

Areas of expertise

human-in-the-loop computing, machine learning, medical image analysis, real-time algorithms

Employment history

Assoc. Prof. (UK Reader), Dept. Computing, Imperial College London, UK	since 09/2021
Professor, Friedrich-Alexander-University Erlangen-Nürnberg, DE	since 09/2021
Assoc. Prof. (UK Senior Lecturer), Dept. Computing, Imperial College London, UK	09/2019 – 08/2021
Ass. Prof. (UK Lecturer), Dept. Computing, Imperial College London, UK	10/2015 – 08/2019
Honorary Lecturer, ISBE, King's College London, UK	since 10/2015
Senior Research Fellow, ISBE, King's College London, UK	05/2015 – 10/2015
Marie-Curie Fellow, Department of Computing, Imperial College London, UK	03/2013 – 04/2015
Post-doctoral researcher, ICG, Graz University of Technology, AUT	05/2011 – 02/2013
Research Associate, ICG, Graz University of Technology, AUT	01/2008 – 04/2011
Research Associate, Dept. Urology, Medical University of Innsbruck, AUT	06/2007 – 12/2007
part-time Research Engineer, Test-lab for High-Voltage Engineering, Graz, AUT	06/2006 – 02/2013
part-time Research Engineer, Siemens Healthcare, Graz, AUT	2004 – 2007

Education

Ph.D. Graz University of Technology	10/2007 – 05/2011
Dissertation: "Ray-Based Image Generation For Advanced Medical Applications" (Advisor: Prof. Dieter Schmalstieg) (summa cum laude). Viva date: 05/25/2011	
M.Sc. Graz University of Technology (summa cum laude)	10/2005 – 10/2007
Specialization in Biomedical Engineering and Computer Vision/Graphics	
B.Sc. Graz University of Technology	10/2001 – 06/2005
Course: Telematics (Computer Science plus Electrical Engineering)	

Academic achievement summary

- ERC Consolidator Grant 2022: MIA-Normal
- 70 peer reviewed articles in scientific journals
- 80 peer reviewed full papers at leading international conferences
- 3 patents
- 20 grants, > €3.9M (as PI), > €25.2M (total)
- 28 awards, prizes, and honours
- 3 books edited
- publications: <https://scholar.google.com/citations?user=Igxq-YEAAA&hl=en&oi=ao>
- graduated 8, supervising 10 PhD students
- graduated 200+ UG project students

Awards and Prizes (selected)

- **2022** Best paper runner-up MICCAI UNSURE (Ouyang et al.)
- **2022** Winner MICCAI FETA Challenge (Li et al.)
- **2021** Best Paper Award MICCAI MLCN (with Ma et al.)
- **2021** Best Demonstration runner-up MICCAI ASMUS (with ThinkSono Ltd.)
- **2021** IEEE TMI Distinguished Reviewer Award
- **2020** Winner of the MICCAI Medical Out-of-Distribution Analysis Challenge (with Tan et al.)
- **2019** Imperial President's award (team award for BioMedIA with D. Rueckert, B. Glocker, W. Bai)
- **2018** S.M. Perren research award (for Verbruggen et al. 2018, J Biomechanics)
- **2017** Winning team of the Multimodal Brain Tumor Segmentation Challenge (BraTS'17) (Kamnitsas et al.)
- **2017** IEEE PacivicVIS'17 best paper honourable mention award.
- **2017–now** Various student project prizes, Google poster competitions, Corporate Partnership Awards.
- **2016** Insight-Award for the most aesthetic Visualization 2016: "Smoky hurricane" led by R. Khlebnikov.
- **2015** Short-listed for the Nurturing Research Talents Marie Skłodowska-Curie actions prize.
- **2014** Best paper honorable mention award EuroGraphics 2014.
- **2013** Short-listed for the OCG Heinz Zemanek Prize.
- **2013** *Best poster* honorable mention for IEEE SciVis 2013.
- **2012** VCBM Karl-Heinz-Höhne 3rd award for "Crepuscular Rays for Tumor Accessibility Planning".
- **2012** Short-listed for the GI-dissertation price.
- **2011** "Forum Technology and Society" and Ing. F. Schmiendl research prize dissertation prize.
- **2011** *Best paper award*, International Symposium on Non-Photorealistic Animation and Rendering.

