellowship is bestowed upon community members, as identified by their peers, in recognition of their exceptional contributions to Medical Image Computing and/or Computer-assisted Interventions and to their contributions to the MICCAI society as a whole. The MICCAI Society Fellows election process consists of Fellows nominating and then voting for candidates, with the top 3 candidates with the most votes recommended for election. The MICCAI Society Board then ratified the recommendations of the Fellows. *Minnesota, USA*

2021 **IEEE EMBS Technical Achievement Award, IEEE Engineering in Medicine and Biology Society**, *"For pioneering contributions in model-based image computing and image-based computational modelling in medicine with clinical and innovation impact"*. This award is given annually by IEEE EMBS "to recognize an individual(s) for outstanding achievement, contribution(s), and/or innovation in a technical area of biomedical engineering". *New York, USA*

2020 **SPIE Fellow, Society for Photo-optical Instrumentation Engineers**, *"for achievements in statistical methods in medical image computing and image-based computational modelling"*. SPIE Fellows who have become distinguished through outstanding contributions in relevant technologies, service to Society, and service to the general optics and photonics community. *Bellingham, USA*

2014 **IEEE Fellow, IEEE Engineering in Medicine and Biology Society**, *"for contributions medical image analysis and image-based computational physiology"*. The IEEE Board of Directors confers the IEEE Grade of Fellow upon someone with an outstanding record of accomplishments in any of the IEEE fields of interest. The total number selected in any one year cannot exceed one-tenth of one percent of the total voting membership. IEEE Fellow is the highest grade of membership and is recognised by the technical community as a prestigious honour and an important career achievement. *New York, USA*

2013 **EAMBES Fellow, European Alliance for Medical and Biological Engineering & Science**, The division of EAMBES Fellows is formed by individuals who have distinguished themselves by identifiable contributions or accomplishments in Medical and Biological Engineering and Science. *Brussels, BE*

2006 **IEEE EMBS Early Career Award, IEEE Engineering in Medicine and Biology Society**, *"for outstanding contributions to medical image computing, especially cardiovascular and cerebrovascular image analysis using model- and registration-based methods"*. The award is presented annually to an individual who has made significant technological or theoretical contributions to the field of Biomedical Engineering within ten years of completing his or her highest degree. These contributions must represent meritorious achievement, exemplary technical contribution, or educational contribution to the field as evidenced by innovative research, design, product development, patents or publications. *New York, USA*

Domestic

2011 **Universitat Pompeu Fabra**, University Medal *"for the Service as Dean of the Escuela Politècnica Superior"* *Barcelona, Spain*

2010 **Universitat Pompeu Fabra**, Social Council Prize Teaching Initiative Prize to the Escuela Politécnica Superior. *"For the development of a mentorship program within the EnginyCat initiative to attract and retain engineering vocations"*. This prize was awarded to the Escuela Politécnica Superior of UPF whose Dean was Prof Frangi and was given by the maximum board of the University whose responsibility is to secure and oversee the social implication of the University and its community. The prize was awarded in 2010 *ex-aequo* with Verónica Moreno, Davinia Hernández and Vanessa Daza, members of the same leadership team. *Barcelona, Spain*

2009 **Institució Catalana de Recerca i Estudis Avançats**, ICREA-Academia Prize. ICREA-Academia is a 5-year prize comprising a grant of 250k€, half of which is a personal salary complement, and the remainder is intended for UPF to cover a substantial teaching reduction during the 5-year period to focus and consolidate its own research programme. This prize was awarded in 2008 to 40 outstanding and full-time tenured academics from all disciplines of sciences who develop their activity. *Barcelona, Spain*

2008 **Universitat Pompeu Fabra**, Program of Research Intensification (Programa I3). UPF awarded me the first of three positions among the tenured faculty of the University by which I could have a 100% reduction of my teaching load during a first year and up to 66% reduction during the second and third years. The Program I3 is mean to award and stimulate outstanding research dedication. *Barcelona, Spain*

2008 **Universitat Pompeu Fabra**, Social Council Prize Knowledge Transfer Prize in the areas of Communication and Information Technologies. *"For performing applied research in the ICT domain, in computational analysis and modelling from biomedical images, with a demonstrated practical value through relevant international projects, including industrial involvement and applicability to the improvement in disease diagnosis and their treatment"*. This prize was awarded by the maximum board of the University whose responsibility is to secure and oversee the social engagement of the University and its community. *Barcelona, Spain*

2008 **Universitat Pompeu Fabra**, Social Council Prize Teaching Initiative Prize to the Escuela Politécnica Superior. *"For the Introduction to the University Course, introducing first-year students to the structure, organization and services of the School and the University; to the working methodology, to study techniques and problem-solving strategies and to their professional prospects"*. This prize was awarded to the Escuela Politécnica Superior of UPF whose Dean was Prof Frangi and was given by the maximum board of the University whose responsibility is to secure and oversee the social implication of the University and its community. The prize was awarded in 2008 ex-aequo with the Escuela de Ciencias de la Salud y de la Vida. *Barcelona, Spain*

2004 **Official College of Telecommunications Engineers**, ADESLAS Prize on New Technologies in Communications applied to Health and Medicine *Madrid, Spain*

2002 **Royal Academy of Medicine Prize**, for work on endothelial function *Zaragoza, Spain*

2002 **Official College of Telecommunications Engineers**, ADESLAS Prize on New Technologies in Communications applied to Health and Medicine *Madrid, Spain*

Professional Societies Membership

Membership

2024- **ELLIS Fellow**, European Laboratory for Learning and Intelligent Systems. *Manchester, UK*

2021- **MICCAI Fellow**, Medical Image Computing and Computer Assisted Interventions. *Minnesota, USA*

2020- **SPIE Fellow**, Society of Photographic Instrumentation Engineers. *Bellingham, WA, USA*

2014- **IEEE Fellow**, Institute of Electrical and Electronic Engineers. *Piscataway, NJ, USA*

2015- **EAMBES Fellow**, European Alliance of Medical and Biological Engineering and Science. *Brussels, Belgium*

2021- **AAIA Fellow**, Asia-Pacific Artificial Intelligence Association. *Kowloon, Hong Kong*

2011- **SIAM Member**, Society for Industrial and Applied Mathematics. *Philadelphia, PA, USA*

2011-19 **EIBIR Member**, European Institute for Biomedical Imaging Research. *Vienna, Austria*

Editorial Roles

Editorial Leadership

2025-27 **Chair, Advisory Committee**, IEEE Trans Med Imaging *IEEE*

2023-24 **Chair, Steering Committee**, IEEE Trans Med Imaging *IEEE*

2022-25 **IEEE SPS Liaison, Steering Committee**, IEEE Trans Med Imaging *IEEE*

2017- **Editorial Board Chair**, MICCAI-Elsevier Book Series *Elsevier*

2018- **Associate Editor-in-Chief**, Progress in Bioengineering *IoP*

Editorial Boards

2003- **Associate Editor**, IEEE Trans on Medical Imaging *IEEE*

2020- **Associate Editor**, IEEE Trans on Computational Imaging *IEEE*

2023- **Associate Editor**, IEEE Trans on Artificial Intelligence *IEEE*

Associate Editor, IEEE Trans on Pattern Anal Machine Intell *IEEE*

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2025-
2006- **Associate Editor**, Medical Image Analysis Journal *Elsevier*

2007-20 **Associate Editor**, International Journal for Computational Vision and Biomechanics *Francis & Taylor*

2014-20 **Associate Editor**, Computer Vision and Image Understanding *Elsevier*

2012-18 **Associate Editor**, SIAM Journal of Imaging Sciences *SIAM*

Advisory, Leadership & Organisation

Academic Service and Leadership

2023– **Director**, CIMIM Centre for Computational Imaging & Modelling in Medicine *University of Manchester*

2018-23 **Director**, CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine, www.cistib.org *University of Leeds*

2011–18 **Director**, CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine, www.cistib.org *University of Sheffield*

2017–18 **Academic Coordinator, Creator**, MSc Bioengineering: Imaging & Sensing, www.sheffield.ac.uk/eee/pgt/bioengineering *University of Sheffield*

2018–21 **REF2021 Mock Panel Member for EEE**, Departmental REF2021 Mock Panel for EEE, www.ref.ac.uk *University of Sheffield*

2013–15 **Member (per nomination)**, Senate Equality & Diversity Board *University of Sheffield*

2012–15 **External Examiner**, MSc in Physics & Engineering in Medicine, Department of Bioengineering and Medical Physics *University College London*

2012–15 **Member (per nomination)**, Senate *University of Sheffield*

2011–14 **External Examiner**, MRes on Medical Image Computing (MIC) stream, Department of Bioengineering and Medical Physics *University College London*

2012–15 **External Examiner**, MRes on Biomedical Engineering and Medical Imaging (BEMI) stream, Department of Bioengineering and Medical Physics *University College London*

2011–14 **Member**, Policy Committee, Department of Mechanical Engineering *University of Sheffield*

2011–14 **Mechanical Engineering Representative**, Study Board of the Biomedical Engineering BEng/MEng Degrees *University of Sheffield*

2009–11 **Dean (per election)**, Escuela Superior Politécnica, www.upf.edu/esup *Universitat Pompeu Fabra*

2004–11 **Director**, CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine, www.cistib.org — *Universitat Pompeu Fabra*

2007–11 **Member (as Dean of the Escuela Superior Politécnica)**, Government Council — *Universitat Pompeu Fabra*

2008–09 **Dean (per Rector designation)**, Escuela Superior Politècnica, www.upf.edu/esup — *Universitat Pompeu Fabra*

2007–08 **Director of the Studies of Telecommunications (per Rector designation)**, Escuela Superior Politècnica, www.upf.edu/esup — *Universitat Pompeu Fabra*

2007–10 **Chair of the Committee**, Research Committee, Department of Information & Communications Technology — *Universitat Pompeu Fabra*

2007–11 **Member**, Teaching Committee, Department of Information & Communications Technology — *Universitat Pompeu Fabra*

2007–11 **Member**, Faculty Selection Committee, Department of Information & Communications Technology — *Universitat Pompeu Fabra*

2007–10 **Representative for the Department of Information & Communications Technology**, Space and Infrastructures Committee for the Campus Ca l'Aranyo — *Universitat Pompeu Fabra*

2005–07 **Representative for the Department of Information & Communications Technology**, University Convalidation Committee — *Universitat Pompeu Fabra*

Community Service and Leadership

2024– **Executive Committee**, UK Computing Research Council — *IET and BCV*

2023-24 **Chair**, IEEE Trans Medical Imaging Steering Board — *IEEE*

2022–25 **3Rs Prize Panel Member**, NC3Rs – National Centre for the Replacement, Refinement and Reduction of Animals in Research — *UK Research and Innovation*

2022–23 **Member**, IEEE Trans Medical Imaging Steering Board — *IEEE*

2022–23 **Membership Committee**, UK Computing Research Council — *IET and BCS*

2021–22 **Member**, IEEE Fellow Committee — *IEEE*

2020–21 **IEEE International Symposium on Biomedical Imaging (ISBI)**, Steering Committee, IEEE BISP Technical Committee Representative — *IEEE*

2020–21 **Member**, Technical Directions Board — *IEEE SP Society*

2020–21 **Chair**, Biomedical Imaging and Signal Processing Technical Committee (BISP TC) — *IEEE SP Society*

2020 **Alternate Member**, IEEE Fellow Committee — *IEEE*

2019 **Vice-Chair**, Society Fellow Electing Committee — *IEEE EMB Society*

2018–19 **Vice-Chair**, Biomedical Imaging and Signal Processing Technical Committee (BISP TC) — *IEEE SP Society*

2018– **Elected Member**, UK Computing Research Council — *IET and BCS*

2018 **Member, Ad Hoc Committee on S/TC-FEC Best Practices**, IEEE Fellow Committee. — *IEEE*

2017–18 **Chair**, Society Fellow Electing Committee — *IEEE EMB Society*

2014–19 **Elected Member**, Board of Directors — *MICCAI Society*

2013–18 **Elected Member**, Scientific Advisory Board — *European Institute for Biomedical Imaging Research*

Organisational Roles

2023 **General Chair**, Information Processing in Medical Imaging (IPMI) — *Bariloche, Argentina*

2020-21 **Biomedical Image & Signal Processing Technical Committee Chair** , Signal Processing Society — *IEEE*

2006–22 **Program Committee Member**, SPIE Medical Imaging, Image Processing Conference — *various, USA*

6–8/6/20 **Diversity and Inclusivity Chair**, Medical Imaging with Deep Learning (MIDL) — *Montreal, Canada*

16–20/09/18 **General Chair**, Medical Image Computing and Computer Assisted Interventions (MICCAI) — *Granada, Spain*

5–6/09/16 **Track Chair**, Track on Biomedical Imaging & Image Analysis, MEIbioeng16 — *Oxford, UK*

17–21/10/16 **Workshop Chair**, Satellite Workshop SASHIMI'16 Simulation and Modeling in Medical Imaging, Satellite Workshop MICCAI 2016 — *Athens, Greece*

5–9/10/15 **Program Co-Chair**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2015) — *Munich, Germany*

22–26/09/13 **Program Committee Member**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2013) — *Nagoya, Japan*

11–13/09/13 **Scientific Committee Member**, International Conference on Computational Bioengineering (ICCB13) — *Leuven, Belgium*

1–5/10/12 **Program Committee Member**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2012) — *Nice, France*

2–5/05/12 **General Chair**, Intl Symposium on Biomedical Imaging: From Nano to Macro (ISBI 2012) — *Barcelona, Spain*

13-14/06/10	**Program Committee Member**, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2010)	*San Francisco, CA, USA*
31/08–04/09/10	**Track Co-chair**, IEEE Engineering in Medicine and Biology Conference (EMBC 2010)	*Buenos Aires, Argentina*
20–24/09/10	**Tutorials Co-Chair**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2010)	*Beijing, China*
16–18/09/09	**Scientific Committee Member**, International Conference on Computational Bioengineering (ICCB09)	*Bertinoro, Italy*
12–15/04/07	**International Liaison Chair**, Intl Symposium on Biomedical Imaging: From Nano to Macro (ISBI 2007)	*Boston, USA*
27–28/06/08	**Program Committee Member**, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2008)	*Anchorage, USA*
7–8/07/08	**Program Committee Member**, Intl Symposium on Computational Models for Biomedical Simulation (ISBMS 2008)	*London, UK*
29/10–2/11/07	**Program Committee Member**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2007)	*Brisbane, Australia*
14–15/10/07	**Program Committee Member**, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2007)	*Rio de Janeiro, Brasil*
1–6/10/06	**Workshop Organiser**, "From Statistical At-lases to Personalized Models: Understanding Complex Diseases in Populations and Individuals", Satellite Workshop Medical Image Computing and Computer Assisted Interventions (MICCAI 2006)	*Copenhagen, Denmark*
6–9/04/06	**Special Session Co-chair**, "Towards vertical integration of biomedical data", Intl Symposium on Biomedical Imaging: From Nano to Macro (ISBI 2006)	*Arlington, USA*
6–9/04/06	**Publications Chair**, Intl Symposium on Biomedical Imaging: From Nano to Macro (ISBI 2006)	*Arlington, USA*
2–4/06/05	**General Chair**, Third Intl Conference on Functional Imaging and Modeling of the Heart (FIMH05)	*Barcelona, Spain*
14–16/09/05	**Scientific Committee Member**, International Conference on Computational Bioengineering (ICCB05)	*Lisbon, Portugal*
26–29/09/04	**Program Committee Member**, Medical Image Computing and Computer Assisted Interventions (MICCAI 2004)	*St Malo, France*
15–17/09/04	**Scientific Committee Member**, Fourth Intl Symposium on Image and Signal Processing and Analysis	*Zagreb, Croatia*
18–20/09/03	**Co-chair**, Special Session: Cardio-Vascular Image Analysis and Modeling, as part of Third Intl Symposium on Image and Signal Processing and Analysis	*Rome, Italy*
5–6/06/03	**Scientific Committee Member**, Second International Conference on Functional Imaging and Modelling of the Heart	*Lyon, France*

Funding

Ongoing Grants

RISE– Reducing Immune Stress from Excess Cytokine Release in Advanced Therapies (APP67256) — *MRC, United Kingdom*

MRC Prosperity Partnerships: Advanced Therapies Safety and Toxicity, Co-Investigator — *Jan 2026 - Dec 2030*

- RISE is a multidisciplinary initiative aimed at addressing the challenges of advanced immunotherapies (ATs) like CAR-T, focusing on improving safety, accessibility, and long-term outcomes. It tackles critical issues such as cytokine release syndrome (CRS) and other severe adverse effects, which hinder broader adoption. Methodologically, RISE integrates cutting-edge in silico techniques, including AI-driven digital twins and multimodal data integration, to simulate patient outcomes and toxicity mechanisms. Through collaborations with NHS, academia, and industry partners, it combines high-dimensional immunoprofiling, wearable technologies, and patient-reported outcomes to enhance pharmacovigilance and establish new standards for AT development and regulation.
- Funding: £3.199m

UK CEiRSI– The UK's Centre of Excellence on In-silico Regulatory Science and Innovation - Pilot Phase (10139527) — *MRC-InnovateUK, United Kingdom*

UK RIN Implementation Phase: Human Health (CERSIs), PI — *Feb 2025 - Jan 2026*

- The UK Centre of Excellence on in-silico Regulatory Science and Innovation (UK CEiRSI) addresses a critical deadlock in medical product development and regulation. While Computational Modelling and Simulation (CM&S) techniques offer potential for more reliable, faster, and cost-effective medical product testing and approvals, their adoption is hindered by a regulatory-industrial impasse: regulators lack evidence to accept in-silico methods as alternatives to live trials, while developers hesitate to invest without regulatory assurance. Building on successful preliminary work in international partnerships and regulatory guidance, the project will implement an innovative In-Silico Regulatory Airlock Initiative. Through pre-competitive pilot case studies of hypothetical medical products, the initiative will evaluate and refine existing credibility frameworks (including FDA and ASME V&V standards) to establish robust UK principles for regulatory adoption of in-silico technologies, ultimately aiming to transform the medical product development landscape.
- The University of Manchester, University of Oxford, University College London, Queen Mary University of London, University of Birmingham, University of Edinburgh, University of Liverpool, University of Sheffield, University of Strathclyde, Swansea University, University of York. The partnership extends to key industry stakeholders, including ANSYS UK, the Association of British HealthTech Industries, BioNow, Edwards Lifesciences, Health Innovation Research Alliance, Health Innovation Manchester, Medtronic, NAFEMS, NHS England, NPL, The British Standards Institution, and The Organisation for Professionals in Regulatory Affairs.
- Funding: £1m

BHF Manchester Centre of Research Excellence (RE/24/130017) *British Heart Foundation, United Kingdom*

BHF Centres of Research Excellence, Awarded to Prof B Keavney, WP5 Co-Lead (w/ Prof S Ananiadou, PI) *Oct 2024 - Oct 2029*

- The Manchester British Heart Foundation Centre of Research Excellence (CRE) advances cardiovascular research by driving interdisciplinary collaboration to tackle cardiovascular disease. It focuses on innovative prevention, diagnosis, treatment, and care strategies, emphasising combining cutting-edge technology and clinical expertise to deliver high-impact and translational discoveries. The Centre integrates world-class cardiovascular science, data science, and AI researchers. This enables us to foster groundbreaking research in cardiovascular genomics, heart failure, and inflammatory drivers of disease.
- Funding: £8.1m

Manchester Radiation Research Centre of Excellence (C1994/A28701)) *Cancer Research UK, United Kingdom*

CRUK Radiation Research Network Programme, Co-Investigator *Nov 2024 - Oct 2029*

- CRUK RadNet Manchester works in collaboration with The Christie NHS Foundation Trust and The University of Manchester to develop an integrated world-leading radiation oncology programme working towards individualised personalised physical and biological testing based on real-time outcomes and a mechanistic understanding of the tumour microenvironment, immune response, comorbidity and genomics. The network represents a significant investment by Cancer Research UK to establish a critical mass of radiation research activity across seven strategic locations in the UK, including Manchester. The Manchester Centre focuses on three key areas: personalised and adaptive radiotherapy, re-irradiation strategies, and combining radiotherapy with novel therapeutic approaches. My role involves developing computational approaches to support these research priorities, particularly in the areas of image-guided therapy planning and response prediction.
- Funding: £4,520,648.14

NIHR Manchester Biomedical Research Centre (NIHR203308) *National Institute for Health and Care Research, United Kingdom*

NIHR Biomedical Research Centres, Digital Infrastructure Lead (w/ Prof A Barton, PI) *Nov 2022 - Oct 2027*

- The Manchester Biomedical Research Center (BRC) of the National Institute of Health and Care Research (NIHR) has received a £59.1m award, which is the largest single research award given by the NIHR to the city region. This grant will aid in translating scientific discoveries into new treatments, diagnostic tests, and medical technologies that will improve the lives of patients in Greater Manchester and beyond, over the next five years. As the leader of the BRC Digital Infrastructure, I am working towards contributing to the delivery of the Greater Manchester Secure Data Environment.
- Funding: £59.1m

INSILICO: Cardiovascular Device Innovation and Regulatory Science: Virtual Chimaeras and In-Silico Trials with Novel Hybrid Machine Learning (EP/Y030494/1) *Engineering and Physical Sciences Research Council, United Kingdom*

Research Grant, Frontier Research Guarantee, Awardee *Dec 2023 - Oct 2028*

- INSILICO will lay advanced computational foundations to accelerate the adoption of in-silico trials as a cost-effective and rational approach to drive medical device innovation and regulatory evidence. It will unify deep learning driven by data and knowledge using hybrid representations. It will lead to a) creating virtual patient cohorts reflecting complex patient features from real-world populations, b) predicting mechanistically/phenomenologically interventional outcomes in virtual populations, and c) ensuring the accuracy, reliability, and scalability of computational predictions and their uncertainties.
- Funding: £2.163m

INSILEX: Precision Computational Medicine for *in silico* Trials of Medical Devices (CiET1819/19) *Royal Academy of Engineering, United Kingdom*

RAEng Chair in Emerging Technologies, Chair Holder *May 2019 - April 2029*

- The Academy's Chair in Emerging Technologies scheme aims to identify global research visionaries and provide them with long-term support to lead on developing emerging technology areas with high potential to deliver economic and social benefit to the UK.
- Funding: £2.69m

Innovation Launchpad Network (EP/W037009/1) *Engineering and Physical Sciences Research Council, United Kingdom*

Network Grant, Catapult-Academic Engagement Network Plus, Co-Investigator (w/ Dr P Osborne, PI) *Apr 2022 - Apr 2026*

- The Innovation Launchpad network aims to unify cross-disciplinary academic teams to work with the UK's nine Catapult Centres in areas like Net Zero, Healthcare & Wellbeing, and Resilience. It boasts wide geographical coverage across the UK and is supported by a Steering Panel to enhance expertise and collaboration. The initiative seeks to foster new technologies and methodologies, promoting a culture of inclusion and diversity beyond traditional academic recognitions. By connecting academics with Catapult Centres and focusing on equal opportunities, the network intends to bridge significant gaps in academia and industry, encouraging innovation and knowledge exchange.
- Funding: £4.88m

STARTER-KIT: A technical, procedural and ethical template for accelerating the start-up of AI multicentre studies requiring data re-use and sharing in clinical settings (RRNIA-Feb22\100001)

Cancer Research UK, United Kingdom

Cancer Research UK Radiation Therapy Network, Principal Investigator

Jun 2022 - May 2026

- STARTER-KIT combines complementary research and expertise, developed separately as part of the CRUK-funded RadNet, ART-NET, and NCITA consortia and made available via newly designated CRUK Centres, to create an infrastructure template and worked examples for facilitating multicentre collaborative data analytics projects.
- Funding: £198k

CROSSLINK: Computational phenomics for unravelling associative/causative links using image-based multi phenotypes in diabetes in the UK Biobank (IES\NSFC\201380)

International Exchanges Cost Share Scheme, The Royal Society, UK

Principal Investigator

Mar 2021 - Mar 2026

- UK-China International Exchange Program
- Other Partners: Shenzhen University
- Funding £12k

Completed Grants Only listed here grants and contracts since 2006.

