

Dr SIMONE PARISOTTO

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Born in Verona (Italy) on 23/12/1987, Married, DBS Checked

POSITIONS

01/2019-01/2021: Research Associate, DAMTP & Fitzwilliam Museum, University of Cambridge, UK

- **Unveiling the invisible: mathematics for conservation in Arts and Humanities** (Leverhulme Trust funded project)
- Principal Investigator: Prof Carola-Bibiane Schönlieb
- with Dr S. Bucklow (Hamilton Kerr Institute), Dr S. Reynolds (Fitzwilliam Museum), Dr A. Launaro and Ms N. Leone (Faculty of Classics)

07/2014-09/2014: Research Scholarship, University of Verona, IT

- **Image processing using thermography techniques for non-invasive analysis of Cultural Heritage**
- Infrared Analysis and Image Processing for Cultural Heritage Conservation of “**Monocromo**”, **Leonardo Da Vinci**.

03/2012-12/2012: Internship, Vision, Image Processing & Sound Laboratory, Verona, IT

- Study of the Laplace-Beltrami operator and Heat-Kernel-Signature for 3D shapes. Supervised learning of brain morphological deformations and features possibly correlated to “schizophrenia”. Attendance to ECCV2012 Conference.

EDUCATION

10/2014 – 12/2018: University of Cambridge, UK - PhD at Cambridge Centre for Analysis - Jesus College

- Thesis title: **Anisotropic Variational models and PDEs for inverse imaging problems.** (DOI: [10.17863/CAM.38240](https://doi.org/10.17863/CAM.38240))
- Supervisor: Prof Carola-Bibiane Schönlieb - Co-supervisor: Prof Simon Masnou
- Examiners: Prof Arieh Iserles, Prof Jean-Michel Morel (PhD viva in February 2019, final approval in April 2019)

2014: University of Verona, IT - Master's Degree in Mathematics (110/110 cum laude)

- Thesis title: **Variational methods in Image Processing for Inpainting and Shadow Removal.**
- Supervisor: Prof Giandomenico Orlandi - Co-supervisor: Prof Simon Masnou

2010: University of Verona, IT - Bachelor's Degree in Applied Mathematics (101/110)

- Thesis title: **Non-equispaced Fast Fourier Transform and Applications.**
- Supervisor: Prof Marco Calari

2006: Liceo Scientifico San Giuseppe, IT - High School Diploma (100/100)

- Thesis title: **Fractals between Art and Nature.**

RESEARCH INTERESTS

Mathematical Image Processing, Inverse Problems, Variational Methods, Anisotropic PDEs, Numerical Analysis, Optimisation, Heritage Science, Digital Humanities.

EDITORIAL ACTIVITIES

Reviewer for Journals:

- Journal of Mathematical Imaging and Vision (JMIV)
- SIAM Journal on Imaging Sciences (SIIMS)
- Sensors

Reviewer for Conferences:

- Scale Space and Variational Methods (SSVM)

GRANTS, AWARDS AND PRIZES

- 2018: **Best Paper Award**, International Conference on Image and Signal Processing, **ICISP 2018**, Cherbourg, FR
- 2018: **SIAM** Imaging Science 2018 **Student Travel Award** (\$700)
- 2014-today: Travel grants from **Cambridge Philosophical Society** (+1.5K GBP)
- 2014-2018: Travel grants from **CCA-DAMTP** (2K GBP) and **Jesus College** (0.65K GBP)
- 2014: **Best Master Thesis Award**, Banca di Credito Cooperativo, Verona, IT

MEMBERSHIP, FELLOWSHIP AND PARTICIPATION TO COMMITTEES

- 11/2019-today: Member of the Alan Turing Institute **AI for Arts** Group www.turing.ac.uk/research/interest-groups/ai-arts
- 10/2016-today: Member of Society for Industrial and Applied Mathematics (**SIAM**)

- 02/2015-today: Fellow of the **Cambridge Philosophical Society**, Cambridge, UK
- 2017: **Committee Member** and **Master Thesis Reviewer** for candidate Nicola Garibaldi at University of Genova, IT
- 2016: **Committee Member** of the SIAM-IMA Cambridge Student Chapter, University of Cambridge, UK