Professional Activities past 5 years

Chair MICCAI Advances in Simplifying Medical UltraSound (ASMUS)	2023
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Nomination for the MICCAI Society Board	2021
Area Chair 21-23rd and 25-26h MICCAI	2018 – 2023
Associate Editor IEEE Transactions on Medical Imaging	since 2019
IPC Human-Centric Machine Learning @ NeurIPS	2019
Guest Editor Computers & Graphics, Visual Computing for Biology and Medicine	2019
IPC OAGM/AAPR Medical Image Analysis 2018	2018
General Chair RAMBO Intl. Workshop at MICCAI	2016 – 2018
Senior IPC: International Joint Conference on Artificial Intelligence	2017 – 2020
Paper Chair Visual Computing for Biology and Medicine (EG VCBM)	2017

Current teaching

FAU: Four courses from programming to advanced machine learning (~400 students/term)	since 2021
Imperial: Computer Graphics (~60-130 students/term),	since 2014
Imperial: Deep Learning (~180–300 students/term)	since 2019

Past teaching

Computer Architecture (~130 students/term), Matlab 101, Computing Topics, (lecture and lab)	2015 – 2019
Computer Graphics at Peking University Summer School International (~40 students)	07.2016
various courses, co-delivered lectures and labs, TUG	2007 – 2013

Funded research projects	MM/YY	funder	total/group	type	role
Explainable ML	01/24 – 12/27	Audi	€200k	Research	PI
MIA-NORMAL	09/23 – 06/28	ERC	€2M	Research	PI
end-to-end MRI	01/23 – 12/25	DFG	€350k	Research	Co-I
major equipment grant	12/22 – 12/24	DFG	€333k	Research	PI
Ultromics AI4Health CDT	10/20 – 09/24	Ultromics&UKRI	£150k	Research	PI
iFind techn. accelerator	10/20 – 09/22	Wellcome Trust	£500k	Translation	Col
Imperial-TUM PhDs	01/20 – 09/24	Imperial-TUM	£177k	Research	PI
AI4Health EP/S011579/1	04/19 – 10/27	UK UKRI	£15M	PhD Training	Col
joint venture with JKU	10/18 – 10/21	Upper Austria	£200k	Research	PI
Imaging & AI (19923)	12/18 – 11/21	Innovate UK	£10M/1.7M	Research	Col
EP/S013687/1	04/19 – 03/22	UK EPSRC	£852k/770k	Research	PI
Intel AI DevCloud	08/18 – 08/19	Intel	\$20k	Research	PI
Impact acceleration grant	07/18 – 08/19	UK EPSRC	£12k	Translation	PI
EP/N024494/1	09/16 – 08/17	UK EPSRC	£120k	Research	PI
Wellcome/EPSCRC (102431)	01/16 – 09/22	Wellcome Trust	£5M/800k	Research	Col
ClinicImpact (610886)	02/14 – 01/15	EU FP7	€3M/400k	Research	Co-Appl.
F.A.U.S.T. - (325661)	05/13 – 04/15	EU FP7	€230k	Fellowship	PI
Schrödinger Scholarship	resigned for ↑	Austrian FWF	€150k	Fellowship	PI
GOSMART (600641)	04/13 – 03/16	EU FP7	€4M/600k	Research	Co-Appl.
MVP (P23329)	09/11 – 08/14	FWF	€350k	Research	Col
PhD student funding	2015–2028	various	~£1M	12×studentships	PI

Memberships of professional bodies

Academic Fellow at the Data Science Institute at Imperial College London	since 2017
Institute of Electrical and Electronics Engineers (IEEE) - Senior Member since 2017	since 2009
Medical Image Computing and Computer Assisted Intervention (MICCAI) Society	since 2008

Selected public engagement activities/developing others

- **2017 – 2021:** <http://corticalexplorer.com>, <http://ratchet.lucidifai.com/> <http://kidneycaliper.lucidifai.com/> <http://ibd.lucidifai.com/> – public medical imaging demos
- **2015 – 2018:** Imperial Festival and Imperial Fringe, presented and coordinated a team of 4-9; >15,000 audience each year; festivals are each 3 days.

Consulting and advising (selected)

- **since 2023:** Fraiya.com (ultrasound image analysis technology) – Scientific Advisor and Co-founder
- **since 2021:** Compath.co.uk (histopathology image analysis technology) – Sci. Advisor and Co-founder
- **since 2020:** cydarmedical.com (interventional technology) – Scientific Advisor
- **since 2017:** Thinksono.com (diagnostic technology) – Scientific Advisor
- **2019–2020:** Ultromics.com (diagnostic technology) – Scientific Advisor