UK Centre of Excellence in in-silico Regulatory Science and Innovation supporting the Entire Product Lifecycle in Life and Health Sciences– A network of enabling national capabilities (10110484)

InnovateUK, United Kingdom

UKRI UK Regulatory Science and Innovation Networks– Discovery Phase, PI)

Mar 2024 - Aug 2024

- The UK Centre of Excellence in in-silico Regulatory Science and Innovation (UK CEiRSI) aims to enhance the InSilicoUK Pro-Innovation Regulations Network's efforts in advancing computational modelling and simulation (CM&S) for Life and Health Sciences. Traditional testing methods for medical products are costly and time-consuming and involve multiple stages, from bench tests to human clinical trials. In contrast, in-silico testing uses computational models, including digital twins and virtual patients, to simulate product life cycles, offering a more efficient, cost-effective, and ethical alternative by minimising animal and human testing. Launched in March 2022, InSilicoUK has grown into a community of over 2,600 members from academia, industry, and regulatory bodies, working towards integrating in-silico evidence into regulatory science. This initiative promises to accelerate medical product development and enhance patient safety but also positions the UK as a leader in the global shift towards embracing in-silico science for healthcare innovation, contributing significantly to public health and economic prosperity.
- Funding: £50k

OncoEng: Oncological Engineering– A new concept in the treatment of bone metastases (EP/W007096/1)

Engineering and Physical Sciences Research Council (EPSRC), UK

Programme Grant, Co-Investigator (w/ Prof R Hall, PI)

Jan 2022 - Dec 2026

- OncoEng adopts a patient-centric methodology, forecasting vertebral failures due to tumors to guide treatment decisions. We employ sophisticated computational modeling and imaging to predict vertebral integrity over time. Moreover, we're developing minimally invasive, custom implants to reinforce at-risk vertebrae, minimising recovery time and discomfort.
- Other Partners: University College London, Imperial College London, Airbus Group Ltd, ETH Zurich, Lulea University of Technology, Photocentric Ltd, Simulation Solutions, TOffeeAM Ltd, University of Florida
- Funding £5.62m

TUSCA: Transthoracic Ultrasound Coronary Angiography (EP/V04799X/1)

Engineering and Physical Sciences Research Council (EPSRC), UK

Co-Investigator (w/ Prof S Freear, PI)

Apr 2021 - Mar 2024

- Healthcare Innovation Partnerships Program
- Other Partners: Imperial College London, Acoustic, GE Healthcare, Grow MedTech, Woodcliffe Associates
- Funding £1.15m

ROCHESTER: Quantification of free and bound water concentrations in human cortical bone using hybrid hard tissue magnetic resonance imaging: Towards Comprehensive Osteoporosis Assessment (H2020-MSCA-IF-2019-IIF-898530)

Marie Curie-Slowdoska International Incoming Fellowships (IIF), European Commission

Principal Investigator, Host, Mentor

May 2021 - May 2023

- Fellow: Dr Hamidreza Saligheh Rad
- Total Funding: €225k

Cancer Research UK Radiation Research Centre of Excellence at the University of Leeds (C19942/A28832)

Cancer Research UK, United Kingdom

Cancer Research UK Radiation Therapy Network, Co-Investigator

Nov 2019 - Oct 2024

- CRUK invested £56m over five years to establish a critical mass of activity in 7 locations (including Leeds). The Network will support the further growth of the radiation research community through national and international multidisciplinary collaboration and by developing the field's future leaders. The focus of the Leeds Centre is on a) Personalised and adaptive radiotherapy, b) Re-irradiation, and c) Combining radiotherapy with novel therapies
- Funding: £3.5m

Learning novel deep multiscale representations of heart anatomy for cardiomics through graph neural networks (IES\R2\202165)
International Exchanges Scheme, The Royal Society, UK
Feb 2021 - Feb 2023

Principal Investigator
- UK-Argentina Exchange Program
- Funding £12k

BQ-MINDED: Breakthroughs in Quantitative Magnetic resonance ImagiNg for improved Detection of Brain Diseases (H2020-MSCA-ITN-2017-764513)
Marie Curie-Slowdoska Program, European Commission
Jan 2018 - Dec 2021

Co-Investigator, PI at the University of Leeds
- Consortium Leader: Jan Sijbers, Antwerp University, Belgium
- Partners: University of Antwerp (BE), Erasmus Medical Centre Rotterdam (NL), University of Leeds (UK), Julich Forschungszentrum (DE), Siemens Healthineers (BE), MR Solutions (UK), Icometrix (BE), Quantib (NL), Antwerp University Hospital (BE)
- Total Funding: €3.7m
- Share of Funding: €550k

CARDIOMICS Novel cardiac phenotyping for population imaging and imaging genetics
IBM Research, Almaden, USA
Jun 2019 - May 2022

Principal Investigator
- PhD Studentship (partially funded): Rodrigo Bonazzola
- Total Funding: £60k

InSilc: In-silico trials for drug-eluting bioabsorbable vascular stents (BVS): design, development, and evaluation (H2020-SC1-PM-16-2017-777119)
Research & Innovation Action, European Commission
Nov 2017 - Oct 2020

Technical Coordinator, PI at the University of Leeds
- Consortium Leader: Dimitris Fotiadis, Foundation for Research and Technology Hellas, Greece
- Partners: University of Sheffield (UK), Erasmus University Medical Centre (NL), Politecnico de Milano (IT), CNRS (IT), Mediolanum Cardio Research SR (IT), FEOPS NV (NL), National University of Ireland (IE), BioIRC doo (RS), Panepistimio Ioanninon (EL), Concord Inc (US), Boston Scientific Ltd (IE)
- Total Funding: €5.8m
- Share of Funding: €658k

BackUP: Personalised Prognostic Models to Improve Well-being and Return to Work After Neck and Low Back Pain (H2020-SC1-PM-17-2017-777090)
Research & Innovation Action, European Commission
Jan 2018 - Dec 2020

Technical Coordinator, PI at the University of Leeds
- Consortium Leader: Helios de Rosario, Instituto de Biomecanica de Valencia, Spain
- Partners: University of Leeds (UK), GMV Soluciones Globales Internet SAU (ES), Universita degli Studi di Parma (IT), Empirica Gesselschaft MbH (DE), Norges Teknisk Naturvitenskapelige Universitet (NO), Universita degli Studi di Padova (IT), Roessingh Research and Development BV (NL), Genos Doo (HR), Karolinska Institutet (SE), Centralny Instytut Ochrony Pracy (PL), University of Keele (UK), MAZ Mutua de Seguros (ES)
- Total Funding: €5.1m
- Share of Funding: €736k

Cardio-X: from cardiac imaging to integrated quantitative patient reports for Precision Cardiology within LTHT the (POC041)
Grow MedTech, EPSRC, United Kingdom
Apr 2020 - Dec 2021

Grow MedTech Proof of Concept Award, Principal Investigator
- This project will demonstrate the technical feasibility and commercial viability of a technology enabling scale-based quantitative cardiac image analysis. Preliminary work on this technology has shown its feasibility in analysing 32k subjects from the UK Biobank, where it was benchmarked against 5k cases with manual annotation. The proposed prototype will be deployed in a test environment within the NHS Leeds Teaching Hospital Trust through a co-development process involving end-user professionals (clinicians and clinical imaging experts), patients and members of the public.
- Funding: £89k

VERDICT: Development and Evaluation of a Functional Prototype for the Automated Identification of Osteoporotic Vertebral Fractures (ARUK-21498)
Proof of Concept, Arthritis Research UK, UK
Apr 2017 - Dec 2019

Principal Investigator
- PI: Alejandro F Frangi
- Collaborators: Mellanby Centre for Bone Research, University of Sheffield
- Total Funding: €99k

MedIAN: EPSRC-NIHR HTC Partnership Award' Plus': Medical Image Analysis Network (EP/N026993/1)
Engineering and Physical Sciences Research Council (EPSRC), UK
Jun 2016 - Jun 2019

Co-Investigator, PI at the University of Sheffield
- PI: Alison Noble, University of Oxford
- Other Partners: University of Leeds, Imperial College London, King's College London, University College London
- Funding £507,583
- Share of Funding: €130k

OCEAN: One-stop-shop microstructure-sensitive perfusion/diffusion MRI: Application to vascular cognitive impairment (EP/M006328/1)
Engineering and Physical Sciences Research Council (EPSRC), UK
Apr 2015 - Sep 2019

Principal Investigator
- Other Partners: University of Manchester, University of Cardiff
- Funding £1.3m

STORMING Simultaneous de-noising and non-rigid registration for medical imaging (IE141258)
International Exchanges Scheme, The Royal Society, UK
Apr 2015 - Oct 2018

Principal Investigator
- UK-China Exchange Program
- Funding £12k

VPH-DARE@IT: VPH Dementia Research Enabled by IT (FP7-ICT-2011-9-601055)

Integrated Project, European Commission

Apr 2013 - Sep 2017

Principal Investigator

- Partners: The Chancellor, Masters and Scholars of the University of Oxford (UK), Teknologian Tutkimuskeskus VTT (FI), ESI Group SA (FR), Advanced Simulation and Design Gmbh (DE), Empirica Gesellschaft Fuer Kommunikations- Und Technologie Forschung Mbh (DE), Universite-tet I Oslo (NO), Erasmus Universitair Medisch Centrum Rotterdam (NL), Klinik Hirslanden AG (CH), Philips Medical Systems Nederland BV (NL), Eidgenoessische Technische Hochschule Zurich (CH), Kings College London (UK), Philips Technologie Gmbh (DE), Sheffield Teaching Hospitals NHS Foundation Trust (UK), University College London (UK), Itä-Suomen Yliopisto (FI), Universiteit Maastricht (NL), Tomorrow Options Microelectronics SA (P), Imperial College of Science, Technology and Medicine (UK), EIBIR Gemeinnuetzige Gmbh zur Foerderung der Erforschung der Biomedizinischen Bildgebung (A).
- Total Funding: €13.3m
- Share of Funding: €3.5m

MindNet EPSRC-NIHR HTC Partnership Award: Partnership with the MindTech HTC (EP/M000346/1)

Engineering and Physical Sciences Research Council (EPSRC), UK

Apr 2014 - May 2017

Collaborator

- PI: Chris Taylor, University of Manchester
- Other Partners: University of Nottingham, University of Sheffield, University of Lancaster and University of York
- Funding £151k

MedIAN EPSRC-NIHR HTC Partnership Award: Medical Image Analysis Network (EP/M000133/1)

Engineering and Physical Sciences Research Council (EPSRC), UK

Jun 2014 - Jun 2017

Co-Investigator, PI at the University of Sheffield

- PI: Alison Noble, University of Oxford
- Other Partners: University of Sheffield, Imperial College London, King's College London, University College London
- Funding £151k

MD-Paedigree: Model-Driven European Paediatric Digital Repository (FP7-ICT-2011-9-600932)

Integrated Project, European Commission

Mar 2013 - Feb 2017

Co-Investigator

- Partners: Ospedale Pediatrico Bambino Gesu (IT), University College London (UK), Istituto Giannina Gaslini (IT), Johns Hopkins University (USA), Katholieke Universiteit Leuven (BE), Vereniging Voor Christelijk Hoger Onderwijs Wetenschappelijk Onderzoek en Patientenzorg (Nl), Universitair Medisch Centrum Utrecht (NL), Siemens AG (DE), BGI Europe Institute Denmark (DK), Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V. (DE), Institut National de Recherche en Informatique et en Au-tomatique (FR), Motek Medical B.V. (NL), Siemens Corporation (USA), Technische Universiteit Delft (NL), Universita degli Studi di Roma La Sapienza (IT), the University of Sheffield (UK), Maat France (FR), Haute Ecole Spe-cialisee de Suisse Occidentale (CH), Universitatea Transilvania din Brasov (RO), National and Kapodistrian University of Athens (GR), Empirica Gesellschaft fuer Kommunikations- und Technologieforschung Mbh (DE), Lynkeus (IT)
- Total Funding: €11.9m
- Share of Funding: €940k

BALMORAL: Variational Basis Learning for Statistical Motion Atlases: Application to Quantitative Dynamic Cardiac Imaging (FP7-PEOPLE-2013-IIF-625745)

Marie Curie-Slowdoska International Incoming Fellowships (IIF), European Commission

Jul 2014 - Jun 2016

Principal Investigator, Host, Mentor

- Fellow: Dr Ali Gooya – Currently Lecturer at the University of Sheffield
- Total Funding: €309k

VPH-Share: Virtual Physiological Human - Structured Human Physiological Research Environment (FP7-ICT-2010-6-269978)

Integrated Project, European Commission

Mar 2011 - Feb 2015

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra

- PI: Rod Hose, University of Sheffield
- Partners: University of Sheffield (UK) Akademia Gorniczo-Hutnicza (PL), Sheffield Teaching Hospitals NHS Foundation Trust (UK), ATOS ORIGIN (ES), The Chancellor, Masters and Scholars of the University of Oxford (UK), Universitat Pompeu Fabra (UK), Empirica Gesellschaft fuer Kommunikations und Technologieforschung (DE), SCS (IT), NHS Information Centre (UK), Institut National De Recherche en Informatique et en Automatique (FR), Istituto Ortopedico Rizzoli (IT), The Open University (UK), Philips Electronics Nederland (NL), Technische Universiteit Eindhoven (NL), University of Auckland (NZ), Universiteit van Amsterdam (NL), University College London (UK), Universitaet Wien (AU), Agencia D'Avaluacio de Tecnologia i Recerca Mediques (ES), IBM Israel – Science and Technology Ltd (IL) and Fundació Clínic per a la Recerca Biomèdica (ES)
- Total Funding: €10.7m
- Share of Funding: €1.1m

MySpine: Functional prognosis simulation of patient-specific spinal treatment for clinical use (FP7-ICT-2009-6-269909)

STREP Project, European Commission

Mar 2011 - Feb 2014

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra

- PI: Damien Lacroix, Institute for Bioengineering of Catalonia
- Partners: Institute for Bioengineering of Catalonia (ES), Eindhoven University of Technology (NL), Vienna University of Technology (AU), University of Technology of Compiegne (FR), Universitat Pompeu Fabra (ES), CETIR Grup Mèdic (ES) and the National Center for Spinal Disorders (Buda Health Center) (HU)
- Total Funding: €3.9m
- Share of Funding: €512k

eHealth Innovation: Scaling up eHealth Facilitated personalised health services: Developing a European roadmap for sustained eHealth Innovation (CIP-ICT-PSP-2009-4)

Thematic Network, European Commission

Apr 2011 - Oct 2013

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra

- PI: Dipak Kalra, University College London
- Partners: University College London Consultants (UK), empirica Gesellschaft für Kommunikations- und Technologieforschung (DE), Aarhus University (DK), European Institute for Health Records (BE), Continua Health Alliance (BE), University of Manchester (UK), National Institute of Public Health, Rep. of Slovenia (SI), French Ministry of Health (FR), Dutch Association for primary & integrated healthcare (NK), County Council of Uppsala (SE) Royal College of Physicians (UK), European Connected Health Campus (UK), University of Sheffield (UK), AOK Rheinland/Hamburg (DE), Government of Catalonia HTA Agency (ES), The Danish eHealth Portal (DK), Czech National eHealth Forum (CZ), European Health Telematics Association (BE), Europ. Coord. Committee of the Radiological, Electromedical and Healthcare IT Industry (BE), Universitat Pompeu Fabra (ES), Health Consumer Powerhouse (BE), University Hospitals of Geneva (CH), and F. Hoffmann-La Roche (CH)
- Total Funding: €497k
- Share of Funding: €20k

VERTEX: VERtebral Extensive diagnosis based on X-ray images (RD10-1-0034) *Nucliscooperations, ACCIO, Spain*

Principal Investigator *Jan 2011 - May 2013*

- Partners: CETIR Centre Mèdic S.A (ES), UDIAT - Centre Diagnòstic (ES), Innopro Global Services (ES), Universitat Pompeu Fabra (ES)
- Total Funding: €139k

CardioSuite: Evaluación de la función cardíaca y aplicación a la planificación de terapias cardiovasculares (2010-VALOR-00130) *VALOR, Talència, Spain*

Principal Investigator *Jan 2011 - Dec 2012*

- Partners: Universitat Pompeu Fabra (ES), Grupo Hospitalario Quirón (ES)
- Total Funding: €76.1k

EndoTreat: Herramienta para el planeamiento de tratamiento endovascular de aneurismas intracraneales con coils (2010-VALOR-00064) *VALOR, Talència, Spain*

Principal Investigator *Jan 2011 - Dec 2012*

- Partners: Universitat Pompeu Fabra (ES), Grupo Hospitalario Quirón (ES)
- Total Funding: €74.1k

cvREMOD: Gestión de remodelado cardiovascular mediante interacción de tecnologías de monitorización ubicua y conceptos del humano fisiológico virtual (CEN-20091044) *Programa CENIT, Centro para el Desarrollo Tecnológico e Industrial (CDTI), Spain*

Scientific Coordinator *Sep 2009 - Dec 2012*

- Partners: Consortium of 10 companies and 10 academic institutions
- Total Funding: €24.0m
- Share of Funding: €2.6m

RICORDO: Researching Interoperability using Core Reference Datasets and Ontologies for the Virtual Physiological Human (ICT-2009-248502) *STREP, European Commission*

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra *Feb 2009 - Jan 2013*

- PI: Bernard de Bono, European Bioinformatics Institute
- Partners: EBI -European Molecular Biology Laboratory (EU), The University of Auckland (NZ), Universitat Pompeu Fabra (ES), University of Washington, Medical Research Council, Danish Technical University (DK), The University of Cambridge (UK) and Herriot-Watt University (UK)
- Total Funding: €1m
- Share of Funding: €155k

MSV: Multiscale Spatiotemporal Visualisation: development of an open-source software library for the interactive visualisation of multiscale biomedical data (ICT-2009-248032) *STREP, European Commission*

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra *Feb 2009 - Jan 2013*

- PI: Assandro Chiarini, B3C Srl
- Partners: B3C Srl. (IT), University of Bedfordshire (UK), Universitat Pompeu Fabra (ES), The University of Auckland (NZ), Kitware Inc (USA)
- Total Funding: €1m
- Share of Funding: €200k

STIMATH: Análisis de imágenes de alto rendimiento mediante modelos estadísticos de forma, apariencia y deformación (TIN2009-14536-C02-01) *Plan Nacional de I+D+i, Ministerio de Innovación y Ciencia de España, Spain*

Principal Investigator *Jan 2010 - Dec 2012*

- Partners: B3C Srl. (IT), University of Bedfordshire (UK), Universitat Pompeu Fabra (ES), The University of Auckland (NZ), Kitware Inc (USA)
- Total Funding: €288k

euHeart: Personalised & Integrated Cardiac Care: Patient-specific Cardiovascular Modelling and Simulation for In Silico Disease Understanding & Management and for Medical Device Evaluation & Optimization (IST-2007-224495) *Integrated Project, European Commission*

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra *Jun 2008 - Jun 2012*

- PI: Juergen Weese, Philips Research Hamburg
- Partners: 17 European organisations led by Philips Research
- Total Funding: €13.9m
- Share of Funding: €1.64k

VPH-NOE: Virtual Physiological Human (IST-2007-223920) *Network of Excellence, European Commission*

Co-Investigator, Principal Investigator at Universitat Pompeu Fabra *Jun 2008 - Jun 2012*

- PI: Peter Coveney, University College London
- Partners: 12 European organisations led by University College London
- Total Funding: €8m
- Share of Funding: €900k

Computational Analysis of Cerebral Aneurysm Evolution (R01 NS059063-01)

National Institute of Neurological Disorders and Stroke (NINDS), USA

Jun 2007 - Jun 2011

External Consultant

- PI: Juan R Cebral, George Mason University, USA

CIBER-BBN: National Center for Networked Biomedical Research in Bioengineering, Biomaterials and Nanomedicine (CB06/01/0061)

Instituto de Salud Carlos III, Spain

Jan 2006 - Dec 2012

Co-Investigator, Director of the Universitat Pompeu Fabra node

- Network of the best 36 groups in bioengineering, biomaterials and nanomedicine
- Funding: core funding of €110k per annum during the period

CDTEAM: Consortium for the Development of Advanced Medical Imaging Technologies

Programa CENIT, Centro para el Desarrollo Tecnológico e Industrial (CDTI), Spain

Jan 2006 - Dec 2009

Scientific Coordinator

- Partners: Consortium of 10 companies and ten academic institutions
- Total Funding: €15.8m
- Share of Funding: €1.8m

@neurIST: Integrated Biomedical Informatics for the Management of Cerebral Aneurysms (IST-2004-027703)

Integrated Project, European Commission

Jun 2008 - Jun 2012

Principal Investigator

- PI: Juergen Weese, Philips Research Hamburg
- Partners: 27 European organisations and four non-European participants
- Total Funding: €12.6m
- Share of Funding: €1.9k

AHAWALL: Study of the Interaction of Wall Shear Stress and Cerebral Aneurysm Wall Compliance

American Heart Association, USA

Aug 2006 - Jul 2008

External Consultant

- PI: Juan R Cebral, George Mason University, USA

Industry-sponsored Research & Technology Transfer

Affine registration of 3D medical images based on mutual information normalised for radio-therapeutic applications

Técnicas Radiofísicas Ltd., Zaragoza, Spain

Apr 2002 - Oct 2002

Principal Contractor

- Funding: € 24k

Cooperation agreement on grid computing applications in healthcare

GridSystems SA, Palma de Mallorca, Spain

Apr 2003 - Mar 2011

Principal Contractor

- Funding: 128 free licenses

Cooperation agreement in R+D on techniques for 3D facial biometry

VisionRT Ltd., London, UK

Apr 2003 - Mar 2005

Principal Contractor

- Funding: € 45k

Excellence Research Lab in Advanced Computing and Visualization

Silicon Graphics SAU, Barcelona, Spain

Apr 2006 - Mar 2011

Principal Contractor

- Funding: Agreement declaring the Computational Imaging Lab an official Excellence Lab by SGI

Excellence Research Lab in Advanced Medical Image Computing

Philips Ibérica SAU, Madrid, Spain

Apr 2006 - Mar 2012

Principal Contractor

- Funding: Agreement declaring the Computational Imaging Lab an official Excellence Lab by Philips Ibérica.