ORGANISATION OF EVENTS

- 2019: Annual Meeting for “Mathematics for Applications in Cultural Heritage”, Fitzwilliam Museum, Cambridge, UK
- 2019: Mathematical Imaging Models for Cultural Heritage Conservation, mini-symposium, **ICIAM19**, Valencia, ES
- 2016: **SIAM-IMA** Cambridge Annual Conference, University of Cambridge, UK
- 2015: 5TH Joint DTC Student Conference CCA-MASDOC-OxPDE, University of Cambridge, UK
- 2015: Cambridge Analysts' Knowledge Exchange (C.A.K.E.) Seminar Series, University of Cambridge, UK
- 2014: Autumn School in Image Processing 2014. University of Verona, IT

INVITED SPEAKER AT INTERNATIONAL CONFERENCES

- 2019: **International Congress on Industrial and Applied Mathematics (ICIAM)**, Valencia, ES
- 2018: **Image Processing for Art Investigation (IP4AI)**, Ghent, BE
- 2018: **SIAM Imaging Science (SIAM IS)**, Bologna, IT
- 2018: **Variational methods and effective algorithms for imaging and vision**, Cambridge, UK
- 2016: **First Joint Meeting Brazil-Italy in Mathematics**, Rio de Janeiro, BR
- 2016: **British Applied Mathematics Colloquium (BAMC)**, Oxford, UK

INVITED RESEARCH VISITS

- Planned for 2020: Dr Cristina Maria Barrocas Dias, Hercules Lab, Evora, PT (part of the ARCHMAT EMJMD program)
- 22-28/09/2019: Prof Aurélie Bugeau, LaBRI, Bordeaux University, FR
- 25/09/2017 - 15/12/2017: VMV Programme, Isaac Newton Institute, Cambridge, UK
- 18-22/06/2013, 19-31/03/2017, 07-19/10/2017: Prof Simon Masnou, University Lyon 1, Lyon, FR

STUDENT SUPERVISION AND TEACHING ACTIVITIES

- 2017: Supervisor for **Linear Analysis** (Part II, 12 students), University of Cambridge, UK
- 2015-2016-2017: Supervisor for **Optimization & Control** (Part II, 17 students), University of Cambridge, UK
- 2016: Co-supervisor in the **Summer Undergraduate Research Program**, University of Cambridge, UK.
Project title: “Classification of Ancient Pottery by Machine Learning and Geometric Analysis”. Student: V. Vankov
- 12/2010: **High school teacher** (temporary cover). Liceo Scientifico San Giuseppe, Verona, IT

DISSEMINATION

- 2019-today: webmaster of Mathematics for Applications in Cultural Heritage (MACH): <https://mach.maths.cam.ac.uk>
- 2019: Science communication on YouTube: “Making stuff disappear using applied maths” (<http://www.youtube.com/watch?v=-yfApxV62hw>) with **Prof S. Siltanen** and **Prof C.-B. Schönlieb**
- 2016: webmaster of SIAM-IMA Cambridge Student Chapter: <https://studentchapter.maths.cam.ac.uk/>
- 2017: Member in Panel Discussion “Art, Architecture, AI”, Emmanuel College, Cambridge, UK

ACADEMIC RELATED ACTIVITIES

- 2018: **Submission helper**, Computer-Aided Teaching of All Mathematics (CATAM) course. University of Cambridge, UK
- 2015: **Mark Checker** and **Script Sorter** for Prof Richard Weber, University of Cambridge, UK

IT AND CODING SKILLS

- **MATLAB, Python 3, C, Github, TeX, Microsoft Office;**
- Expertise as webmaster in HTML, CSS, MyPHP, Joomla, **Wordpress**, Adobe Lightroom, Adobe Photoshop;
- CINECA (Bologna, IT) training on: Scientific computing in HPC (MPI, OpenACC, CUDA), Python 3.

LANGUAGES

- **Italian** (Mother tongue),
- **English** (7.0 IELTS)