TEAM: TEchnologies in Aneurysm Management

Philips Medical Systems BV, The Netherlands

Feb 2007 - Feb 2011

Principal Contractor

- Funding: € 500k

SERESHA: SEgmentation, dynamic REconstruction and SHape analysis of cerebral aneurysms

Philips Medical Systems BV, The Netherlands

Nov 2006 - Feb Feb 2011

Principal Contractor

- Funding: € 50k

In silico modelling and simulation of a novel flow diverter

Penumbra Inc. California, USA

Feb 2009 - May 2009

Principal Contractor

- Funding: € 10k

Scientific Output

Published Reports

R4. Redrup E, Mitchell C, Myles P, Branson R, **Frangi AF**, Cross-Regulator Workshop: Journeys, experiences and best practices on computer modelled and simulated regulatory evidence— Workshop Report. 2023.

R3. **Frangi AF**, Denison T, Brown P, Turpin R, Kipping M, Palmer M, Flynn D, Afshari P, Lane C, De Cunha Maluf-Bergman M, Horner M, Levine S, Marchal T, Bischoff J, Bryan R, Tunbridge G, Pink J, Macpherson S, Niederer S, Shipley R, Jozsa T, Dall'Ara E, Rodriguez B, Maeder T, Thompson M, Unlocking the power of computational modelling and simulation across the product lifecycle in life sciences: A UK Landscape Report. Sounder, safer, faster, and more sustainable innovation and regulatory evidence of medicines and healthcare products. 2023.

R2. **Frangi AF**, Denison T, Lincoln J, The Economic Impact of In-silico Technology on the UK and its Lifesciences Sector. 2023.

R1. Whorwood H, **Frangi AF**, Wilkinson K, In Silico Medicine: Investment in next-generation life sciences innovations empowered by computational modelling and simulations. 2023.

Journal Papers

J326. Bi N, Zakeri A, Xia Y, **Frangi AF**, Gooya A, SegMorph: Concurrent Motion Estimation and Segmentation for Cardiac MRI Sequences. IEEE Trans Med Imaging. 2025. In press.

J325. MacRaild M, Sarrami-Foroushani A, Song S, Liu Q, Kelly C, Ravikumar N, Patankar T, Lassila T, Taylor ZA, **Frangi AF**, Off-label in-silico flow diverter performance assessment in posterior communicating artery aneurysms. J Neurointerv Surg. 2025. In press.

J324. Ru X, Wang X, Liu Z, Du P, Zhao H, Wu Z, Ju X, Liu S, Zhu YC, **Frangi AF**, Pose-independent efficient gauge equivariant network for 3D mesh aneurysm segmentation. Neurocomputing. 2025;639:130188.

J323. Dhesi SS, Adusumilli P, Ravikumar N, Waduud MA, Frood R, **Frangi AF**, McDermott G, Rudd JHF, Huang Y, Boyle JR, Elkhawad M, Newby DE, Joshi N, Kwan JY, Coughlin P, Bailey MA, Scarsbrook AF, Development and External Validation of [18F]FDG PET-CT-Derived Radiomic Models for Prediction of Abdominal Aortic Aneurysm Growth Rate. Algorithms 2025;18:86.

J322. Chakraborti T, Banerji CRS, Marandon A, Hellon V, Mitra R, Lehmann B, Bräuninger L, McGough S, Turkay C, **Frangi AF**, Bianconi G, Li W, Rackham O, Parashar D, Harbron C, MacArthur B, Personalized uncertainty quantification in artificial intelligence. Nat. Mach. Intell. 2025;7:522–30.

J321. Song X, Yang P, Zhou F, **Frangi AF**, Xiao X, Wang T, Wang S, Lei B, Knowledge-aware Multisite Adaptive Graph Transformer for Brain Disorder Diagnosis. IEEE Trans Med Imaging. 2025;44:2370–83.

J320. Gaggion N, Matheson BA, Xia Y, Bonazzola R, Ravikumar N, Taylor ZA, Milone DH, **Frangi AF**, Ferrante E, Multi-view Hybrid Graph Convolutional Network for Volume-to-mesh Reconstruction in Cardiovascular MRI. Med Image Anal 2025;104:103630.

J319. Huang Y, Chang A, Dou H, Tao X, Zhou X, Cao Y, Huang R, **Frangi AF**, Bao L, Yang X, Ni D, Flip Learning: Weakly supervised erase to segment nodules in breast ultrasound. Med Image Anal 2025;102:103552.

J318. Nan Y, Zhou H, Xing X, Papanastasiou G, Zhu L, Gao Z, **Frangi AF**, Yang G, Revisiting medical image retrieval via knowledge consolidation. Med Image Anal. 2025;102:103553.

J317. Mekki YM, Luijten G, Hagert E, Belkhair S, Varghese C, Qadir J, Solaiman B, Bilal M, Dhanda J, Egger J, Deng J, Khanduja V, **Frangi AF**, Zughaier SM, Stotland MA, Digital twins for the era of personalized surgery. NPJ Digit Med 2025;8:283.

J316. Hsu WC, Meuschke M, **Frangi AF**, Preim B, Lawonn K, A Survey of Intracranial Aneurysm Detection and Segmentation. Med Image Anal. 2025;101:103493.

J315. Munia AA, Abdara M, Hasan M, Jalali MS, Banerjee B, Khosravi A, Hossain I, Fu H, **Frangi AF**, Attention-Guided Hierarchical Fusion U-Net for Uncertainty-driven Medical Image Segmentation. Inf. Fusion 2025;1154:102719.

J314. MacRaild M, Sarrami-Foroushani A, Patankar T, **Frangi AF**, In-Silico Neurosurgery: Toward Safe, Effective and Equitable Flow Diverter Treatment of Intracranial Aneurysms. World Neurosurg 2025;195:123589.

J313. Samei E, Abadi E, Bakic P, Bliznakova K, Bosmans H, Carton AK, **Frangi AF**, Glick S, Lo JY, Kinahan P, Maidment A, Ria F, Sechopoulos I, Segars WP, Tanaka R, Vancoillie L, Virtual imaging trials in medicine: A brief takeaway of the lessons from the first international summit. Med Phys 2025;52:1950–9.

J312. Dou H, Virtanen S, Ravikumar N, **Frangi AF**, A Generative Shape Compositional Framework to Synthesize Populations of Virtual Chimeras. IEEE Trans Neural Netw Learn Syst. 2025;36:4750–64.

J311. Lekadir K, **Frangi AF**, Porras AR, Glocker B, Cintas C, Langlotz CP, Weicken E, Asselbergs FW, Prior F, Collins GS, Kaissis G, Tsakou G, Buvat I, Kalpathy-Cramer J, Mongan J, Schnabel JA, Kushibar K, Riklund K, Marias K, Amugongo LM, Fromont LA, Maier-Hein L, Cerdá-Alberich L, Martí-Bonmatí L, Cardoso MJ, Bobowicz M, Shabani M, Tsiknakis M, Zuluaga MA, Fritzsche MC, Camacho M, Linguraru MG, Wenzel M, De Bruijne M, Tolsgaard MG, Goisauf M, Cano Abadía M, Papanikolaou N, Lazrak N, Pujol O, Osuala R, Napel S, Colantonio S, Joshi S, Klein S, Aussó S, Rogers WA, Salahuddin Z, Starmans MPA, FUTURE-AI: international consensus guideline for trustworthy and deployable artificial intelligence in healthcare. BMJ 2025;388:e081554.

J310. Liu Q, Lassila T, Lin F, MacRaild M, Patankar T, Islim F, Song S, Xu H, Chen X, Taylor ZA, Sarrami-Foroushani A, **Frangi AF**, Key influencers in an aneurysmal thrombosis model: A sensitivity analysis and validation study. APL Bioeng 2025;9:016107.

J309. Lashgari M, Yang Z, Bernabeu MO, Li JR, **Frangi AF**, SpinDoctor-IVIM: A virtual imaging framework for intravoxel incoherent motion MRI. Med Image Anal. 2025;99:103369.

J308. Chew E, Burns S, Abraham A, Bakhoum M, Beckman J, Chui T, Finger R, **Frangi AF**, Gottesman R, Grant M, Hanssen H, Lee C, Meyer M, Rizzoni D, Rudnicka A, Schuman J, Seidelmann S, Tang HW, Adhikari B, Danthi N, Hong Y, Reid D, Shen G, Oh Y, Standardization and Clinical Applications of Retinal Imaging Biomarkers for Cardiovascular Disease: NHLBI Workshop/Roadmap. Nat Rev Cardiol. 2025;22:47–63.

J307. Wu K, Xia Y, Ravikumar N, **Frangi AF**, Compressed Sensing using a Deep Adaptive Perceptual Generative Adversarial Network for MRI Reconstruction from Undersampled K-space Data. Biomed Signal Process Control. 2024;96:106560.

J306. Harkness R, **Frangi AF**, Zucker K, Ravikumar N, Multi-centre benchmarking of deep learning models for COVID-19 detection in chest x-rays. Front. Radiol. 2024;4:1386906.

J305. Abadi E, Barufaldi B, Lago M, Badal A, Mello-Thoms C, Bottenus N, Wangerin K, Goldburgh M, Tarbox L, Beaucage-Gauvreau E, **Frangi AF**, Maidment A, Kinahan P, Bosmans H, Samei E, Towards widespread use of virtual trials in medical imaging innovation and regulatory science. Med Phys. 2024;51:9394–404.

J304. Nabavi S, Hashemi M, Moghaddam ME, Abin AA, **Frangi AF**, Automated Cardiac Coverage Assessment in Cardiovascular Magnetic Resonance Imaging using a Recurrent 3D Dual-Domain Convolutional Network. Med Phys. 2024;51:8789–803.

J303. Mou L, Lin J, Zhao Y, Liu Y, Ma S, Zhang J, Lv W, Zhou T, **Frangi AF**, Zhao Y, COSTA: A Multi-center TOF-MRA Dataset and A Style Self-Consistency Network for Cerebrovascular Segmentation. IEEE Trans Med Imaging. 2024;43:4442–56.

J302. Thomson RJ, Grafton-Clarke C, Matthews G, Swoboda PP, Swift AJ, **Frangi A**, Petersen SE, Aung N, Garg P, Risk factors for raised left ventricular filling pressure by cardiovascular magnetic resonance: Prognostic insights. ESC Heart Fail 2024;11:4148–59.

J301. MacRaild M, Sarrami-Foroushani A, Lassila T, **Frangi AF**, Reduced order modelling of intracranial aneurysm flow using proper orthogonal decomposition and neural networks. Int J Numer Meth Biomed Eng. 2024;40:e3848.

J300. Zhang S, Fang Y, Nan Y, Wang S, Ding W, Ong YS, **Frangi AF**, Pedrycz W, Walsh S, Yang G, Fuzzy Attention-based Border Rendering Orthogonal Network for Lung Organ Segmentation. IEEE Trans Fuzzy Syst. 2024;32:5462–76.

J299. Zhao Y, Hao J, Kwapong W, Shen T, Fu H, Xu Y, Lu Q, Liu S, Zhang J, Liu Y, Zhao Y, Zheng Y, **Frangi AF**, Zhang S, Qi H, Early Detection of Dementia through Retinal Imaging and Trustworthy AI. Nature Digit Med. 2024;7:294.

J298. Liu X, Wu Z, Wang X, Q L, Pozo JM, **Frangi AF**, Joint magnetic resonance imaging artifacts and noise reduction on discrete shape space of images. Pattern Recognit. 2024;153:110495.

J297. Zhang L, Bronik K, Piechnik SK, Lima JAC, Neubauer S, Petersen SE, **Frangi AF**, Automatic Plane Pose Estimation for Cardiac Left Ventricle Coverage Estimation via Deep Adversarial Regression Network. IEEE Trans Artif Intell. 2024;5:4738–52.

J296. Liu Z, Wang X, Wu Z, Ju X, Zhu YC, **Frangi AF**, MRI Joint Super-Resolution and Denoising based on Conditional Stochastic Normalizing Flow. IEEE Trans Artif Intell. 2024;6:1472–87.

J295. Girach Z, Sarian A, Maldonado-García C, Ravikumar N, Sergouniotis PI, Rothwell PM, **Frangi AF**, Julian TH, Retinal imaging for the assessment of stroke risk: a systematic review. J Neurol. 2024;271:2285–97.

J294. Wong MYZ, Vargas JD, Naderi H, Sanghvi MM, Raisi-Estabragh Z, Suinesiaputra A, Bonazzola R, Attar R, Ravikumar N, Hann E, Neubauer S, Piechnik SK, **Frangi AF**, Petersen SE, Aung N, Concurrent Left Ventricular Myocardial Diffuse Fibrosis and Left Atrial Dysfunction Strongly Predict Incident Heart Failure. JACC Cardiovasc Imaging 2024;17:560–2.

J293. Bonazzola R, Ferrante E, Ravikumar N, Xia Y, Keavney B, Plein S, Syeda-Mahmood T, **Frangi AF**, Unsupervised ensemble-based phenotyping enhances gene discoverability in imaging genetics: new associations from left-ventricular morphology. Nature Mach. Intell. 2024;6:291–306.

J292. Xie J, Yi Q, Wu Y, Zheng Y, Liu Y, Macerollo A, Fu H, Xu Y, Zhang J, Behera A, Fan C, **Frangi AF**, Liu J, Lu Q, Qi H, Zhao Y, Deep segmentation of OCTA for evaluation and association of changes of retinal microvasculature with Alzheimer's disease and mild cognitive impairment. Br J Ophthalmol. 2024;108:432–9.

J291. MacRaild M, Sarrami-Foroushani A, Lassila T, **Frangi AF**, Accelerated simulation methodologies for computational vascular flow modelling. J R Soc Interface 2024;21:20230565.

J290. Aksoy N, Sharoff S, Baser S, Ravikumar N, **Frangi AF**, Beyond images: an integrative multi-modal approach to chest x-ray report generation. Front Radiol. 2024;4:1339612.

J289. Alzaid A, Lineham B, Dogramadzi S, Pandit H, **Frangi AF**, Xie SQ, Hip Implant Segmentation and Gruen Landmarks Detection. IEEE J Biomed Health Inform 2024;28:333–42.

J288. Chen X, Xia Y, Dall'Armellina E, Ravikumar N, **Frangi AF**, Joint shape/texture representation learning for cardiovascular disease diagnosis from MRI. Eur Heart J - Imag Meth Practice 2024;2:qyae042.

J287. Zhang J, Zhao Y, SHone F, Li Z, **Frangi AF**, Xie S, Zhang ZQ, Physics-informed Deep Learning for Musculoskeletal Modelling: Predicting Muscle Forces and Joint Kinematics from Surface EMG. IEEE Trans. Neural Syst. Rehabilitation Eng. 2023;31:484–93.

J286. Nabavi S, Simchi H, Moghaddam ME, Abin AA, **Frangi AF**, A generalised deep meta-learning model for automated quality control of cardiovascular magnetic resonance images. Comput Methods Programs Biomed 2023;242:107770.

J285. Farzi M, Coveney S, Afzali M, Zdora MC, Lygate CA, Rau C, **Frangi AF**, Dall'Armellina E, Teh I, Schneider JE, Measuring Cardiomyocyte Cellular Characteristics in Cardiac Hypertrophy using Diffusion-Weighted MRI. Magn Res Med. 2023;90:2144–57.

J284. H H, Pan N, **Frangi AF**, Fully Automatic initialization and segmentation of left and right ventricles for large-scale cardiac MRI using a deeply supervised network and 3D-ASM. Comput Methods Programs Biomed 2023;240:107679.

J283. Luo M, Yang X, Wang H, Dou H, Hu X, Huang Y, Ravikumar N, Xu S, Zhang Y, Xiong Y, Xue W, **Frangi AF**, Ni D, Sun L, RecON: Online learning for sensorless freehand 3D ultrasound reconstruction. Med Image Anal. 2023;87:102810.

J282. Liu Q, Sarrami-Foroushani A, Wang Y, MacRaild M, Kelly C, Lin F, Xia Y, Song S, Ravikumar N, Patankar T, Taylor ZA, Lassila T, **Frangi AF**, Hemodynamics of thrombus formation in intracranial aneurysms: An in silico observational study. APL Bioeng 2023;7:036102.

J281. Aviyente S, **Frangi AF**, Meijering E, Muñoz-Barrutia A, Liebling M, Van De Ville D, Olivo-Marin JC, Kovačević J, Unser M, From Nano to Macro: An Overview of the IEEE Bio Image and Signal Processing Technical Committee. IEEE Signal Process Mag. 2023;40:61–71.

J280. Hartung T, Deng J, Mall R, **Frangi AF**, Emmert-Streib F, Pham TD, Editorial: Insights in AI: Medicine and public health 2022. Front Artif Intell. 2023;2:1166426.

J279. Elhaminia B, Gilbert A, Lilley J, Abdar M, **Frangi AF**, Scarsbrook A, Appelt A, Gooya A, Toxicity Prediction in Pelvic Radiotherapy Using Multiple Instance Learning and Cascaded Attention Layers. IEEE J Biomed Health Inform. 2023;27:1958–.1966.

J278. Lin F, Xia Y, Song S, Ravikumar N, **Frangi AF**, High-Throughput 3DRA Segmentation of Brain Vasculature and Aneurysms using Deep Learning. Comput Methods Programs Biomed 2023;230:107355.

J277. Song X, Zhou F, **Frangi AF**, Cao J, Xiao X, Lei X, Wang T, Lei B, Multi-Center and Multi-Channel Pooling GCN for Early AD Diagnosis Based on Dual-Modality Fused Brain Network. IEEE Trans Med Imaging. 2023;42:354–67.

J276. Zakeri A, Hokmabadi A, Bi N, Wijesinghea I, Nix MG, Petersen SE, **Frangi AF**, Gooya A, DragNet: learning-based deformable registration for realistic cardiac MR sequence generation from a single frame. Med Image Anal. 2023;83:102678.

J275. Zhao Y, Bao T, Li Z, Qian J, **Frangi AF**, Xie S, Zhang ZQ, Boosting Personalised Musculoskeletal Modelling with Physics-informed Knowledge Transfer. IEEE Trans Instrum Meas. 2023;72:1–11.

J274. Kassab-Bachi A, Ravikumar N, Wilcox RK, **Frangi AF**, Taylor ZA, Contribution of shape features to intradiscal pressure and facets contact pressure in L4/L5 FSUs: An in-silico study. Ann Biomed Eng. 2023;51:174–78.

J273. Abdar M, Fahami MA, Rundo L, Radeva P, **Frangi AF**, Acharya U, Khosravi A, Lam HK, Jung A, Nahavandi S, Hercules: Deep Hierarchical Attentive Multi-Level Fusion Model with Uncertainty Quantification for Medical Image Classification. IEEE Trans Industr Inform. 2023;19:274–85.

J272. Frood R, Clark M, Burton C, Tsoumpas C, **Frangi AF**, Gleeson F, Patel C, Scarsbrook AF, Discovery of Pre-Treatment FDG PET/CT-Derived Radiomics-Based Models for Predicting Outcome in Diffuse Large B-Cell. Cancers 2022;14:1711.

J271. Lashgari M, Ravikumar N, Teh I, Li JR, Buckley DL, Schneider JE, **Frangi AF**, Three-dimensional micro-structurally informed in silico myocardium– towards virtual imaging trials in cardiac diffusion-weighted MRI. Med Image Anal. 2022;82:102592.

J270. Frood R, Clark M, Burton C, Tsoumpas C, **Frangi AF**, Gleeson F, Patel C, Scarsbrook A, Utility of pre-treatment FDG PET/CT–derived machine learning models for outcome prediction in classical Hodgkin lymphoma. Eur Radiol 2022;32:7237–47.

J269. Farzi M, Pozo JM, McCoskey EV, Eastell R, Harvey NC, **Frangi AF**, Wilkinson JM, Quantitating Age-Related BMD Textural Variation from DXA Region-Free-Analysis: A Study of Hip Fracture Prediction in Three Cohorts. J Bone Miner Res. 2022;37:1679–88.

J268. Huang Z, Lei H, Chen G, **Frangi AF**, Xu Y, Elazab A, Qin J, Lei B, Parkinson's Disease Classification and Clinical Score Regression via United Embedding and Sparse Learning from Longitudinal Data. IEEE Trans Neural Netw Learn Syst. 2022;33:3357–71.

J267. Harkness R, Hall G, **Frangi A**, Ravikumar N, Zucker K, The Pitfalls of Using Open Data to Develop Deep Learning Solutions for COVID-19 Detection in Chest X-Rays. Stud Health Technol Inform. 2022;6:679–83.

J266. Xia Y, Chen X, Ravikumar N, Kelly C, Attar R, Aung N, Neubauer S, Petersen SE, **Frangi AF**, Automatic 3D+t Four-Chamber CMR Quantification of the UK Biobank: integrating imaging and non-imaging data priors at scale. Med Image Anal. 2022;80:102498.

J265. Xia Y, Ravikumar N, **Frangi AF**, Learning to complete incomplete hearts for population analysis of cardiac MR images. Med Image Anal. 2022;77:102354.

J264. Diaz-Pinto A, Attar R, Ravikumar N, Suinesiaputra A, Zhao Y, Levelt E, Dall'Armellina E, Lorenzi M, Chen Q, Keenan TDL, Agrón E, Chew EY, Lu Z, Gale CP, Plein S, **Frangi AF**, Predicting Infarction through your Retinal Scans and Minimal Personal Information. Nat Machine Intel. 2022;4:55–61.

J263. Luo X, Stoyanov D, Hata N, **Frangi AF**, Taylor RH, Peters TM, Guest Editorial Special Section on Surgical Vision, Navigation, and Robotics. IEEE Trans Med Robot Bionics. 2022;4:2–4.

J262. Zakeri A, Hokmabadi A, Ravikumar N, **Frangi AF**, Gooya A, A probabilistic deep motion model for unsupervised cardiac shape anomaly assessment. Med Image Anal. 2022;75:e052887.

J261. Danilov VV, Gerget OM, Klyshnikov KY, **Frangi AF**, Ovcharenko EA, Analysis of Deep Neural Networks for Detection of Coronary Artery Stenosis. Program Comput Softw. 2021;47:153–60.

J260. Chen X, Ravikumar N, Xia Y, Attar R, Diaz-Pinto A, Piechnik SK, Neubauer S, Petersen SE, **Frangi AF**, Shape registration with learned deformations for 3D shape reconstruction from sparse and incomplete point clouds. Med Image Anal. 2021;74:102228.

J259. Lei B, Cheng N, **Frangi AF**, Wei Y, Yu B, Liang L, Mai W, Duan G, Nong X, Li C, Su J, Wang T, Zhao L, Deng D, Zhang Z, Auto-weighted Centralised Multi-Task Learning via Integrating Functional and Structural Connectivity for Subjective Cognitive Decline Diagnosis. Med Image Anal. 2021;74:102248.

J258. Nadarajah R, Wu J, **Frangi AF**, Hogg D, Cowan C, Gale C, What is next for screening for undiagnosed atrial fibrillation? Artificial intelligence may hold the key. Eur Heart J Qual Care Clin Outcomes. 2021;23:qcab094.

J257. Van den Eynde J, Manlhiot C, Van De Bruaene A, Diller GP, **Frangi AF**, Budts W, Kutty S, Medicine-Based Evidence in Congenital Heart Disease: How Artificial Intelligence Can Guide Treatment Decision. Front Cardiovasc Med. 2021;8:798215.

J256. Pal A, Chaturved A, Chandra A, Chatterjee R, Senapat S, **Frangi AF**, Garain U, MICaps: Multi-Instance Capsule Network for Machine Inspection of Munro's Microabscess. Comp Biol Med. 2021;140:105071.

J255. Nadarajah R, Wu J, **Frangi AF**, Hogg D, Cowan C, Gale C, Predicting patient-level new-onset atrial fibrillation from population-based nationwide electronic health records: protocol of FIND-AF for developing a precision medicine prediction model using artificial intelligence. BMJ Open. 2021;11:e052887.

J254. Frood R, Burton C, Tsoumpas C, **Frangi AF**, Gleeson F, Patel C, Scarsbrook A, Baseline PET/CT imaging parameters for prediction of treatment outcome in Hodgkin and diffuse large B-cell lymphoma: A Systematic Review. Eur J Nucl Med Mol Imaging. 2021;48:3198–220.

J253. Hu H, Pan N, Lui H, Liu L, Yin T, Tu Z, **Frangi AF**, Automatic segmentation of left and right ventricles in cardiac MRI using 3D-ASM and deep learning. Signal Process Image Commun. 2021;96:116303.

J252. Guo L, Lei B, Chen W, Dua J, **Frangi AF**, Qin J, Zhao C, Shi P, Xia B, Wang T, Dual Attention Enhancement Feature Fusion Network for Segmentation and Quantitative Analysis of Paediatric Echocardiography. Med Image Anal. 2021;71:102042.

J251. Smye SW, **Frangi AF**, Interdisciplinary research: shaping the healthcare of the future. Future Healthc J. 2021;8:e218–e223.

J250. Nabavi S, Ejmalian A, Moghaddam ME, Abin AA, **Frangi AF**, Mohammadi M, Rad HS, Medical imaging and computational image analysis in COVID-19 diagnosis: A review. Comput Biol Med. 2021;135:104605.

J249. Yang X, Li H, Wang Y, Liang K, Chen C, Zhou X, Zeng F, Fang J, **Frangi AF**, Chen Z, Ni D, Contrastive Rendering with Semi-supervised Learning for Ovary and Follicle Segmentation from 3D Ultrasound. Med Image Anal. 2021;73:102134.

J248. Sarrami-Foroushani A, Lassila T, MacRaild M, Asquith J, Roes KCB, Byrne JV, **Frangi AF**, In-silico trial of intracranial flow diverters replicates and expands insights from conventional clinical trials: Supplementary material. Nat Comm. 2021;12:3861.

J247. Song X, Zhou F, **Frangi AF**, Cao J, Xiao X, Lei Y, Wang T, Lei B, Graph Convolution Network with Similarity Awareness and Adaptive Calibration for Disease-induced Deterioration Prediction. Med Image Anal. 2021;61.

J246. Vukicevic AM, Zelic K, Milasinovic D, Sarrami-Foroushani A, Jovicic G, Milovanovic P, Djuric M, Filipovic N, **Frangi AF**, Open-Mandible: An open-source framework for highly realistic numerical modelling of lower mandible physiology. Dent Mater. 2021;37:612–24.

J245. Mendonca TV, Jones AA, Pozo JM, Baxendale S, Whilfield TT, **Frangi AF**, Origami: Single-cell 3D shape dynamics oriented along the apico-basal axis of folding epithelia from fluorescence microscopy. PLoS Comp Biol. 2021;17:e1009063.

J244. Danilov VV, Klyshnikov KY, Gerget OM, Kutikhin AG, Ganyukov VI, **Frangi AF**, Ovcharenko E, Real-time coronary artery stenosis detection based on modern neural networks. Sci Rep. 2021;11:7582.

J243. Attanasio A, Alberti C, Scaglioni B, Marahrens N, **Frangi AF**, Leonetti M, Biyani C, De Momi E, Valdastri P, A Comparative Study of Spatio-Temporal U-Nets for Tissue Segmentation in Surgical Robotics. IEEE Trans Med Robotics Bionics. 2021;3:53–63.

J242. Dembowska S, **Frangi AF**, Houwing-Duistermaat J, Liu H, Multivariate functional partial least squares for classification using longitudinal data. Theor Biol Forum. 2021;114:75–88.
J241. Hu Y, Lei B, Guo L, Mao M, Jin Z, Du J, Xia B, **Frangi AF**, Wang T, AIDAN: An Attention-guided Dual-path Network for Pediatric Echocardiography Segmentation. IEEE Access. 2020;8:29176–87.
J240. Attanasio A, Scaglione B, Leonetti M, **Frangi AF**, Cross W, Biyani CS, Valdastri P, Autonomous Tissue Retraction in Robotic Assisted Minimally Invasive Surgery - A Feasibility Study. IEEE Robot Autom Lett. 2020;5:6528–35.
J239. Li F, Song D, Chen H, Xiong J, Li X, Zhong H, Tang G, Fan S, Lam DSC, Pan W, Zheng Y, Li Y, Qu G, He J, Wang Z, Jin L, Zhou R, Song Y, Sun Y, Cheng W, Yang C, Fan Y, Li Y, Zhang H, Yuan Y, Xu Y, Xiong Y, Jin L, Lv A, Niu L, Liu Y, Li S, Zhang J, Zangwill LM, **Frangi AF**, Aung T, Cheng CY, Qiao Y, Zhang X, Ting DSW, Development and clinical deployment of a smartphone-based visual field deep learning system for glaucoma detection (iGlaucoma): a multicenter study. Nature Digit Med. 2020;22:123.
J238. Fu T, Yang J, Li Q, Ai D, Song H, Jiang Y, Wang Y, **Frangi AF**, Groupwise Registration with Global-local Graph Shrinkage in Atlas Construction. Med Image Anal. 2020;64:101711.
J237. Abadi E, Segars WP, Tsui BMW, Kinahan PE, Bottenus N, **Frangi AF**, Maidment A, Lo J, Samei E, Virtual clinical trials in medical imaging: a review. J Medical Imaging. 2020;7:042805.
J236. Littlejohns T, Holliday J, Gibson L, Garratt S, Oesingmann N, Alfaro-Almagro F, Bell J, Boultwood C, Collins R, Conroy M, Crabtree N, Doherty R, **Frangi AF**, Harvey N, Leeson L, Miller L, Neubauer S, Petersen SE, Sellors J, Sheard J, Smith S, Sudlow C, Matthews P, Allen N, The UK Biobank imaging enhancement of 100,000 participants: rationale, data collection, management and future directions. Nat Comm. 2020;11:2624–.
J235. Lei B, Cheng N, **Frangi AF**, Tanc EL, Yang P, Elazab A, Dua J, Xu Y, Wang T, Self-calibrated Brain Network Estimation and Joint Non-Convex Multi-Task Learning for Identification of Early Alzheimer's Disease. Med Image Anal. 2020;61:101652.
J234. Asif M, Chen L, Song H, Yang J, **Frangi AF**, An Automatic Framework for Endoscopic Image Restoration and Enhancement. Appl Intell. 2020;51.
J233. Vukicevic AM, Milic V, Zabotti A, Hocevar A, De Lucia O, Filippou G, **Frangi AF**, Tzioufas A, De Vita S, Filipovic N, Radiomics-based assessment of Primary Sjögren's Syndrome from salivary gland ultrasonography images. IEEE J Biomed Health Inform. 2020;24:835–43.
J232. Wang C, Oda M, Hayashi Y, Yoshino Y, Yamamoto T, **Frangi AF**, Mori K, Tensor-cut: A Tensor-based Graph-cut Blood Vessel Segmentation Method and Its Application to Renal Artery Segmentation. Med Image Anal. 2020;60:101623.
J231. Lei B, Yu S, Zhao X, **Frangi AF**, Tanc EL, Elazab A, Wang T, Wang S, Early Alzheimer's Disease Diagnosis Based on Dynamic High Order Networks. Brain Imaging Behav. 2020;15:276–87.
J230. Mou L, Zhao Y, Fu H, Liu Y, Cheng J, Zheng Y, Su P, Yang J, Cheng L, **Frangi AF**, Akiba M, Liu J, CS2-Net: Deep Learning Segmentation of Curvilinear Structures in Medical Imaging. Med Image Anal. 2020;67:101874.
J229. Xia Y, Zhang L, Ravikumar N, Attar R, Piechnik S, Neubauer S, Petersen P, **Frangi AF**, Recovering from Missing Data in Population Imaging - Cardiac MR Image Imputation via Conditional Generative Adversarial Nets. Med Image Anal. 2020;67:101812.
J228. Lassila T, Sarrami-Foroushani A, Hejazi SM, **Frangi AF**, Population-specific modelling of between/within-subject flow variability in the carotid arteries of the elderly. Int J Num Meth Biomed Eng. 2020;36:e3271.
J227. Waller R, Baxter L, Fillingham DJ, Coelho S, Pozo JM, Mozumder M, **Frangi AF**, Ince PG, Simpson JE, Highley JR, Iba-1-/CD68+ microglia are a prominent feature of age-associated deep subcortical white matter lesions. PLOS One. 2019;14:e0210888.
J226. Aime S, Alberich A, Almen A, Arthurs O, Barthel H, Clément O, Crean M, de Souza N, Demuth F, Dewey M, Dousset V, **Frangi A**, Garos C, Golay X, Gordebeke P, Günther M, Hahn H, Hierath M, Hoeschen C, Hunink M, Kauczor H, Krestin G, Krischak K, Langs G, Liu Y, Marti-Bonmati L, Matos C, Mayerhofer-Sebera U, McNulty J, Muylle K, Neeman M, Niessen J, Nikolaou K, Pereira P, Persson A, Pifferi A, Riklund K, Rockall A, Rosendahl K, Sardanelli F, Sourbron S, Speck O, Valentini V, Zolda P, The European Institute for Biomedical Imaging Research (EIBIR), Strategic research agenda for biomedical imaging. Insights into Imaging 2019;10.
J225. Vardakis JC, Bonfanti M, Franzetti G, Guo L, Lassila T, Mitolo M, Hoz de Vila M, Greenwood JP, Maritati G, Chou D, Taylor ZA, Venneri A, Homer-Vanniasinkam S, Balabani S, **Frangi AF**, Ventikos Y, Diaz-Zuccarini V, Highly integrated workflows for exploring cardiovascular conditions: Exemplars of precision medicine in Alzheimer's disease and aortic dissection. Morphologie. 2019;103:148–60.
J224. Schnabel J, Davatzikos C, Fichtinger G, **Frangi AF**, Alberola-López C, Editorial: Special Issue on MICCAI 2018. Med Image Anal. 2019;58:101560.
J223. Vardakis JC, Guo L, Peach TW, Lassila T, Mitolo M, Chou D, Taylor ZA, Varma S, Venneri A, **Frangi AF**, Ventikos Y, Fluid-Structure Interaction for Highly Complex, Statistically Defined, Biological Media: Homogenisation and a 3D Multi-Compartmental Poroelastic Model for Brain Biomechanics. J Fluids Struct 2019;91:102641.
J222. Song AF, Yang J, Ai D, Du C, Huang Y, Song H, Zhang L, Han Y, Wang Y, Patch-Based Adaptive Background Subtraction for Vascular Enhancement in X-Ray Cineangiograms. IEEE J Biomed Health Inform. 2019;23:2563–75.
J221. Mozumder M, Pozo JM, Coelho S, **Frangi AF**, Population-based Bayesian regularization for microstructural diffusion MRI with NODDIDA. Magn Res Med. 2019;82:1553–65.
J220. Yan Q, Zhao Y, Zheng Y, Liu Y, Zhou K, **Frangi AF**, Liu J, Automated retinal lesion detection via image saliency analysis. Med Phys. 2019;46:4531–44.
J219. Diaz-Pinto AY, Colomer A, Naranjo V, Morales S, Xu Y, **Frangi AF**, Retinal Image Synthesis and Semi-supervised Learning for Glaucoma Assessment. IEEE Trans Med Imaging. 2019;38:2211–8.
J218. Fichtinger G, Schnabel J, Davatzikos C, **Frangi AF**, Alberola-López C, Editorial IJCARS-MICCAI 2018 Special Issue. Int J Comput Assist Radiol Surg. 2019;14:1461.
J217. Coelho S, Pozo JM, Jespersen SN, Jones DK, **Frangi AF**, Resolving degeneracy in diffusion MRI biophysical model parameter estimation using double diffusion encoding. Magn Res Med. 2019;82:395–41.
J216. Zhang L, Gooya A, Pereanez M, Dong B, Piechnik SK, Neubauer S, Petersen SE, **Frangi AF**, Automatic Assessment of Full Left Ventricular Coverage in Cardiac Cine Magnetic Resonance Imaging with Fisher- Discriminative 3D CNN. IEEE Trans Biomedical Eng. 2019;60:1975–86.
J215. Fehri H, Gooya A, Lu Y, Meijering EHW, Johnston S, **Frangi AF**, Bayesian Polytrees with Learned Deep Features for Multi-Class Cell Segmentation. IEEE Trans Image Process. 2019;28:3246–60.

J214. Sarrami-Foroushani A, Lassila T, Hejazi SM, Nagaraja S, Bacon A, **Frangi AF,** A computational model for prediction of clot platelet content in flow-diverted intracranial aneurysms. J Biomech. 2019;25:7–13.
J213. Shaukat F, Raja G, **Frangi AF,** Computer-Aided Detection of Lung Nodules: A Review. J Med Imaging. 2019;6:020901.
J212. Farzi M, Pozo JM, McCloskey E, Eastell R, Harvey N, Wilkinson JM, **Frangi AF,** A Spatio-Temporal Ageing Atlas of the Proximal Femur. IEEE Trans Med Imaging. 2019;39:1359–68.
J211. Venneri A, Mitolo M, Beltrachini L, Varma S, Della Pieta C, Jahn-Carta C, **Frangi AF**, De Marco M, Beyond Episodic Memory: Semantic Processing as Independent redictor of Hippocampal/Perirhinal Volume in Aging and Mild Cognitive Impairmenet due to Alzheimer's Disease. Neuropsychol. 2019;33:523–33.
J210. Attar R, Perenez M, Gooya A, Alba X, Zhang L, Hoz M, Lee AM, Aung N, Lukaschuk E, Sanghvi K, Paiva JM, Piechnik SK, Neubauer S, Petersen SE, **Frangi AF,** Quantitative CMR Population Imaging on 20,000 Subjects of the UK Biobank Imaging Study: LV/RV Quantification Pipeline and its Evaluation. Med Image Anal. 2019;25:26–42.
J209. Ravikumar N, Gooya A, Beltrachini L, **Frangi AF**, Taylor ZA, Generalised coherent point drift for group-wise multi-dimensional analysis of diffusion brain MRI data. Med Image Anal. 2019:47–63.
J208. Fathi-Kazerooni A, Pozo JM, McCloskey EV, Saligheh-Rad H, **Frangi AF,** Diffusion MRI For Assessment of Bone Quality; A Review of Findings in Healthy Aging and Osteoporosis. J Magn Res Imaging. 2019;51:975–92.
J207. Mozumder M, Pozo JM, Coelho S, Costantini M, Simpson J, Highley R, G IP, **Frangi AF,** Quantitative histomorphometry of capillary microstructure in deep white matter. NeuroImage: Clin. 2019;25:101839.
J206. Coelho S, Pozo JM, Costantini M, Highley JR, Mozumder M, Simpson J, Ince PG, **Frangi AF,** Histological data of axons, astrocytes, and myelin in deep subcortical white matter populations. Data Brief 2019;6:103762.
J205. Song S, Du C, Liu X, Huang Y, Song H, Jiang Y, Ai D, **Frangi AF**, Wang Y, Yang J, Deep Motion Tracking from Multiview Angiographic Image Sequences for Synchronization of Cardiac Phases. Phys Med Biol. 2019;64:025018.
J204. Lassila T, Di Marco LY, Mitolo M, Iaia V, Levedianos G, Venneri A, **Frangi AF,** Screening for Cognitive Impairment by Model Assisted Cerebral Blood Flow Estimation. IEEE Trans Biomedical Eng. 2018;65:1654–61.
J203. Fathi-Kazerooni A, Nabil M, Zeinali-Zadeh M, Firouznia K, Azmoudeh-Ardalan F, **Frangi AF**, Davatzikos C, Saligheh-Rad H, Characterization of Active and Infiltrative Tumorous Subregions from Normal Tissue in Brain Gliomas Using Multi-Parametric MRI. J Mag Res Imaging. 2018;48:938–50.
J202. Nemat H, Fehri H, Ahmadinejad N, **Frangi AF**, Gooya A, Classification of Breast Lesions in Ultrasonography Using Sparse Logistic Regression and Morphology-based Texture Features. Med Phys. 2018;45:4112–24.
J201. Maier-Hein L, Eisenmann M, Reinke A, Onogur S, Stankovic M, Scholz P, Arbel T, Bogunovic H, Bradley A, Feldmann C, **Frangi AF**, Full P, van Ginneken B, Hanbury A, Honauer K, Kozubek M, Landman B, März K, Maier O, Maier-Hein K, Menze B, Müller H, Neher P, Niessen WJ, Rajpoot N, Sharp G, Sirinukunwattana K, Speidel S, Stock C, Stoyanov D, Aziz Taha A, van der Sommen F, Wang CW, Weber MA, Zheng G, Jannin P, Kopp-Schneider A, Why rankings of biomedical image analysis competitions should be interpreted with care? Nat Commun. 2018;9:5217.
J200. Coelho S, Pozo JM, Costantini M, Mozumder M, Highley JR, Ince PG, **Frangi AF,** Local volume fraction distributions of axons, astrocytes, and myelin in deep subcortical white matter. Neuroimage 2018;179:275–87.
J199. Mozumder M, Beltrachini L, Collier Q, Pozo JM, **Frangi AF,** Simultaneous magnetic resonance diffusion and pseudo-diffusion tensor imaging. Magn Res Med. 2018;79:2367–78.
J198. Gooya A, Lekadir K, Castro-Mateos I, Pozo JM, **Frangi AF,** Mixture of probabilistic principal component analyzers for shapes from point sets. IEEE Trans Pattern Anal Mach Intell. 2018;40:891–904.
J197. Ngoepe MN, **Frangi AF**, Byrne JV, Ventikos Y, Thrombosis in cerebral aneurysms and the computational modelling thereof: A review. Front Physiol- Computational Physiology and Medicine. 2018;9:e00306.
J196. **Frangi AF**, Tsaftaris SA, Prince JL, Editorial: Special issue on Simulation and Synthesis in Medical Imaging. IEEE Trans Med Imaging. 2018;37:673–9.
J195. Huang Y, Shao L, **Frangi AF,** Cross-Modality Image Synthesis via Weakly-Coupled and Geometry Co-Regularized Joint Dictionary Learning. IEEE Trans Med Imaging. 2018;37:815–27.
J194. Chen X, Pengfei J, Yiping W, Henghui Z, Liao W, Taylor ZA, **Frangi AF,** A Surface-based Approach to Determine Key Spatial Parameters of the Acetabulum in a Standardized Pelvic Coordinate. Med Eng Phys. 2018;52:22–30.
J193. Suinesiaputra A, Ablin P, Alba X, Alessandrini M, Allen J, Bai W, Cimen S, Claes P, Cowan BR, D'hooge J, Duchateau N, Ehrhardt J, **Frangi AF**, Gooya A, Grau V, Lekadir K, Lu A, Mukhopadhyay A, Oksuz I, Parajali N, Pennec X, Pereanez M, Pinto C, Piras P, Rohe MM, Rueckert D, Saring D, Sermesant M, Siddiqi K, Tabassian M, Teresi L, Tsaftaris SA, Wilms M, Young AA, Zhang X, Medrano-Gracia P, Statistical shape modeling of the left ventricle: myocardial infarct classification challenge. IEEE J Biomed Health Inform. 2018;22:503–15.
J192. Guo L, Vardakis JC, Lassila T, Mitolo M, Ravikumar N, Chou D, Lange M, Sarrami-Foroushani A, Tully BJ, Taylor ZA, Varma S, Venneri A, **Frangi AF**, Ventikos Y, Subject-specific multiporoelastic model for exploring the risk factors associated with the early stages of Alzheimer's Disease. Interface Focus. 2018;8:e20170019.
J191. Alba X, Lekadir K, Young AA, Pereañez M, Medrano-Gracia P, **Frangi AF,** Automatic Initialization and Quality Control of Large-Scale Cardiac MRI Segmentations. Med Image Anal. 2018:129–45.
J190. Vukicevic A, Çimen S, Jagic N, Jovicic G, **Frangi AF**, Filipovic N, Reconstruction and structured meshing of coronary arteries from X-ray angiography. Sci Reports. 2018;8:1711ff.
J189. Kasztelnik M, Coto E, Bubak M, Malawski M, Nowakowski P, Arenas J, Saglimbeni A, Testi D, **Frangi AF,** Support for Taverna workflows in the VPH-Share cloud platform. Comput Methods Programs Biomed 2017;146:37–46.
J188. Hua R, Pozo JM, Taylor ZA, **Frangi AF,** Multiresolution eXtended Free-Form Deformations (XFFD) for non-rigid registration with discontinuous transforms. Med Image Anal 2017;36:113–22.
J187. Parker A, Yang L, Farzi M, Pozo JM, **Frangi AF**, Wilkinson MJ, Quantifying Pelvic Periprosthetic Bone Remodeling Using Dual-Energy X-Ray Absorptiometry Region-Free Analysis. J Clin Densitom. 2017;20:480–5.
J186. Geers AJ, Morales HG, Larrabide I, Butakoff C, Bijlenga P, **Frangi AF,** Wall shear stress at the initiation site of cerebral aneurysms. Biomech Model Mechanobiol 2017;16.
J185. De Marco M, Vallelunga A, Meneghello F, Varma S, **Frangi AF**, Venneri A, ApoE ε4 Allele Related Alterations in Hippocampal Connectivity in Early Alzheimer's Disease Support Memory Performance. Curr Alzheimer Res 2017;14:766–77.

J184. Ravikumar N, Gooya A, Çimen S, **Frangi AF**, Taylor ZA, Group-wise similarity registration of point sets using Student's t-mixture model for statistical shape models. Med Image Anal. 2017:156–76.
J183. Manap RA, Shao L, **Frangi AF**, PATCH-IQ: A patch based learning framework for blind image quality assessment. Inform Sciences. 2017;420:329–44.
J182. Farzi M, Morris RM, Penny J, Yang L, Pozo JM, Overgaard S, **Frangi AF**, Wilkinson JM, Quantitating the effect of prosthesis design on femoral remodeling using high-resolution region-free densitometric analysis (DXA-RFA). J Orthop Res. 2017;35:2203–10.
J181. De Marco M, Beltrachini L, Biancardi A, **Frangi AF**, Venneri A, Machine learning support to individual diagnosis of mild cognitive impairment using multimodal MRI and cognitive assessments. Alzheimer Dis Assoc Disord. 2017;31:278–86.
J180. Fu H, Xu Y, Lin S, Zhang X, Wong DWK, Liu J, **Frangi AF**, Baskaran M, Aung T, Segmentation and Quantification for Angle-Closure Glaucoma Assessment in Anterior Segment OCT. IEEE Trans Med Imaging. 2017;36:1930–8.
J179. Pozo JM, J GA, Villa-Uriol MC, **Frangi AF**, Interlacing Complexity Index for open flow systems based on mutual information. J Fluid Mech. 2017;825:704–42.
J178. Hoogendoorn C, Sebastian R, Rodriguez JF, Lekadir K, **Frangi AF**, An atlas- and data-driven approach to initializing reaction-diffusion systems in computer cardiac electrophysiology. Int J Numer Method Biomed Eng. 2017;33:e2846.
J177. McGrath DM, Ravikumar N, Beltrachini L, Wilkinson ID, **Frangi AF**, Taylor ZA, Evaluation of wave delivery methodology for brain MRE: insights from computational simulations. Magn Reson Med 2017;78:341–56.
J176. Shaukat F, Raja G, Gooya A, **Frangi AF**, Fully automatic and accurate detection of lung nodules in CT images using a hybrid feature set. Med Phys 2017;44:3615–29.
J175. Sarrami-Foroushani A, Lassila T, **Frangi AF**, Virtual endovascular treatment of intracranial aneurysms: models and uncertainty. Wiley Interdiscip Rev Syst Biol Med 2017;9:e1385.
J174. Elhami M, Alemi N, **Frangi AF**, Gooya A, Tracking and Diameter Estimation of Retinal Vessels Using Gaussian Process and Radon Transform. J Med Imaging. 2017;4:e034006.
J173. Lange M, Palamara S, Lassila T, Vergara C, Quarteroni A, **Frangi AF**, Improved hybrid/GPU algorithm for solving cardiac electrophysiology problems on Purkinje networks. Int J Numer Method Biomed Eng. 2017;33:e2835.
J172. Evju Ø, Pozo JM, **Frangi AF**, Mardal KA, Robustness of common hemodynamic indicators with respect to numerical resolution in 38 middle cerebral artery aneurysms. PLoS One 2017;12:e0177566.
J171. Parto Dezfouli MA, Parto Dezfouli M, Ahmadian A, **Frangi AF**, Esmaeili Rad M, Saligheh Rad H, Quantification of 1 H-MRS signals based on sparse metabolite profiles in the time-frequency domain. NMR Biomed. 2017;30:e3675.
J170. Vergara C, Lange M, Palamara S, Lassila T, **Frangi AF**, Quarteroni A, A coupled 3D-1D numerical monodomain solver for cardiac electrical activation in the myocardium with detailed Purkinje network. J Comput Phys 2016;308:218–38.
J169. McGrath DM, Ravikumar N, Wilkinson ID, **Frangi AF**, Taylor ZA, Magnetic resonance elastography of the brain: an in silico study to determine the influence of cranial anatomy. Magn Reson Med 2016;76:645–62.
J168. Yao J, Burns JE, Forsberg D, Seitel A, Rasoulian A, Abolmaesumi P, Hammernik K, Urschler M, Ibragimov B, Korez R, Vrtovec T, Castro-Mateos I, Pozo JM, **Frangi AF**, Summers RM, Li S, A multi-center milestone study of clinical vertebral CT segmentation. Comput Med Imaging Graph 2016;49:16–28.
J167. Sarrami-Foroushani A, Lassila T, Gooya A, Geers AJ, **Frangi AF**, Uncertainty quantification of wall shear stress in intracranial aneurysms using a data-driven statistical model of systemic blood flow variability. J Biomech 2016;49:3815–23.
J166. Lekadir K, Noble C, Hazrati-Marangalou J, Hoogendoorn C, Rietbergen B, Taylor ZA, **Frangi AF**, Patient-specific biomechanical modeling of bone strength using statistically-derived fabric tensors. Ann Biomed Eng 2016;44:234–46.
J165. Lekadir K, Hoogendoorn C, Armitage P, Whitby E, King D, Dimitri P, **Frangi AF**, Estimation of trabecular bone parameters in children from multisequence MRI using texture-based regression. Med Phys 2016;43:3071.
J164. Alba X, Pereanez M, Hoogendoorn C, Swift AJ, Wild JM, **Frangi AF**, Lekadir K, An algorithm for the segmentation of highly abnormal hearts using a generic statistical shape model. IEEE Trans Med Imaging 2016;35:845–59.
J163. Porras AR, Alessandrini M, Mirea O, D'hooge J, **Frangi AF**, Piella G, Integration of multi-plane tissue Doppler and b-mode echocardiographic images for left ventricular motion estimation. IEEE Trans Med Imaging 2016;35:89–97.
J162. **Frangi AF**, Taylor ZA, Gooya A, Precision imaging: more descriptive, predictive and integrative imaging. Med Image Anal 2016;33:27–32.
J161. Avegliano GP, Costabel JP, Asch F, Sciancalepore A, Kuschnir P, Huguet M, Tobon-Gomez C, **Frangi AF**, Ronderos R, Utility of real time 3D echocardiography for the assessment of left ventricular mass in patients with hypertrophic cardiomyopathy: comparison with cardiac magnetic resonance. Echocardiogr –J Card 2016;33:431–6.
J160. Karim R, Bhagirath P, Claus P, James Housden R, Chen Z, Karimaghaloo Z, Sohn HM, Lara Rodríguez L, Vera S, Albà X, Hennemuth A, Peitgen HO, Arbel T, Gonzàlez Ballester MA, **Frangi AF**, Götte M, Razavi R, Schaeffter T, Rhode K, Evaluation of state-of-the-art segmentation algorithms for left ventricle infarct from late gadolinium enhancement MR images. Med Image Anal 2016;30:95–107.
J159. Peng P, Lekadir K, Gooya A, Shao L, Petersen SE, **Frangi AF**, A review of heart chamber segmentation for structural and functional analysis using cardiac magnetic resonance imaging. MAGMA 2016;29:155–95.
J158. Lekadir K, Lange M, Zimmer VA, Hoogendoorn C, **Frangi AF**, Statistically-driven 3D fiber reconstruction and denoising from multi-slice cardiac DTI using a Markov random field model. Med Image Anal 2016;27:105–16.
J157. Castro-Mateos I, Hua R, Pozo JM, Lazary A, **Frangi AF**, Intervertebral disc classification by its degree of degeneration from T2-weighted magnetic resonance images. Eur Spine J 2016;25:2721–7.
J156. Manap R, Shao L, **Frangi AF**, Non-parametric quality assessment of natural images. IEEE Multimedia 2016;23:22–30.
J155. Lange M, Di Marco LY, Lekadir K, Lassila T, **Frangi AF**, Protective role of false tendon in subjects with left bundle branch block: a virtual population study. PLoS One 2016;11:e0146477.
J154. Butakoff C, Balocco S, Sukno FM, Hoogendoorn C, Tobon-Gomez C, Avegliano G, **Frangi AF**, Left-ventricular epi- and endocardium extraction from 3D ultrasound images using an automatically constructed 3D ASM. Comput Methods Biomech Biomed Eng Imaging Vis 2016;4:265–80.
J153. Çimen S, Gooya A, Grass M, **Frangi AF**, Reconstruction of coronary arteries from x-ray angiography: a review. Med Image Anal 2016;32:46–68.
J152. Morris RM, Yang L, Martín-Fernández MA, Pozo JM, **Frangi AF**, Wilkinson JM, High-spatial-resolution bone densitometry with dual-energy x-ray absorptiometric region-free analysis. Radiology 2015;274:532–9.

J151. Beltrachini L, Taylor ZA, **Frangi AF,** A parametric finite element solution of the generalised Bloch-Torrey equation for arbitrary domains. J Magn Reson 2015;259:126–34.
J150. Dimitri P, Jacques RM, Paggiosi M, King D, Walsh J, Taylor ZA, **Frangi AF**, Bishop N, Eastell R, Leptin may play a role in bone microstructural alterations in obese children. J Clin Endocrinol Metab 2015;100:594–602.
J149. Di Marco LY, Venneri A, Farkas E, Evans PC, Marzo A, **Frangi AF,** Vascular dysfunction in the pathogenesis of Alzheimer's disease–a review of endothelium-mediated mechanisms and ensuing vicious circles. Neurobiol Dis 2015;82:593–606.
J148. Lekadir K, Hazrati-Marangalou J, Hoogendoorn C, Taylor ZA, van Rietbergen B, **Frangi AF,** Statistical estimation of femur micro-architecture using optimal shape and density predictors. J Biomech 2015;48:598–603.
J147. Di Marco LY, Farkas E, Martin C, Venneri A, **Frangi AF,** Is vasomotion in cerebral arteries impaired in Alzheimer's disease? J Alzheimers Dis 2015;46:35–53.
J146. Cito S, Geers AJ, Arroyo MP, Palero VR, Pallares J, Vernet A, Blasco J, San Roman L, Fu W, Qiao A, Janiga G, Miura Y, Ohta M, Mendina M, Usera G, **Frangi AF,** Accuracy and Reproducibility of Patient-Specific Hemodynamic Models of Stented Intracranial Aneurysms: Report on the Virtual Intracranial Stenting Challenge 2011. Ann Biomed Eng 2015;43:154–67.
J145. Sarrami-Foroushani A, Villa-Uriol MC, Nasr Esfahany M, Coley SC, Di Marco LY, **Frangi AF**, Marzo A, Modeling of the acute effects of primary hypertension and hypotension on the hemodynamics of intracranial aneurysms. Ann Biomed Eng 2015;43:207–21.
J144. Zimmer VA, Lekadir K, Hoogendoorn C, **Frangi AF**, Piella G, A framework for optimal kernel-based manifold embedding of medical image data. Comput Med Imaging Graph 2015;41:93–107.
J143. Castro-Mateos I, Pozo JM, Pereanez M, Lekadir K, Lazary A, **Frangi AF,** Statistical interspace models (SIMs): application to robust 3D spine segmentation. IEEE Trans Med Imaging 2015;34:1663–75.
J142. Lekadir K, Hoogendoorn C, Hazrati-Marangalou J, Taylor ZA, Noble C, van Rietbergen B, **Frangi AF,** A predictive model of vertebral trabecular anisotropy from ex vivo micro-CT. IEEE Trans Med Imaging 2015;34:1747–59.
J141. Pereañez M, Lekadir K, Castro-Mateos I, Pozo JM, Lazáry Á, **Frangi AF,** Accurate segmentation of vertebral bodies and processes using statistical shape decomposition and conditional models. IEEE Trans Med Imaging 2015;34:1627–39.
J140. Wilkinson JM, Morris RM, Martin-Fernandez MA, Pozo JM, **Frangi AF**, Maheson M, Yang L, Use of high resolution dual-energy x-ray absorptiometry-region free analysis (DXA-RFA) to detect local periprosthetic bone remodeling events. J Orthop Res 2015;33:712–6.
J139. Beltrachini L, De Marco M, Taylor ZA, Lotjonen J, **Frangi AF**, Venneri A, Integration of cognitive tests and resting state fMRI for the individual identification of mild cognitive impairment. Curr Alzheimer Res 2015;12:592–603.
J138. Sarrami-Foroushani A, Nasr Esfahany M, Nasiraei Moghaddam A, Saligheh Rad H, Firouznia K, Shakiba M, Ghanaati H, Wilkinson ID, **Frangi AF,** Velocity measurement in carotid artery: quantitative comparison of time-resolved 3D phase-contrast MRI and image-based computational fluid dynamics. Iran J Radiol 2015;12.
J137. Gooya A, Davatzikos C, **Frangi AF,** A Bayesian approach to sparse model selection in statistical shape models. SIAM J Imag Sci 2015;8:858–87.
J136. Malandrino A, Pozo JM, Castro-Mateos I, **Frangi AF**, Rijsbergen MM, Ito K, Wilke HJ, Dao TT, Ho Ba Tho MC, Noailly J, On the relative relevance of subject-specific geometries and degeneration-specific mechanical properties for the study of cell death in human intervertebral disk models. Front Bioeng Biotechnol 2015;3:5.
J135. Alba X, Figueras, Lekadir K, Tobon-Gomez C, Hoogendoorn C, **Frangi AF,** Automatic cardiac lv segmentation in MRI using modified graph cuts with smoothness and interslice constraints. Magn Reson Med 2014;72:1775–84.
J134. Lekadir K, Pashaei A, Hoogendoorn C, Pereanez M, Alba X, **Frangi AF,** Effect of statistically derived fiber models on the estimation of cardiac electrical activation. IEEE Trans Biomed Eng 2014;61:2740–8.
J133. Geers AJ, Larrabide I, Morales HG, **Frangi AF,** Approximating hemodynamics of cerebral aneurysms with steady flow simulations. J Biomech 2014;47:178–85.
J132. Di Marco LY, Marzo A, Munoz-Ruiz M, Ikram MA, Kivipelto M, Ruefenacht DA, Venneri A, Soininen H, Wanke I, Ventikos Y, **Frangi AF,** Modifiable lifestyle factors in dementia: a systematic review of longitudinal observational cohort studies. J Alzheimers Dis 2014;42:119–35.
J131. Lekadir K, Hoogendoorn C, Pereanez M, Alba X, Pashaei A, **Frangi AF,** Statistical personalization of ventricular fiber orientation using shape predictors. IEEE Trans Med Imaging 2014;33:882–90.
J130. Porras AR, Alessandrini M, De Craene M, Duchateau N, Sitges M, Bijnens BH, Delingette H, Sermesant M, D'Hooge J, **Frangi AF**, Piella G, Improved myocardial motion estimation combining tissue Doppler and b-mode echocardiographic images. IEEE Trans Med Imaging 2014;33:2098–106.
J129. Pereanez M, Lekadir K, Butakoff C, Hoogendoorn C, **Frangi AF,** A framework for the merging of pre-existing and correspondenceless 3D statistical shape models. Med Image Anal 2014;18:1044–58.
J128. Moosavi MH, Fatouraee N, Katoozian H, Pashaei A, Camara O, **Frangi AF,** Numerical simulation of blood flow in the left ventricle and aortic sinus using magnetic resonance imaging and computational fluid dynamics. Comput Methods Biomech Biomed Engin 2014;17:740–9.
J127. Pavani SK, Delgado-Gomez D, **Frangi AF,** Fast training procedure for Viola-Jones type object detectors using Laplacian clutter models. Pattern Anal Appl 2014;17:441–9.
J126. Pavani SK, Delgado-Gomez D, **Frangi AF,** Gaussian weak classifiers based on co-occurring Haar-like features for face detection. Pattern Anal Appl 2014;17:431–9.
J125. Avegliano G, Costabel JP, Huguet M, Thierer J, Trivi M, Catalina TG, Petit M, Bijnens B, **Frangi AF**, Ronderos R, Influence of dynamic obstruction and hypertrophy location on diastolic function in hypertrophic cardiomyopathy. J Cardiovasc Med 2014;15:207–13.
J124. Castro-Mateos I, Pozo JM, Cootes TF, Wilkinson JM, Eastell R, **Frangi AF,** Statistical shape and appearance models in osteoporosis. Curr Osteoporos Rep 2014;12:163–73.
J123. Porras AR, Piella G, Berruezo A, Fernández-Armenta J, **Frangi AF,** Pre to Intraoperative Data Fusion Framework for Multimodal Characterization of Myocardial Scar Tissue. IEEE J Transl Eng Health Med. 2014;4:1900211.
J122. Perez F, Huguet J, Aguilar R, Lara L, Larrabide I, Villa-Uriol MC, Lopez J, Macho JM, Rigo A, Rossello J, Vera S, Vivas E, Fernandez J, Arbona A, **Frangi AF**, Herrero Jover J, Gonzalez Ballester MA, RadStation3G: a platform for cardiovascular image analysis integrating pacs, 3D+t visualization and grid computing. Comput Methods Programs Biomed 2013;110:399–410.

J121. Porras AR, Piella G, Berruezo A, Hoogendoorn C, Andreu D, Fernandez-Armenta J, Sitges M, **Frangi AF,** Interventional endocardial motion estimation from electroanatomical mapping data: application to scar characterization. IEEE Trans Biomed Eng 2013;60:1217–24.

J120. Cardenes R, Larrabide I, San Roman L, **Frangi AF,** Performance assessment of isolation methods for geometrical cerebral aneurysm analysis. Med Biol Eng Comput 2013;51:343–52.

J119. Tobon-Gomez C, Duchateau N, Sebastian R, Marchesseau S, Camara O, Donal E, De Craene M, Pashaei A, Relan J, Steghofer M, Lamata P, Delingette H, Duckett S, Garreau M, Hernandez A, Rhode KS, Sermesant M, Ayache N, Leclercq C, Razavi R, Smith NP, **Frangi AF,** Understanding the mechanisms amenable to CRT response: from pre-operative multimodal image data to patient-specific computational models. Med Biol Eng Comput 2013;51:1235–50.

J118. Weese J, Groth A, Nickisch H, Barschdorf H, Weber FM, Velut J, Castro M, Toumoulin C, Coatrieux JL, De Craene M, Piella G, Tobon-Gomez C, **Frangi AF**, Barber DC, Valverde I, Shi Y, Staicu C, Brown A, Beerbaum P, Hose DR, Generating anatomical models of the heart and the aorta from medical images for personalized physiological simulations. Med Biol Eng Comput 2013;51:1209–19.

J117. Morales HG, Larrabide I, Geers AJ, Aguilar ML, **Frangi AF,** Newtonian and non-newtonian blood flow in coiled cerebral aneurysms. J Biomech 2013;46:2158–64.

J116. Bijlenga P, Ebeling C, Jaegersberg M, Summers P, Rogers A, Waterworth A, Iavindrasana J, Macho J, Pereira VM, Bukovics P, Vivas E, Sturkenboom MCJM, Wright J, Friedrich CM, **Frangi AF**, Byrne J, Schaller K, Rufenacht DA, Risk of rupture of small anterior communicating artery aneurysms is similar to posterior circulation aneurysms. Stroke 2013;44:3018–26.

J115. Cardenes R, Diez JL, Duchateau N, Pashaei A, **Frangi AF,** Model generation of coronary artery bifurcations from CTA and single plane angiography. Med Phys 2013;40:e013701.

J114. Larrabide I, Aguilar ML, Morales HG, Geers AJ, Kulcsar Z, Ruefenacht D, **Frangi AF,** Intra-aneurysmal pressure and flow changes induced by flow diverters: relation to aneurysm size and shape. Am J Neuroradiol 2013;34:816–22.

J113. Bogunovic H, Pozo JM, Cardenes R, San Roman L, **Frangi AF,** Anatomical labeling of the Circle of Willis using maximum a posteriori probability estimation. IEEE Trans Med Imaging 2013;32:1587–99.

J112. **Frangi AF**, Hose DR, Hunter PJ, Ayache N, Brooks D, Special issue on medical imaging and image computing in computational physiology. IEEE Trans Med Imaging 2013;32:1–7.

J111. Hoogendoorn C, Duchateau N, Sanchez-Quintana D, Whitmarsh T, Sukno FM, De Craene M, Lekadir K, **Frangi AF,** A high-resolution atlas and statistical model of the human heart from multislice ct. IEEE Trans Med Imaging 2013;32:28–44.

J110. Morales HG, Larrabide I, Geers AJ, San Roman L, Blasco J, Macho JM, **Frangi AF,** A virtual coiling technique for image-based aneurysm models by dynamic path planning. IEEE Trans Med Imaging 2013;32:119–29.

J109. Sebastian R, Zimmerman V, Romero D, Sanchez-Quintana D, **Frangi AF,** Characterization and modeling of the peripheral cardiac conduction system. IEEE Trans Med Imaging 2013;32:45–55.

J108. Marchesseau S, Delingette H, Sermesant M, Cabrera-Lozoya R, Tobon-Gomez C, Moireau P, Figueras, Lekadir K, Hernandez A, Garreau M, Donal E, Leclercq C, Duckett SG, Rhode K, Rinaldi CA, **Frangi AF**, Razavi R, Chapelle D, Ayache N, Personalization of a cardiac electromechanical model using reduced order unscented Kalman filtering from regional volumes. Med Image Anal 2013;17:816–29.

J107. Tobon-Gomez C, De Craene M, McLeod K, Tautz L, Shi W, Hennemuth A, Prakosa A, Wang H, Carr-White G, Kapetanakis S, Lutz A, Rasche V, Schaeffter T, Butakoff C, Friman O, Mansi T, Sermesant M, Zhuang X, Ourselin S, Peitgen HO, Pennec X, Razavi R, Rueckert D, **Frangi AF**, Rhode KS, Benchmarking framework for myocardial tracking and deformation algorithms: an open access database. Med Image Anal 2013;17:632–48.

J106. Whitmarsh T, Humbert L, Del Rio Barquero LM, Di Gregorio S, **Frangi AF,** 3D reconstruction of the lumbar vertebrae from anteroposterior and lateral dual-energy x-ray absorptiometry. Med Image Anal 2013;17:475–87.

J105. Piella G, De Craene M, Butakoff C, Grau V, Yao C, Nedjati-Gilani S, Penney GP, **Frangi AF,** Multiview diffeomorphic registration: application to motion and strain estimation from 3D echocardiography. Med Image Anal 2013;17:348–64.

J104. Marti Fuster B, Esteban O, Planes X, Aguiar P, Crespo C, Falcon C, Wollny G, Rubi Sureda S, Setoain X, **Frangi AF**, Ledesma MJ, Santos A, Pavia J, Ros D, FocusDet, a new toolbox for SISCOM analysis. evaluation of the registration accuracy using Monte Carlo simulation. Neuroinformatics 2013;11:77–89.

J103. Fernandez-Armenta J, Berruezo A, Andreu D, Camara O, Silva E, Serra L, Barbarito V, Carotenutto L, Evertz R, Ortiz-Perez JT, De Caralt MT, Perea RJ, Sitges M, Mont L, **Frangi AF**, Brugada J, Three-dimensional architecture of scar and conducting channels based on high resolution ce-cmr: insights for ventricular tachycardia ablation. Circ Arrhythm Electrophysiol 2013;6:528–37.

J102. Morales HG, Larrabide I, Geers AJ, Dai D, Kallmes DF, **Frangi AF,** Analysis and quantification of endovascular coil distribution inside saccular aneurysms using histological images. J Neurointerv Surg 2013;5:III33–III37.

J101. Hunter P, Chapman T, Coveney PV, Bono B, Diaz V, Fenner J, **Frangi AF**, Harris P, Hose R, Kohl P, Lawford P, McCormack K, Mendes M, Omholt S, Quarteroni A, Shublaq N, Skar J, Stroetmann K, Tegner J, Thomas SR, Tollis I, Tsamardinos I, Beek JHGM, Viceconti M, A vision and strategy for the virtual physiological human: 2012 update. Interface Focus 2013;3.

J100. Larrabide I, Villa-Uriol MC, Cardenes R, Barbarito V, Carotenuto L, Geers AJ, Morales HG, Pozo JM, Mazzeo MD, Bogunovic H, Omedas P, Riccobene C, Macho JM, **Frangi AF,** Angiolab-a software tool for morphological analysis and endovascular treatment planning of intracranial aneurysms. Comput Methods Programs Biomed 2012;108:806–19.

J99. Tobon-Gomez C, Sukno FM, Butakoff C, Huguet M, **Frangi AF,** Automatic training and reliability estimation for 3D ASM applied to cardiac MRI segmentation. Phys Med Biol 2012;57:4155–74.

J98. Whitmarsh T, Fritscher KD, Humbert L, del Rio Barquero LM, Roth T, Kammerlander C, Blauth M, Schubert R, **Frangi AF,** Hip fracture discrimination from dual-energy x-ray absorptiometry by statistical model registration. Bone 2012;51:896–901.

J97. Cerrolaza JJ, Villanueva A, Sukno FM, Butakoff C, **Frangi AF**, Cabeza R, Full multiresolution active shape models. J Math Imaging Vision 2012;44:463–79.

J96. Humbert L, Whitmarsh T, De Craene M, del Rio Barquero LM, **Frangi AF,** Technical note: comparison between single and multiview simulated DXA configurations for reconstructing the 3D shape and bone mineral density distribution of the proximal femur. Med Phys 2012;39:5272–6.

J95. Duchateau N, Doltra A, Silva E, De Craene Y, Piella G, Angeles Castel M, Mont L, Brugada J, **Frangi AF**, Sitges M, Atlas-based quantification of myocardial motion abnormalities: added-value for understanding the effect of cardiac resynchronization therapy. Ultrasound Med Biol 2012;38:2186–97.

J94. Humbert L, Whitmarsh LM, **Frangi AF,** Computing structural parameters from dual-energy x-ray absorptiometry using a 3D reconstruction method. Osteoporos Int 2012;23:S349–S350.
J93. Duchateau N, De Craene M, Piella G, **Frangi AF,** Constrained manifold learning for the characterization of pathological deviations from normality. Med Image Anal 2012;16:1532–49.
J92. Bogunovic H, Pozo JM, Cardenes R, Cruz Villa-Uriol M, Blanc R, Piotin M, **Frangi AF,** Automated landmarking and geometric characterization of the carotid siphon. Med Image Anal 2012;16:889–903.
J91. Larrabide I, Kim M, Augsburger L, Cruz Villa-Uriol M, Ruefenacht D, **Frangi AF,** Fast virtual deployment of self-expandable stents: method and in vitro evaluation for intracranial aneurysmal stenting. Med Image Anal 2012;16:721–30.
J90. De Craene M, Piella G, Camara O, Duchateau N, Silva E, Doltra A, D'Hooge J, Brugada J, Sitges M, **Frangi AF,** Temporal diffeomorphic free-form deformation: application to motion and strain estimation from 3D echocardiography. Med Image Anal 2012;16:427–50.
J89. Oubel E, De Craene M, Hero AO, Pourmorteza A, Huguet M, Avegliano G, Bijnens BH, **Frangi AF,** Cardiac motion estimation by joint alignment of tagged MRI sequences. Med Image Anal 2012;16:339–50.
J88. Bernardini A, Larrabide I, Petrini L, Pennati G, Fiore E, Kim M, **Frangi AF,** Deployment of self-expandable stents in aneurysmatic cerebral vessels: comparison of different computational approaches for interventional planning. Comput Methods Biomech Biomed Engin 2012;15:303–11.
J87. Duckett SG, Camara O, Ginks MR, Bostock J, Chinchapatnam P, Sermesant M, Pashaei A, Lambiase PD, Gill JS, Carr-White GS, **Frangi AF**, Razavi R, Bijnens BH, Rinaldi CA, Relationship between endocardial activation sequences defined by high-density mapping to early septal contraction (septal flash) in patients with left bundle branch block undergoing cardiac resynchronization therapy. Europace 2012;14:99–106.
J86. Pavani SK, Sukno FM, Delgado-Gomez D, Butakoff C, Planes X, **Frangi AF,** An experimental evaluation of three classifiers for use in self-updating face recognition systems. IEEE Trans Inf Forensics Security 2012;7:932–43.
J85. Bradley C, Bowery A, Britten R, Budelmann V, Camara O, Christie R, Cookson A, **Frangi AF**, Gamage TB, Heidlauf T, Krittian S, Ladd D, Little C, Mithraratne K, Nash M, Nickerson D, Nielsen P, Nordbo O, Omholt S, Pashaei A, Paterson D, Rajagopal V, Reeve A, Roehrle O, Safaei S, Sebastian R, Steghoefer M, Wu T, Yu T, Zhang H, Hunter PJ, OpenCMISS: a multi-physics & multi-scale computational infrastructure for the vph/physiome project. Prog Biophys Mol Biol 2011;107:32–47.
J84. Camara O, Sermesant M, Lamata P, Wang L, Pop M, Relan J, De Craene M, Delingette H, Liu H, Niederer S, Pashaei A, Plank G, Romero D, Sebastian R, Wong KCL, Zhang H, Ayache N, **Frangi AF**, Shi P, Smith NP, Wright GA, Inter-model consistency and complementarity: learning from ex-vivo imaging and electrophysiological data towards an integrated understanding of cardiac physiology. Prog Biophys Mol Biol 2011;107:122–33.
J83. Avegliano GP, Huguet M, Costabel JP, Kuschnir P, Thierer J, Alves de Lima A, Sanchez G, Petit M, **Frangi AF**, Ronderos R, Utilidad de la resonancia magnética cardíaca en la valoración de los pacientes con dolor torácico, troponinas elevadas y ausencia de obstrucción arterial coronaria. Rev Argent Cardiol 2011;79:226–30.
J82. Tobon-Gomez C, Sukno FM, Bijnens BH, Huguet M, **Frangi AF,** Realistic simulation of cardiac magnetic resonance studies modeling anatomical variability, trabeculae, and papillary muscles. Magn Reson Med 2011;65:280–8.
J81. Coatrieux JL, **Frangi AF**, Peng GCY, D'Argenio DZ, Marmarelis VZ, Michailova A, Special issue on Multiscale modeling and analysis in computational biology and medicine - Part 2. IEEE Trans Biomed Eng 2011;58:3434–9.
J80. Sebastian R, Zimmerman V, Romero D, **Frangi AF,** Construction of a computational anatomical model of the peripheral cardiac conduction system. IEEE Trans Biomed Eng 2011;58:3479–82.
J79. **Frangi AF**, Coatrieux JL, Peng GCY, D'Argenio DZ, Marmarelis VZ, Michailova A, Special issue on Multiscale modeling and analysis in computational biology and medicine - Part 1. IEEE Trans Biomed Eng 2011;58:2936–42.
J78. Pashaei A, Romero D, Sebastian R, Camara O, **Frangi AF,** Fast multiscale modeling of cardiac electrophysiology including Purkinje system. IEEE Trans Biomed Eng 2011;58:2956–60.
J77. Costalat V, Sanchez M, Ambard D, Thines L, Lonjon N, Nicoud F, Brunel H, Lejeune JP, Dufour H, Bouillot P, Lhaldky JP, Kouri K, Segnarbieux F, Maurage CA, Lobotesis K, Villa-Uriol MC, Zhang C, **Frangi AF**, Mercier G, Bonafe A, Sarry L, Jourdan F, Biomechanical wall properties of human intracranial aneurysms resected following surgical clipping (irras project). J Biomech 2011;44:2685–91.
J76. Marzo A, Singh P, Larrabide I, Radaelli A, Coley S, Gwilliam M, Wilkinson ID, Lawford P, Reymond P, Patel U, **Frangi AF**, Hose DR, Computational hemodynamics in cerebral aneurysms: the effects of modeled versus measured boundary conditions. Ann Biomed Eng 2011;39:884–96.
J75. Larrabide I, Cruz Villa-Uriol M, Cardenes R, Pozo JM, Macho J, San Roman L, Blasco J, Vivas E, Marzo A, Hose DR, **Frangi AF,** Three-dimensional morphological analysis of intracranial aneurysms: a fully automated method for aneurysm sac isolation and quantification. Med Phys 2011;38:2439–49.
J74. Zhang C, Villa-Uriol MC, De Craene M, Pozo JM, Macho JM, **Frangi AF,** Dynamic estimation of three-dimensional cerebrovascular deformation from rotational angiography. Med Phys 2011;38:1294–306.
J73. Bogunovic H, Pozo JM, Villa-Uriol MC, Majoie CBLM, van den Berg R, van Andel HA, Macho JM, Blasco J, San Roman L, **Frangi AF,** Automated segmentation of cerebral vasculature with aneurysms in 3DRA and tof-mra using geodesic active regions: an evaluation study. Med Phys 2011;38:210–22.
J72. Avegliano G, Huguet M, Costabel JP, Ronderos R, Bijnens B, Kuschnir P, Thierer J, Tobon-Gomez C, Oller Martinez G, **Frangi AF,** Morphologic pattern of late gadolinium enhancement in takotsubo cardiomyopathy detected by early cardiovascular magnetic resonance. Clin Cardiol 2011;34:178–82.
J71. Suinesiaputra A, **Frangi AF**, Kaandorp TAM, Lamb HJ, Bax JJ, Reiber JHC, Lelieveldt BPF, Automated regional wall motion abnormality detection by combining rest and stress cardiac MRI: correlation with contrast-enhanced MRI. J Magn Reson Imaging 2011;34:270–8.
J70. Pozo JM, Villa-Uriol MC, **Frangi AF,** Efficient 3D geometric and Zernike moments computation from unstructured surface meshes. IEEE Trans Pattern Anal Mach Intell 2011;33:471–84.
J69. Geers AJ, Larrabide I, Radaelli AG, Bogunovic H, Kim M, Andel HAFG, Majoie CB, VanBavel E, **Frangi AF,** Patient-specific computational hemodynamics of intracranial aneurysms from 3D rotational angiography and CT angiography: an in vivo reproducibility study. Am J Neuroradiol 2011;32:581–6.

J68. Morales HG, Kim M, Vivas EE, Villa-Uriol MC, Larrabide I, Sola T, Guimaraens L, **Frangi AF,** How do coil configuration and packing density influence intra-aneurysmal hemodynamics? Am J Neuroradiol 2011;32:1935–41.

J67. Whitmarsh T, Humbert L, De Craene M, del Rio Barquero LM, **Frangi AF,** Reconstructing the 3D shape and bone mineral density distribution of the proximal femur from dual-energy x-ray absorptiometry. IEEE Trans Med Imaging 2011;30:2101–14.

J66. Cardenes R, Pozo JM, Bogunovic H, Larrabide I, **Frangi AF,** Automatic aneurysm neck detection using surface Voronoi diagrams. IEEE Trans Med Imaging 2011;30:1863–76.

J65. Duchateau N, De Craene M, Piella G, Silva E, Doltra A, Sitges M, Bijnens BH, **Frangi AF,** A spatiotemporal statistical atlas of motion for the quantification of abnormal myocardial tissue velocities. Med Image Anal 2011;15:316–28.

J64. Bernardini A, Larrabide I, Morales HG, Pennati G, Petrini L, Cito S, **Frangi AF,** Influence of different computational approaches for stent deployment on cerebral aneurysm haemodynamics. Interface Focus 2011;1:338–48.

J63. Smith N, Vecchi A, McCormick M, Nordsletten D, Camara O, **Frangi AF**, Delingette H, Sermesant M, Relan J, Ayache N, Krueger MW, Schulze WHW, Hose R, Valverde I, Beerbaum P, Staicu C, Siebes M, Spaan J, Hunter P, Weese J, Lehmann H, Chapelle D, Rezavi R, euHeart: personalized and integrated cardiac care using patient-specific cardiovascular modelling. Interface Focus 2011;1:349–64.

J62. Villa-Uriol MC, Berti G, Hose DR, Marzo A, Chiarini A, Penrose J, Pozo J, Schmidt JG, Singh P, Lycett R, Larrabide I, **Frangi AF,** @neurIST complex information processing toolchain for the integrated management of cerebral aneurysms. Interface Focus 2011;1:308–19.

J61. Gianni D, McKeever S, Yu T, Britten R, Delingette H, **Frangi AF**, Hunter P, Smith N, Sharing and reusing cardiovascular anatomical models over the web: a step towards the implementation of the virtual physiological human project. Philos Trans A Math Phys Eng Sci 2010;368:3039–56.

J60. Villa-Uriol MC, Larrabide I, Pozo JM, Kim M, Camara O, De Craene M, Zhang C, Geers AJ, Morales H, Bogunovic H, Cardenes R, **Frangi AF,** Toward integrated management of cerebral aneurysms. Philos Trans A Math Phys Eng Sci 2010;368:2961–82.

J59. Hunter P, Coveney PV, Bono B, Diaz V, Fenner J, **Frangi AF**, Harris P, Hose R, Kohl P, Lawford P, McCormack K, Mendes M, Omholt S, Quarteroni A, Skar J, Tegner J, Thomas SR, Tollis I, Tsamardinos I, Beek JHGM, Viceconti M, A vision and strategy for the virtual physiological human in 2010 and beyond. Philos Trans A Math Phys Eng Sci 2010;368:2595–614.

J58. Butakoff C, **Frangi AF,** Multi-view face segmentation using fusion of statistical shape and appearance models. Comput Vis Image Underst 2010;114:311–21.

J57. Singh PK, Marzo A, Howard B, Rufenacht DA, Bijlenga P, **Frangi AF**, Lawford PV, Coley SC, Hose DR, Patel UJ, Effects of smoking and hypertension on wall shear stress and oscillatory shear index at the site of intracranial aneurysm formation. Clin Neurol Neurosurg 2010;112:306–13.

J56. Yilmaz S, Bijlenga P, Rashid M, Collot-Teixeira S, Brocheton J, Proust C, Rotival M, Risselada R, Summers P, Blasco J, Singh J, Waterworth A, Ebeling C, Friedrich C, **Frangi AF**, Macho JJ, Byrne J, Sturkenboom MCJM, Schaller K, Cambien F, Gunel M, McGregor JL, Gene expression signature in peripheral blood cells detects intracranial aneurysm. Neurosurgery 2010;67:540.

J55. Piella G, De Craene M, Bijnens BH, Tobon-Gomez C, Huguet M, Avegliano G, **Frangi AF,** Characterizing myocardial deformation in patients with left ventricular hypertrophy of different etiologies using the strain distribution obtained by magnetic resonance imaging. Rev Esp Cardiol 2010;63:1281–91.

J54. Balocco S, Basset O, Courbebaisse G, Boni E, **Frangi AF**, Tortoli P, Cachard C, Estimation of the viscoelastic properties of vessel walls using a computational model and Doppler ultrasound. Phys Med Biol 2010;55:3557–75.

J53. Sukno FM, Guerrero JJ, **Frangi AF,** Projective active shape models for pose-variant image analysis of quasi-planar objects: application to facial analysis. Pattern Recognit 2010;43:835–49.

J52. Pavani SK, Delgado D, **Frangi AF,** Haar-like features with optimally weighted rectangles for rapid object detection. Pattern Recognit 2010;43:160–72.

J51. Yasuno K, Bilguvar K, Bijlenga P, Low SK, Krischek B, Auburger G, Simon M, Krex D, Arlier Z, Nayak N, Ruigrok YM, Niemela M, Tajima A, Fraunberg M, Doczi T, Wirjatijasa F, Hata A, Blasco J, Oszvald A, Kasuya H, Zilani G, Schoch B, Singh P, Stueer C, Risselada R, Beck J, Sola T, Ricciardi F, Aromaa A, Illig T, Schreiber S, Duijn CM, Berg LH, Perret C, Proust C, Roder C, Ozturk AK, Gaal E, Berg D, Geisen C, Friedrich CM, Summers P, **Frangi AF**, State MW, Wichmann HE, Breteler MMB, Wijmenga C, Mane S, Peltonen L, Elio V, Sturkenboom MCJM, Lawford P, Byrne J, Macho J, Sandalcioglu EI, Meyer B, Raabe A, Steinmetz H, Ruefenacht D, Jaaskelainen JE, Hernesniemi J, Rinkel GJE, Zembutsu H, Inoue I, Palotie A, Cambien F, Nakamura Y, Lifton RP, Guenel M, Genome-wide association study of intracranial aneurysm identifies three new risk loci. Nat Genet 2010;42:420–U69.

J50. Romero D, Sebastian R, Bijnens BH, Zimmerman V, Boyle PM, Vigmond EJ, **Frangi AF,** Effects of the Purkinje system and cardiac geometry on biventricular pacing: a model study. Ann Biomed Eng 2010;38:1388–98.

J49. Balocco S, Camara O, Vivas E, Sola T, Guimaraens L, Andel HA, Majoie CB, Pozo JM, Bijnens BH, **Frangi AF,** Feasibility of estimating regional mechanical properties of cerebral aneurysms in vivo. Med Phys 2010;37:1689–706.

J48. Ortega-Garcia J, Fierrez J, Alonso-Fernandez F, Galbally J, Freire MR, Gonzalez-Rodriguez J, Garcia-Mateo C, Alba-Castro JL, Gonzalez-Agulla E, Otero-Muras E, Garcia-Salicetti S, Allano L, Ly-Van B, Dorizzi B, Kittler J, Bourlai T, Poh N, Deravi F, Ng MWR, Fairhurst M, Hennebert J, Humm A, Tistarelli M, Brodo L, Richiardi J, Drygajlo A, Ganster H, Sukno FM, Pavani SK, **Frangi AF**, Akarun L, Savran A, The multiscenario multienvironment biosecure multimodal database (BMDB). IEEE Trans Pattern Anal Mach Intell 2010;32:1097–111.

J47. Duchateau N, De Craene M, Piella G, Silva E, Doltra A, Sitges M, Bijnens BH, **Frangi AF,** Quantification of septal motion abnormalities in CRT candidates using a statistical atlas based-approach. Eur Heart J 2010;31:875–6.

J46. Oubel E, Cebral JR, De Craene M, Blanc R, Blasco J, Macho J, Putman CM, **Frangi AF,** Wall motion estimation in intracranial aneurysms. Physiol Meas 2010;31:1119–35.

J45. Benkner S, Arbona A, Berti G, Chiarini A, Dunlop R, Engelbrecht G, **Frangi AF**, Friedrich CM, Hanser S, Hasselmeyer P, Hose RD, Iavindrasana J, Koehler M, Lo Iacono L, Lonsdale G, Meyer R, Moore B, Rajasekaran H, Summers PE, Woehrer A, Wood S, @neurIST: infrastructure for advanced disease management through integration of heterogeneous data, computing, and complex processing services. IEEE Trans Inf Technol Biomed 2010;14:1365–77.

J44. Singh PK, Marzo A, Staicu C, William MG, Wilkinson I, Lawford PV, Rufenacht DA, Bijlenga P, **Frangi AF**, Hose R, Patel UJ, Coley SC, The effects of aortic coarctation on cerebral hemodynamics and its importance in the etiopathogenesis of intracranial aneurysms. J Vasc Interv Neurol 2010;3:17–30.

J43. Singh PK, Marzo A, Coley SC, Berti G, Bijlenga P, Lawford PV, Villa-Uriol MC, Rufenacht DA, McCormack KM, **Frangi AF**, Patel UJ, Hose DR, The role of computational fluid dynamics in the management of unruptured intracranial aneurysms: a clinicians' view. Comput Intell Neurosci 2009:760364.
J42. Young AA, **Frangi AF**, Computational cardiac atlases: from patient to population and back. Exp Physiol 2009;94:578–96.
J41. Hoogendoorn C, Sukno FM, Ordas S, **Frangi AF**, Bilinear models for spatio-temporal point distribution analysis. Int J Comput Vision 2009;85:237–52.
J40. Meinhardt E, Zacur E, **Frangi AF**, Caselles V, 3D edge detection by selection of level surface patches. J Math Imaging Vision 2009;34:1–16.
J39. Camara O, Oeltze S, De Craene M, Sebastian R, Silva E, Tamborero D, Mont L, Sitges M, Bijnens BH, **Frangi AF**, Detecting abnormal septal motion by combining spatial and electrical information from endocardial mapping data in CRT candidates. Eur Heart J 2009;30:1015.
J38. Sebastian R, Bijnens BH, **Frangi AF**, The role of the myocardial fiber orientation in homogenizing transmural electrical activation. Eur Heart J 2009;30:72.
J37. Delgado-Gomez D, Fagertun J, Ersboll B, Sukno FM, **Frangi AF**, Similarity-based fisherfaces. Pattern Recognit Lett 2009;30:1110–6.
J36. Zhang C, Villa-Uriol MC, De Craene M, Pozo JM, **Frangi AF**, Morphodynamic analysis of cerebral aneurysm pulsation from time-resolved rotational angiography. IEEE Trans Med Imaging 2009;28:1105–16.
J35. Suinesiaputra A, **Frangi AF**, Kaandorp TAM, Lamb HJ, Bax JJ, Reiber JHC, Lelieveldt BPF, Automated detection of regional wall motion abnormalities based on a statistical model applied to multislice short-axis cardiac MR images. IEEE Trans Med Imaging 2009;28:595–607.
J34. Castro M, Putman C, Radaelli A, **Frangi AF**, Cebral JR, Hemodynamics and rupture of terminal cerebral aneurysms. Acad Radiol 2009;16:1201–7.
J33. Huguet M, Tobon-Gomez C, Bijnens BH, **Frangi AF**, Petit M, Cardiac injuries in blunt chest trauma. J Cardiovasc Magn Reson 2009;11.
J32. Laclaustra M, **Frangi AF**, **Frangi AG**, Casasnovas JA, Cia P, Association of endothelial function and vascular data with ldl-c and HDL-c in a homogeneous population of middle-aged, healthy military men: evidence for a critical role of optimal lipid levels. Int J Cardiol 2008;125:376–82.
J31. Radaelli AG, Augsburger L, Cebral JR, Ohta M, Ruefenacht DA, Balossino R, Benndorf G, Hose DR, Marzo A, Metcalfe R, Mortier P, Mut F, Reymond P, Socci L, Verhegghe B, **Frangi AF**, Reproducibility of haemodynamical simulations in a subject-specific stented aneurysm model - a report on the virtual intracranial stenting challenge 2007. J Biomech 2008;41:2069–81.
J30. Tobon-Gomez C, Butakoff C, Aguade S, Sukno F, Moragas G, **Frangi AF**, Automatic construction of 3D-ASM intensity models by simulating image acquisition: application to myocardial gated SPECT studies. IEEE Trans Med Imaging 2008;27:1655–67.
J29. Sukno FM, **Frangi AF**, Reliability estimation for statistical shape models. IEEE Trans Image Process 2008;17:2442–55.
J28. Olafsdottir H, Darvann TA, Hermann NV, Oubel E, Ersboll BK, **Frangi AF**, Larsen P, Perlyn CA, Morriss-Kay GM, Kreiborg S, Computational mouse atlases and their application to automatic assessment of craniofacial dysmorphology caused by the Crouzon mutation fgfr2(c342y). J Anat 2007;211:37–52.
J27. Sukno FM, Ordas S, Butakoff C, Cruz S, **Frangi AF**, Active shape models with invariant optimal features: application to facial analysis. IEEE Trans Pattern Anal Mach Intell 2007;29:1105–17.
J26. Laclaustra M, **Frangi AF**, Garcia D, Boisrobert L, **Frangi AG**, Pascual I, Detailed exploration of the endothelium: parameterization of flow-mediated dilation through principal component analysis. Physiol Meas 2007;28:301–20.
J25. Millan RD, Dempere-Marco L, Pozo JM, Cebral JR, **Frangi AF**, Morphological characterization of intracranial aneurysms using 3D moment invariants. IEEE Trans Med Imaging 2007;26:1270–82.
J24. Barber DC, Oubel E, **Frangi AF**, Hose DR, Efficient computational fluid dynamics mesh generation by image registration. Med Image Anal 2007;11:648–62.
J23. Hernandez M, **Frangi AF**, Non-parametric geodesic active regions: method and evaluation for cerebral aneurysms segmentation in 3DRA and CTA. Med Image Anal 2007;11:224–41.
J22. Butakoff C, **Frangi AF**, A framework for weighted fusion of multiple statistical models of shape and appearance. IEEE Trans Pattern Anal Mach Intell 2006;28:1847–57.
J21. **Frangi AF**, Radeva PI, Santos A, Special Issue on International Conference on Functional Imaging and Modelling of the Heart (FIMH). Med Image Anal 2006;10:612–4.
J20. Assen HC, Danilouchkine MG, **Frangi AF**, Ordas S, Westenberg JJM, Reiber JHC, Lelieveldt BR, SPASM: a 3D-ASM for segmentation of sparse and arbitrarily oriented cardiac MRI data. Med Image Anal 2006;10:286–303.
J19. Yang J, **Frangi AF**, Yang JY, Zhang D, Jin Z, Kpca plus LDA: a complete kernel fisher discriminant framework for feature extraction and recognition. IEEE Trans Pattern Anal Mach Intell 2005;27:230–44.
J18. Cebral JR, Castro MA, Appanaboyina S, Putman CM, Millan D, **Frangi AF**, Efficient pipeline for image-based patient-specific analysis of cerebral aneurysm hemodynamics: technique and sensitivity. IEEE Trans Med Imaging 2005;24:457–67.
J17. **Frangi AF**, Amini AA, Bullitt E, Vascular imaging. IEEE Trans Med Imaging 2005;24:433–5.
J16. Yang J, **Frangi AF**, Yang JY, A new kernel Fisher discriminant algorithm with application to face recognition. Neurocomputing 2004;56:415–21.
J15. Yang J, Jin Z, Yang JY, Zhang D, **Frangi AF**, Essence of kernel fisher discriminant: KPCA plus LDA. Pattern Recognit 2004;37:2097–100.
J14. Yang J, Zhang D, **Frangi AF**, Yang JY, Two-dimensional PCA: a new approach to appearance-based face representation and recognition. IEEE Trans Pattern Anal Mach Intell 2004;26:131–7.
J13. Rueckert D, **Frangi AF**, Schnabel JA, Automatic construction of 3-D statistical deformation models of the brain using nonrigid registration. IEEE Trans Med Imaging 2003;22:1014–25.
J12. **Frangi AF**, Laclaustra M, Lamata P, A registration-based approach to quantify flow-mediated dilation (FMD) of the brachial artery in ultrasound image sequences. IEEE Trans Med Imaging 2003;22:1458–69.
J11. Yang H, Yang JY, **Frangi AF**, Combined fisherfaces framework. Image Vision Comput 2003;21:1037–44.
J10. Yang R, Yang JY, **Frangi AF**, Zhang D, Uncorrelated projection discriminant analysis and its application to face image feature extraction. Int J Pattern Recognit Artif Intell 2003;17:1325–47.

J9. Wink O, **Frangi AF**, Verdonck B, Viergever MA, Niessen WJ, 3D MRA coronary axis determination using a minimum cost path approach. Magn Reson Med 2002;47:1169–75.
J8. **Frangi AF**, Rueckert D, Duncan JS, Three-dimensional cardiovascular image analysis. IEEE Trans Med Imaging 2002;21:1005–10.
J7. **Frangi AF**, Rueckert D, Schnabel JA, Niessen WJ, Automatic construction of multiple-object three-dimensional statistical shape models: application to cardiac modeling. IEEE Trans Med Imaging 2002;21:1151–66.
J6. Ginneken B, **Frangi AF**, Staal JJ, Romeny BMT, Viergever MA, Active shape model segmentation with optimal features. IEEE Trans Med Imaging 2002;21:924–33.
J5. **Frangi AF**, Riu PJ, Rosell J, Viergever MA, Propagation of measurement noise through backprojection reconstruction in electrical impedance tomography. IEEE Trans Med Imaging 2002;21:566–78.
J4. **Frangi AF**, Niessen WJ, Nederkoorn PJ, Bakker J, Mali W, Viergever MA, Quantitative analysis of vascular morphology from 3D MR angiograms: in vitro and in vivo results. Magn Reson Med 2001;45:311–22.
J3. **Frangi AF**, Niessen WJ, Viergever MA, Three-dimensional modeling for functional analysis of cardiac images: a review. IEEE Trans Med Imaging 2001;20:2–25.
J2. **Frangi AF**, Egmont-Petersen M, Niessen WJ, Reiber JHC, Viergever MA, Bone tumor segmentation from MR perfusion images with neural networks using multi-scale pharmacokinetic features. Image Vision Comput 2001;19:679–90.
J1. **Frangi AF**, Niessen WJ, Hoogeveen RM, Walsum T, Viergever MA, Model-based quantitation of 3-D magnetic resonance angiographic images. IEEE Trans Med Imaging 1999;18:946–56.

Books & Proceedings

E18. **Frangi AF**, Prince JL, Sonka M, eds. Medical Image Analysis (Textbook). London, UK: Academic Press, 2023.
E17. Su R, Zhang Y, Liu H, **Frangi AF**, eds. Medical Imaging and Computer-Aided Diagnosis. Vol. 810. Lecture Notes in Electrical Engineering. Berlin: Springer-Verlag, 2023.
E16. Kakileti SK, Gabrani M, Manjunath G, Rosen-Zvi M, Braman N, Schwartz RG, **Frangi AF**, Chung PC, Weight C, Jagadish V, eds. Artificial Intelligence over Infrared Images for Medical Applications and Medical Image Assisted Biomarker Discovery. Vol. 13602. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2022.
E15. **Frangi AF**, Schnabel JA, Davatzikos C, López-Alberola C, Fichtinger G, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2018 – Part II: Optical and Histology Applications: Optical Imaging Applications; Histology Applications; Microscopy Applications; Optical Coherence Tomography and Other Optical Imaging Applications. Cardiac, Chest and Abdominal Applications: Cardiac Imaging Applications: Colorectal, Kidney and Liver Imaging Applications; Lung Imaging Applications; Breast Imaging Applications; Other Abdominal Applications. Vol. 11071. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2018.
E14. **Frangi AF**, Schnabel JA, Davatzikos C, López-Alberola C, Fichtinger G, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2018 – Part I: Image Quality and Artefacts; Image Reconstruction Methods; Machine Learning in Medical Imaging; Statistical Analysis for Medical Imaging; Image Registration Methods. Vol. 11070. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2018.
E13. Glocker B, Yao J, Vrtovec T, **Frangi AF**, Zheng G, eds. Computational Methods and Clinical Applications in Musculoskeletal Imaging. Proceedings of the International Workshop and Challenge on Computational Musculoskeletal Imaging (MSKI2017). Vol. 10734. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2018.
E12. **Frangi AF**, Schnabel JA, Davatzikos C, López-Alberola C, Fichtinger G, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2018 – Part III: Diffusion Tensor Imaging and Functional MRI: Diffusion Tensor Imaging; Diffusion Weighted Imaging; Functional MRI; Human Connectome. Neuroimaging and Brain Segmentation Methods: Neuroimaging; Brain Segmentation Methods. Lecture Notes in Computer Science. 2018.
E11. Tsaftaris SA, Gooya A, **Frangi AF**, Prince JL, eds. Simulation and Synthesis in Medical Imaging. Proceedings of the International Workshop SASHIMI 2017. Vol. 10557. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2017.
E10. Yao J, Vrtovec T, Glocker B, Zheng G, **Frangi AF**, Shuo L, eds. Computational Methods and Clinical Applications for Spine Imaging. Proceedings of the International Workshop and Challenge on Computational Spine Imaging (CSI2016). Vol. 10182. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2017.
E9. Liu CL, Lee SW, Yang JY, Yang J, Makihara Y, Tao DC, **Frangi AF**, eds. Proceedings The 4th Asian Conference on Pattern Recognition (ACPR2017). Piscataway, NJ: IEEE Computer Society, 2017.
E8. Tsaftaris SA, Gooya A, **Frangi AF**, Prince JL, eds. Simulation and Synthesis in Medical Imaging. Proceedings of the International Workshop SASHIMI 2016. Vol. 9968. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2016.
E7. Vrtovec T, Yao J, Glocker B, Klinder T, **Frangi AF**, Zheng G, Li S, eds. Computational Methods and Clinical Applications for Spine Imaging. Proceedings of the International Workshop and Challenge Computational Spine Imaging (CSI2015). Vol. 9402. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2016.
E6. Navab N, Hornegger J, Wells WM, **Frangi AF**, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2015 – Part III: Quantitative Image Analysis I: Segmentation and Measurement; Quantitative Image Analysis IV: Microscopy, Fluorescence and Histological Imagery; Quantitative Image Analysis III: Motion, Deformation, Development and Degeneration; Quantitative Image Analysis II: Classification, Detection, Features, and Morphology. Vol. 9351. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2015.
E5. Navab N, Hornegger J, Wells WM, **Frangi AF**, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2015 – Part II: Quantitative Image Analysis II: Classification, Detection, Features, and Morphology, Advanced MRI: Diffusion, fMRI, DCE; Quantitative Image Analysis III: Motion, Deformation, Development and Degeneration; Quantitative Image Analysis IV: Microscopy, Fluorescence and Histological Imagery. Vol. 9350. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2015.
E4. Navab N, Hornegger J, Wells WM, **Frangi AF**, eds. Medical Image Computing and Computer-Assisted Intervention (MICCAI). Proceedings of the International Conference MICCAI 2015 – Part I: Advanced MRI: Diffusion, fMRI, DCE; Computer Assisted and Image-guided Interventions; Computer Aided Diagnosis: Machine Learning. Vol. 9349. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2015.

E3. **Frangi AF**, Delingette H, eds. From Statistical Atlases to Personalized Models: Understanding Complex Diseases in Populations and Individuals. Proceedings of the International Workshop. Technical Report. IT University of Copenhagen, 2006.

E2. **Frangi AF**, Radeva P, Santos A, Hernandez M, eds. Functional Imaging and Modelling of the Heart (FIMH). Proceedings of the International Conference. Vol. 3504. Lecture Notes in Computer Science. Berlin: Springer-Verlag, 2005.

E1. **Frangi AF**. Three-dimensional Model-based Analysis of Vascular and Cardiac Images. Wageningen, The Netherlands: Ponsen & Looijen, 2001.

Book Chapters

B12. Xia Y, Ravikumar N, **Frangi AF**, Image imputation in cardiac MRI and quality assessment. In: Biomedical Image Synthesis and Simulation. Ed. by Burgos N and Svoboda D. The MICCAI Society Book Series. Academic Press, 2022:347–67.

B11. Duchateau N, Piella G, **Frangi AF**, De Craene M, Learning pathological deviations from a normal pattern of myocardial motion: Added value for CRT studies? In: Machine Learning and Medical Imaging. Ed. by Wu G, Shen D, and Sabuncu M. Elsevier, 2016:365–82.

B10. Radaelli AG, Bogunović H, Villa-Uriol MC, Cebral JR, **Frangi AF**, Image-based haemodynamics simulation in intracranial aneurysms. In: Handbook of Biomedical Imaging: Methodologies and Clinical Research. Ed. by Paragios N, Duncan J, and Ayache N. Boston, MA: Springer US, 2015:199–217.

B9. Hunter PJ, Bradley C, Britten R, Brooks D, Carotenuto L, Christie R, **Frangi AF**, Garny A, Ladd D, Little C, Nickerson D, Nielsen P, Miller A, Planes X, Steghoffer M, Young AA, Yu T, The VPH-Physiome Project: standards, tools and databases for multi-scale physiological modelling. In: Modelling Physiological Flows. Ed. by Ambrosi D, Quarteroni A, and Rozza G. Springer, 2012:205–50.

B8. Dunlop R, Arbona A, Rajasekaran H, Lo Iacono L, Fingberg J, Summers P, Benkner S, Engelbrecht G, Chiarini A, Friedrich CM, Moore B, Bijlenga P, Iavindrasana J, Hose RD, **Frangi AF**, The @neurIST Consortium, @neurIST - chronic disease management through integration of heterogeneous data and computer-interpretable guideline services. In: Global Healthgrid: E-science Meets Biomedical Informatics. Ed. by Solomonides T, Silverstein JC, Saltz J, Legre Y, Kratz M, Foster I, Breton V, and Beck JR. Vol. 138. Studies in Health Technology and Informatics. 2008:173–7.

B7. Iavindrasana J, Lo Iacono L, Mueller H, Periz I, Summers P, Wright J, Friedrich CM, Dach H, Gattermayer T, Engelbrecht G, Benkner S, Hofmann-Apitius M, Dunlop R, Arbona A, Rajasekaran H, Fingberg J, Chiarini A, Moore B, Bijlenga P, Hose RD, **Frangi AF**, The @neurIST project. In: Global Healthgrid: E-science Meets Biomedical Informatics. Ed. by Solomonides T, Silverstein JC, Saltz J, Legre Y, Kratz M, Foster I, Breton V, and Beck JR. Vol. 138. Studies in Health Technology and Informatics. 2008:161–4.

B6. Tobon-Gomez C, Ordas S, **Frangi AF**, Aguade S, Castell J, Statistical deformable models for cardiac segmentation and functional analysis in gated-SPECT studies. In: Deformable Models: Biomedical and Clinical Applications. Ed. by Suri J and Farag A. Springer, 2007:163–93.

B5. Arbona A, Benkner S, Fingberg J, **Frangi AF**, Hofmann M, Hose DR, Lonsdale G, Ruefenacht D, Viceconti M, Outlook for grid service technologies within the @neurIST eHealth environment. In: Challenges and Opportunities of Healthgrids. Ed. by Hernandez V and Blanquer I. Vol. 120. Studies in Health Technology and Informatics. 2006:401–4.

B4. Hernandez M, **Frangi AF**, Sapiro G, Quantification of brain aneurysm dimensions from CTA for surgical planning of coiling interventions. In: Handbook of Biomedical Image Analysis, Vol III: Registration Models. Ed. by Suri JA, Wilson DL, and Laxminarayan S. Kluwer Academic Publisher, 2005:185–217.

B3. Ordas S, van Assen HC, Puente J, Lelieveldt BPF, **Frangi AF**, Parametric optimization of a model-based segmentation algorithm for cardiac MR image analysis: a grid-computing approach. In: From Grid to Healthgrid. Ed. by Solomonides T and McClatchey R. Vol. 112. Studies in Health Technology and Informatics. 2005:146–56.

B2. **Frangi AF**, Niessen WJ, Viergever MA, Lelieveldt BPF, A survey of three-dimensional modelling techniques for quantitative functional analysis of cardiac images. In: Advanced Image Processing in Magnetic Resonance Imaging. Ed. by Landini L and Santarelli MF. Vol. 26. CRC Pres, 2005:267–341.

B1. **Frangi AF**, Laclaustra M, Yang J, Computerized analysis and vasodilation parameterization in flow-mediated dilation tests from ultrasonic image sequences. In: Handbook of Biomedical Image Analysis, Vol II: Segmentation Models Pt B. Ed. by Suri JS, Wilson DL, and Laxminarayan S. Vol. 2. Kluwer Academic Publisher, 2005:229–66.

Patents

P13. Dou H, Ravikumar N, **Frangi AF**, Method and Apparatus for Controlled Generation of Virtual Anatomical Population Models. Patent Application PCT/GB2024/051608 (World Intellectual Property Organization). 2024.

P12. Dou H, Ravikumar N, **Frangi AF**, Method and Apparatus for Generating Virtual Populations of Anatomy. Patent Application PCT/EP2023/077300 (World Intellectual Property Organization). 2023.

P11. Xia Y, Ravikumar N, **Frangi AF**, Method and apparatus for generating subject-specific magnetic resonance angiography images from other multi-contrast magnetic resonance images. Patent Application No 18/242,982 (US Patent, Trademark Office). 2023.

P10. Diaz-Pinto A, Ravikumar N, **Frangi AF**, Determination of Cardiac Functional Indexes. Patent Filed No PCT/IB2022/053356 (World Intellectual Property Organization). 2022.

P9. Cimen S, **Frangi AF**, Method and Apparatus for Modelling Non-rigid Networks. Patent Application WO 2016/030692 A1 (World Intellectual Property Organization). 2016.

P8. Barbarito V, Carotenuto L, Serra Del Molino L, **Frangi AF**, Brugada J, Berruezo A, Computer Implemented Methods for Identifying Channels in a 3D Volume and Computer Program Product Implementing the Methods. Patent Application US 2015/0356742 A1 (United States). 2015.

P7. Barbarito V, Carotenuto L, Serra Del Molino L, **Frangi AF**, Brugada J, Berruezo A, Computer Implemented Methods for Identifying Channels in a 3D Volume and Computer Program Product Implementing the Methods. Patent Application WO 2014/111787 A1 (World Intellectual Property Organization). 2014.

P6. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Metodo para Obtener una Reconstruccion Tridimensional a Partir de una o mas Vistas Proyectivas, y uso de la misma. Granted Patent ES 2382774 B1 (Spain). 2013.

P5. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Method for Obtaining a Three-dimensional Reconstruction from One or More Projective Views and Use Thereof. Patent Application EP 2534641 A2 (European Patent Office). 2012.

P4. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Method for Obtaining a Three-dimensional Reconstruction from One or More Projective Views and Use Thereof. Patent Application WO 2011/098895 A8 (World Intellectual Property Organization). 2012.

P3. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Metodo para Obtener una Reconstruccion Tridimensional a Partir de una o mas Vistas Proyectivas, y uso de la misma. Patent Application ES 2382774 A1 (Spain). 2012.

P2. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Method for Obtaining a Three-dimensional Reconstruction from One or More Projective Views and Use Thereof. Search report WO 2011/098895 A3 (World Intellectual Property Organization). 2011.

P1. Humbert L, Whitmarsh T, Del Rio Barquero L, De Craene M, **Frangi AF**, Method for Obtaining a Three-dimensional Reconstruction from One or More Projective Views and Use Thereof. Patent Application WO 2011/098895 A2 (World Intellectual Property Organization). 2011.

Outreach & Dissemination

O21. Virtual Patients for Evaluating Medical Devices. BBC Digital Planet. 2021. URL: https://www.bbc.co.uk/programmes/w3ct1lsg.

O20. 'Huge potential' in virtual clinical trials. University of Leeds. 2021. URL: https://www.leeds.ac.uk/news-health/news/article/4850/huge-potential-in-virtual-clinical-trials.

O19. Replace, Reduce, Refine: In-Silico Trials in The Spotlight. Clinical OMICs. 2021. URL: https://www.clinicalomics.com/topics/patient-care/cardiovascular-disease/replace-reduce-refine-in-silico-trials-in-the-spotlight.

O18. Virtual clinical trials are on their way. The Economist. 2021. URL: https://www.economist.com/science-and-technology/2021/07/01/virtual-clinical-trials-are-on-their-way.

O17. Clinical Trials for Medicines and New Medical Procedures. BBC World Service Radio. 2021. URL: https://www.bbc.co.uk/programmes/w172xv2pndhs8lj.

O16. Os ensaios clínicos virtuais estão a caminho (e podem ser mais práticos e baratos. aeiou. 2021. URL: https://zap.aeiou.pt/ensaios-clinicos-virtuais-a-caminho-418520.

O15. Rewrite the Rules. Lifesciences Integrates. 2021. URL: https://www.lifescienceintegrates.com/medtech-integrates-agenda-2021/#rewrite.

O14. Using virtual populations for clinical trials. Science Daily. 2021. URL: https://www.sciencedaily.com/releases/2021/06/210623091139.htm.

O13. **Frangi AF**. Am (A)I human? Building Safer and More Effective Medical Devices with Virtual Twins. Pint of Science, Leeds. 2021. URL: https://pintofscience.co.uk/event/hear-me-out.

O12. **Frangi AF**. Café Scientific, Chesterfield. Video. 2016. URL: http://tinyurl.com/zdmrot6.

O11. **Frangi AF**. Can Computer Heal Spines? Do you know? Video. 2015. URL: http://tinyurl.com/jjozs4r.

O10. **Frangi AF**. MySpine Project Overview. Video. 2015. URL: http://tinyurl.com/jd8e8nm.

O9. **Frangi AF**. Sheffield Festival of Science & Engineering, Interview. Video. 2015. URL: http://tinyurl.com/he3w45x.

O8. **Frangi AF**. VPH-DARE-IT Platforms Overview. Video. 2015. URL: http://tinyurl.com/jcxhphh.

O7. **Frangi AF**. VPH-DARE@IT Clinical Research Platforms Overview. Video. 2015. URL: http://tinyurl.com/jd2s2hq.

O6. **Frangi AF**. CISTIB YouTube Channel. Video. 2011. URL: https://www.youtube.com/user/CISTIB.

O5. **Frangi AF**. DISCIPULUS Project – Digital Patient: Interview. Video. 2011. URL: http://tinyurl.com/jrnx9tx.

O4. **Frangi AF**. The @neurIST Project: Outreach Video. Video. 2010. URL: http://tinyurl.com/hl5vzvg.

O3. **Frangi AF**. The @neurIST Project: Biomedical data integration supporting in silico understanding of cerebral aneurysms and individualized disease management and interventional planning. The Parliament Magazines Research Review 2008;7:52–3.

O2. **Frangi AF**, Hose RD, Ruefenacht DA, The @neurIST Project: Towards understanding of cerebral aneurysms. SPIE Newsroom. 2007. URL: http://tinyurl.com/ycexcalq.

O1. **Frangi AF**, Ruiz A, Hofmann M, Understanding cerebral aneurysms: The @neurIST project. ERCIM News. 2007. URL: http://tinyurl.com/y7sfqyoq. Special Theme on the Digital Patient.

PhD Supervision

T35. Deo Y. Deep learning with simulated data for medical imaging. PhD Thesis. Supervisors (ordered): Lasila T, **Frangi AF**, University of Leeds: Leeds, UK. Viva held 2025.

T34. Lin F. Vessel Tree Segmentation and Modality Agnostic Aneurysm Detection. PhD Thesis. Supervisor: **Frangi AF**. University of Leeds: Leeds, UK. Viva held 2025.

T33. Golshani S. Accelerating cardiac diffusion MRI: concepts and applications. PhD Thesis. Supervisors (ordered): **Frangi AF**, Schneider JE, University of Leeds: Leeds, UK. Viva held 2024.

T32. MacRaild M. Efficient Ensemble Simulation Methods for In-Silico Trials of Endovascular Medical Devices. PhD Thesis. Supervisors (ordered): **Frangi AF**, Lassila T, Sarrami A, University of Leeds: Leeds, UK. Viva held 2024.

T31. Bi N. Bayesian Deep Learning for Cardiac Motion Modelling and Analysis. PhD Thesis. Supervisors (ordered): Zakeri A, Taylor ZA, **Frangi AF**, Ravikumar N, University of Leeds: Leeds, UK. Viva held 2024.

T30. Bonazzola R. Statistical learning methods in deep cardiac phenotyping for population imaging and imaging genetics. PhD Thesis. Supervisors (ordered): **Frangi AF**, Ravikumar N, University of Leeds: Leeds, UK. Viva held 2024.

T29. Lashgari M. An In Silico Imaging Framework for Microstructure-Sensitive Myocardial Diffusion-Weighted MRI. PhD Thesis. Supervisors (ordered): **Frangi AF**, Schneider JE, Ravikumar N, Teh I, University of Leeds: Leeds, UK. Viva held 2023.

T28. Frood RT. The use of machine learning/deep learning in PET/CT interpretation to aid in outcome prediction in lymphoma. PhD Thesis. Supervisors (ordered): Scarsbrook A, **Frangi AF**, Tsoumpas C, Gleeson F, University of Leeds: Leeds, UK. Viva held 2023.

T27. Attar A. Quantitative Analysis of Cardiac Magnetic Resonance in Population Imaging. PhD Thesis. Supervisor: **Frangi AF**. University of Leeds: Leeds, UK. Viva held 2020.
T26. Coelho S. Diffusion MRI for Well-posed and Optimal White Matter Microstructure Characterisation: Beyond Single Diffusion Encoding. PhD Thesis. Supervisors (ordered): **Frangi AF**, Pozo JM, University of Leeds: Leeds, UK. Viva held 2019.
T25. Zhang L. Image quality assessment for population cardiac MRI: from detection to synthesis. PhD Thesis. Supervisors (ordered): **Frangi AF**, Jewell G, University of Sheffield: Sheffield, UK. Viva held 2019.
T24. Sarrami-Foroushani A. In silico clinical trials for assessment of intracranial flow diverters. PhD Thesis. Supervisors (ordered): **Frangi AF**, Lassila T, University of Sheffield: Sheffield, UK. Viva held 2018.
T23. Farzi M. Bone Ageing and Osteoporosis: Automated DXA Image Analysis for Population Imaging. PhD Thesis. Supervisors (ordered): Wilkinson JM, **Frangi AF**, University of Sheffield: Sheffield, UK. Viva held 2018.
T22. Manap R. New learning frameworks for blind image quality assessment model. PhD Thesis. Supervisors (ordered): **Frangi AF**, Shao L, University of Sheffield: Sheffield, UK. Viva held 2018.
T21. Pereanez M. Enlargement, Subdivision and Individualization of Statistical Shape Models: Application to 3D Medical Image Segmentation. PhD Thesis. Supervisors (ordered): **Frangi AF**, Lekadir K, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2017.
T20. Dong B. High-throughput Image Analysis of Zebrafish Model of Parkinson's Disease. PhD Thesis. Supervisor: **Frangi AF**. University of Sheffield: Sheffield, UK. Viva held 2017.
T19. Ravikumar N. A Probabilistic Framework for Statistical Shape Models and Atlas Construction: Application to Neuroimaging. PhD Thesis. Supervisors (ordered): Taylor ZA, **Frangi AF**, University of Sheffield. Viva held 2017.
T18. Alba X. Automated Cardiac MR Image Analysis for Population Imaging. PhD Thesis. Supervisors (ordered): **Frangi AF**, Lekadir K, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2017.
T17. Cimen S. Reconstruction of Coronary Arteries from X-ray Rotational Angiography. PhD Thesis. Supervisors (ordered): **Frangi AF**, Gooya A, University of Sheffield: Sheffield, UK. Viva held 2017.
T16. Hua R. Non-rigid Medical Image Registration with Extended Free Form Deformations: Modelling General Tissue Transitions. PhD Thesis. Supervisors (ordered): **Frangi AF**, Pozo JM, University of Sheffield: Sheffield, UK. Viva held 2017.
T15. Lange M. Exploration of the Human Purkinje Network in Virtual Populations. PhD Thesis. Supervisors (ordered): **Frangi AF**, Lassila T, University of Sheffield: Sheffield, UK. Viva held 2017.
T14. Castro-Mateos I. Statistical Anatomical Modelling for Efficient and Personalized Spine Biomechanical Models. PhD Thesis. Supervisors (ordered): **Frangi AF**, Pozo JM, University of Sheffield: Sheffield, UK. Viva held 2015.
T13. Porras-Perez AR. Multi-cue Image Integration for Cardiac Tissue Characterization. Cum Laude. PhD Thesis. Supervisors (ordered): Piella G, **Frangi AF**, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2015.
T12. Geers AH. Hemodynamic Modeling of Cerebral Aneurysms. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Larrabide I, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2015.
T11. Hoogendoorn C. A Statistical Dynamic Cardiac Atlas for the Virtual Physiological Human: Construction and Application. Cum Laude. PhD Thesis. Supervisor: **Frangi AF**. Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2014.
T10. Bogunovic H. Geometric Modeling and Characterization of the Circle of Willis. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Pozo JM, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2012.
T9. Morales H. Endovascular Coiling and Its Influence on Intra-aneurysmal Hemodynamics by Image-based. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Larrabide I, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2012.
T8. Whitmarsh T. 3D Reconstruction of the Proximal Femur and Lumbar Vertebrae from Dual-energy X-ray Absorptiometry for Osteoporotic Fracture Risk Assessment. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Humbert L, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2012.
T7. Duchateau N. Statistical Atlases of Motion and Deformation for the Characterization of Crt Responders. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, De Craene M, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2012.
T6. Zhang C. Recovery of Cerebrovascular Morphodynamics from Time-resolved Rotational Angiography. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Villa-Uriol MC, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2011.
T5. Tobon-Gomez C. Three-dimensional Statistical Shape Models for Cardiac Image Analysis. Cum Laude. PhD Thesis. Supervisor: **Frangi AF**. Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2011.
T4. Pavani SK. Face Detection and Adaptive Face Recognition Systems. Cum Laude. PhD Thesis. Supervisors (ordered): **Frangi AF**, Delgado D, Universitat Pompeu Fabra: Barcelona, Spain. Viva held 2010.
T3. Butakoff C. Efficient Techniques for Statistical Shape Model Building and Fusion. Cum Laude. PhD Thesis. Supervisor: **Frangi AF**. Universidad de Zaragoza: Zaragoza, Spain. 2009.
T2. Oubel E. Registration-based Motion and Deformation Analysis of Cardiovascular Image Sequences. Cum Laude. PhD Thesis. Supervisor: **Frangi AF**. Universidad de Zaragoza: Zaragoza, Spain. Viva held 2008.
T1. Sukno FM. Invariance and Reliability for Statistical Shape Models. Cum Laude. PhD Thesis. Supervisor: **Frangi AF**. Universidad de Zaragoza: Zaragoza, Spain. 2008.

The full manuscript of all these theses can be downloaded from www.cistib.org/afrangi/alumni.

Scientific Evaluation Committees

2002 **Examiner**, Docent position Dr. Jyrki Lötjönen, Department of Engineering and Physics, Helsinki University of Technology *Helsinki, FI*
2003 **Evaluator**, Torres y Quevedo Technologists Fellowship Program, Spanish Ministry of Science and Technology *Spain*

2001-03 **Evaluator**, National R+D Program. Spanish National Evaluation and Prospection Agency (ANEP) *Spain*
2003 **Examiner**, Nederland Wetenschap Organisatie, Holland, Research Program on Computational Life Sciences *The Netherlands*
2003 **Examiner**, Junior Grants, Grant Agency, Academy of Sciences of the Czech Republic *Czech Republic*

2006-10	**International College Member**, Review College, Engineering and Physical Sciences Research Council (EPSRC)	*United Kingdom*
2007	**Expert Panellist**, Expert Consensus Panel, Tecnología Electrónica y Comunicaciones (TEC), Ministerio de Educación y Ciencia, Plan Nacional	*Spanish*
2007	**Expert Panellist**, Expert Consensus Panel, Tecnología Electrónica y Comunicaciones (TEC), Ministerio de Educación y Ciencia, Plan Nacional	*Spanish*
2008	**Expert Reviewer, evaluated a proposal of 20M£**, Strategic Awards Programme, Joint call of Wellcome Trust and EPSRC,	*United Kingdom*
2010	**Expert Reviewer, evaluated a fellowship application**, MRC Career Development Award Fellowship, Medical Research Council (MRC)	*United Kingdom*
2010	**Expert Reviewer**, Expert Consensus Panel, Tecnologías de la Sociedad de la Información (TSI), Ministerio de Educación y Ciencia, Plan Nacional	*Spain*
2010–	**Expert Reviewer**, French National Research Agency ANR	*France*
2013–	**Expert Reviewer**, Review College Member, Engineering and Physical Sciences Research Council (EPSRC)	*United Kingdom*
2014	**Expert Reviewer**, Czech Science Foundation	*Czech Republic*
2013–	**Expert Reviewer**, Research Grants and Fellowships, British Heart Foundation	*United Kingdom*
2014–	**Expert Reviewer**, New Zealand Ministry of Business, Innovation & Employment (MBIE)	*New Zealand*
2014–	**Expert Reviewer**, Research Program, Alzheimer's Society	*United Kingdom*
2014	**Expert Evaluator and Panellist**, Special Research Program (SFB) F32 Mathematical Optimization and Applications in Biomedical Sciences, Austrian Science Foundation	*Austria*
2015	**Expert Evaluator**, STW programme Samenwerkingsprogramma, Technology Foundation STW	*The Netherlands*
2016	**Expert Evaluator and Panel Member, various programs worth each €5m**, ICTPLUSS Program, Research Council of Norway (RCN)	*Norway*
2016	**Expert Evaluator, various programs worth each €10m**, Programme of the Investment for the Future (Hospital And Academic Research in Health Area), French National Research Agency ANR	*France*
2016	**External Panel Member, each cluster worth around 1M€/year for 5 years**, Cluster of Excellence Evaluation, University of Bordeaux	*France*
2016	**External Project Reviewer, 2 projects**, Project 5-100 (5top100.com), Ministry of Education and Science of the Russian Federation	*Russia*
2016	**Expert Evaluator, 2 projects**, R&D Infrastructure Funding, Austrian Research Promotion Agency (FFG)	*Austria*
2017	**Chair of the Fellows Committee, oversee 26 nominations**, Society Technical Committee, IEEE Engineering in Medicine & Biology Society	*USA*
2017	**Leading Expert Evaluator and Panel Member, each project worth €2M/each**, LEAD Projects, Strategic Program, Graz University of Technology (TU Graz)	*Austria*
2021	**Expert Evaluator and Panel Member, AORTA LEAP Project (evaluation and renewal) worth €2.2M**, LEAD Projects, Strategic Program, Graz University of Technology (TU Graz)	*Austria*
2021	**Review Panel Member, Quinquennial Scientific Review (2017-2021)**, European Molecular Biology Laboratory's European Bioinformatics Institute (EMBL-EBI)	*UK*
2021	**Panel 11 (Computer Science) Member, Research Excellence Framework 2021**, UK Research & Innovation	*UK*
2023	**Panel LS7, ERC Starting Grants**, European Research Council	*European Commission*
2023	**Assessor, ERC Consolidator Grants**, European Research Council	*European Commission*

PhD Evaluation Committees

Jun 2003	**Ernesto Serrano: Vocal del Tribunal de Tesis**, Estudio de la función pulmonar unilateral mediante tomografía de impedancia eléctrica. Supervisor: Joan Pere Riu, Doctorado en Ingeniería Biomédica, Universidad Politécnica de Cataluña	*Barcelona, Spain*
Jun 2003	**Javier Pascau: Informador del Proyecto de Tesis**, Integración de imágenes biomédicas: técnicas basadas en la teoría de la información. Supervisors: Manuel Desco Menéndez y Andrés Santos y Lleó, Doctorado en Ingeniería Electrónica, Universidad Politécnica de Madrid	*Madrid, Spain*
Sep 2003	**María Jesús Ledesma-Carbayo: Vocal del Tribunal de Tesis**, Detección del movimiento cardíaco mediante técnicas de registro elástico. Supervisors: Manuel Desco Menéndez y Andrés Santos y Lleó, Doctorado en Ingeniería Electrónica, Universidad Politécnica de Madrid	*Madrid, Spain*
Sep 2003	**Joan Domingo Gispert: Suplente Segundo del Tribunal de Tesis**, Segmentación estadística de resonancia magnética. Supervisor: Manuel Desco Méndez, Doctorado en Ingeniería Electrónica, Universidad Politécnica de Madrid	*Madrid, Spain*
Jan 2004	**Joan Verdera: Suplente Primero del Tribunal de Tesis**, Some interpolation problems in image processing. Supervisor: Vicent Caselles. Doctorado en Tecnología, Universidad Pompeu Fabra	*Barcelona, Spain*
Nov 2004	**Oriol Pujol: Vocal del Tribunal de Tesis**, A Semi-Supervised Statistical Frameworkand Generative Snakes for IVUS Analysis. Supervisor: Petia Radeva, Doctorado en Visión por Computador, Universidad Autónoma de Barcelona	*Barcelona, Spain*
Dec 2005	**Valerie Moreau-Villeger: Rapporteur and Member of PhD Defence Committee**, Mèthodes variationnelles et séquentielles poour l'ètude de la contraction cardiaque. Supervisor: Nicholas Ayache, Herve Delingette, Doctorado Ecole doctorale STIC, Université de Nice-Sophia Antipolis	*Sophia-Antipolis, France*
Mar 2006	**Juha Koikkalainen: Thesis Opponent**, Image Databases in Medical Applications. Supervisor: J. Lötjönen, Technical University of Helsinki	*Helsinki, Finland*

Oct 2005	**Hans C. van Assen: Titular del Tribunal de Tesis**, 3D Active Shape Modeling for Cardiac MR and CT Image Segmentation. Supervisor: J.H.C. Reiber, B.H.P. Lelieveldt, Leiden University	*Leiden, The Netherlands*
Nov 2006	**Stephane Allaire: Rapporteur and Member of PhD Defence Committee**, Ajustement robuste de quadriques et coniques de types contraints appliqué à la morphométrie tridimensionnelle de structures osseuses. Supervisor: C. Roux, Ecole Nationale Supérieure des Télécommunications de Bretagne	*Brest, France*
Dec 2006	**Lars A, Conrad-Hansen: PhD Evaluation Committee Member**, Towards an Automated Quantification Tool for the Assessment of Atherosclerotic Plaque in Lumbar X-rays. Supervisor: M. Nielsen, M. de Bruijne, IT University of Copenhagen	*Copenhagen, Denmark*
May 2007	**Arnau Oliver: Vocal del Tribunal de Tesis**, Automatic Mass Segmentation in Mammographic Images. Supervisor: Jordi Freixenet, Doctorado en Ingeniería Informática, Universidad de Girona	*Girona, Spain*
Sep 2007	**Mehmet Üzumcü: PhD Evaluation Committee Member**, Constrained segmentation of cardiac MR image sequences. Supervisor: J.H.C. Reiber, B.H.P. Lelieveldt, Leiden University	*Leiden, The Netherlands*
Apr 2008	**Dong-Seon Cheng: PhD Committee Member**, Image and Video Segmentation through Semi-supervised Clustering. Supervisor: V. Murino, Università degli Studi di Verona	*Verona, Italy*
Mar 2010	**Hui Sun: PhD Committee Member**, Medial model and application in biomedical image analysis. Supervisor: Paul Yushkevich, University of Pennsylvania	*Philadelphia, USA*
Apr 2010	**Harvey Ho: PhD Examiner Committee**, Computational Modeling of Cerebral Aneurysms. Supervisor: Peter J Hunter, University of Auckland	*Auckland, New Zealand*
Mar 2011	**Tim H. Heibel: PhD Examiner Committee**, Medical Tool Tracking in Fluoroscopic Interventions: new insights in detection and tracking of tubular tools. Supervisor: Nassir Navab, Technical University of Munich	*Munich, Germany*
Mar 2011	**Enric Meinhardt: Vocal de Tribunal de Tesis**, Morphological and Statistical Techniques for the Analysis of 3D Images. Supervisor: Vicent Caselles, Universitat Pompeu Fabra	*Barcelona, Spain*
Oct 2011	**An Elen: PhD Committee Member**, Model-based analysis of cardiac medical images. Supervisors: Paul Suetens, Frederik Maes, Catholic University of Leuven	*Leuven, Belgium*
Dec 2012	**Marina Piccinelli: PhD Committee Member**, Characterization of cerebral aneurysm morphology-development of methods and techniques in an open-source framework. Supervisors: Frans van der Vosse, Luca Antiga, Technical University Einthoven	*Einthoven, The Netherlands*
Jan 2013	**Nicolas Honnorat: PhD Committee Member**, Curvilinear Structures Segmentation and Tracking in Interventional Imaging. Supervisor: Nikos Paragios, Ecole Centrale Paris	*Paris, France*
Jan 2013	**Azadeh Firouzian: PhD Committee Member**, Automated Analysis of Intracranial Aneurysm Morphology and Dynamics from CTA Data. Supervisors: Wiro Niessen, Rashindra Maniessing, Erasmus University Rotterdam	*Rotterdam, The Netherlands*
Oct 2013	**Malebogo N Ngoepe: PhD External Examiner**, Computational modelling of thrombotic processes and complex haemodynamics in cerebral aneurysms. Supervisor: Yiannis Ventikos, University of Oxford	*Oxford, UK*
Apr 2014	**Lene Lillemark: PhD External Examiner**, Shapes related to longitudinal studies of disease. Supervisor: Prof Mads Nielssen, University of Copenhagen	*Copenhagen, Denmark*
Oct 2014	**Xianliang Wu: PhD External Examiner**, Fast Catheter segmentation and tracking based on X-ray fluoroscopic and echocardiographic modalities for catheter-based cardiac minimally invasive interventions. Supervisor: Daniel Rueckert, Imperial College of Science, Technology and Medicine	*London, UK*
Jul 2015	**Thomas Peach: PhD External Examiner**, The effect of design on endovascular embolisation device performance. Supervisor: Yiannis Ventikos, University of Oxford	*Oxford, UK*
May 2016	**Hugo Winfield: PhD External Examiner**, Automatic segmentation of the lumbar spine from medical images. Supervisor: Judy R Meakin, University of Exeter	*Exeter, UK*
Jun 2016	**David Ladd: PhD External Examiner**, An open-source vascular modelling framework: from imaging to multiscale CFD. Supervisor: Chris Bradley, University of Auckland	*Auckland, New Zealand*
Nov 2016	**Jessie Thomson: PhD External Examiner**, Algorithms for Automatic Analysis of Radiographs of the Knee with Application in Diagnosis and Monitoring of Osteoarthritis. Supervisor: Tim Cootes, University of Manchester	*Manchester, UK*
Nov 2016	**Zhongliu Xie: PhD External Examiner**, Segmentation and anomaly detection in phenotyping experiments involving mouse embryo images. Supervisors: Duncan Gillies / Daniel Rueckert, Imperial College London	*London, UK*
May 2017	**Kristína Lidayová. Opponent**, Fast Methods for Vascular Segmentation Based on Approximate Skeleton Detection. Supervisors: Hans Frimmel, Ewert Bengtsson, Örjan Smedby, Uppsala University	*Uppsala, Sweden*
Jul 2017	**Christopher P Bridge. PhD External Examiner**, Computer Aided Analysis of Foetal Cardiac Ultrasound Videos. Supervisors: Alison Noble, Oxford University	*Oxford, UK*
Jul 2017	**Nuno Almeida: PhD Committee Member**, Automated echocardiographic assessment of the left atrium. Supervisors: Jan D'Hooge, Eigil Samset, Catholic University of Leuven	*Leuven, Belgium*
Oct 2017	**Seyed-Alborz Amir-khalili: PhD Examiner**, Automated Dynamic Scene Analysis and Augmentation of Medical Data with Application to Image-Guided Radiological and Surgical Interventions. Supervisors: Rafeef Abugharbieh, University of British Columbia	*Vancouver, Canada*
Dec 2017	**Ozan Oktay: PhD Examiner**, Segmentation, synthesis and super-resolution in cardiac MRI. Supervisor: Daniel Rueckert, Imperial College London	*London, UK*
May 2018	**Dejan Knez: PhD Examiner**, Computer Assisted Design and Analysis of Pedicle Screw Placement based on Medical Images of the Spine. Supervisor: Tomaž Vrtovec, University of Ljubljana	*Ljubljana, Slovenia*
Ago 2018	**Tan Li Kuo: PhD Examiner**, Fully automated segmentation of the left ventricle in cine cardiac MRI. Supervisor: Lim Einly and Liew Yih Miin, University of Malaya	*Kuala Lumpur, Malaysia*
Oct 2018	**Quinten Collier: PhD Examiner**, Robust estimation of diffusion tensor and diffusion kurtosis imaging parameters. Supervisors: Jan Sijbers and Jelle Veraart, University of Antwerp	*Antwerp, Belgium*
Jun 2019	**Anaik Pal: PhD Examiner**, MacPso: Machine assisted analysis of Psoriatic skin. Supervisors: Utpal Garain, Indian Statistical Institute	*Kolkata, India*

May 2021	**Alain Berod: Rapporteur**, Modélisation in-silico des effets hémodynamiques des prothèses endovasculaires dans le traitement des anévrismes cérébraux: application à l'estimation des chances de succès. Supervisors: Franck Nicoud and Simon Mendez, University of Montpelier	*Montpelier, France*
Dec 2021	**Ricardo J Araújo: Rapporteur**, Computer Vision for Blood Vessel Segmentation and Related Applications. Supervisors: Helder P Oliveira, Jaime Cardoso, University of Porto	*Porto, Portugal*
Apr 2023	**Jiayu Wang: External Examiner**, Multiscale Modelling of Haemorrhagic Transformation After Ischaemic Stroke. Supervisors: Stephen Payne, Vicente Grau, University of Oxford	*Oxford, United Kingdom*
May 2023	**Eva Breznik: Opponent**, Image Processing and Analysis Methods for Biomedical Applications. Supervisors: Robin Strand, Uppsala University	*Uppsala, Sweden*