

Education

2010.10 - 2014.05 University of Oxford

- **DPhil Degree** in Solid Mechanics and Materials Engineering, Department of Engineering Science, University of Oxford. Viva date: 29 May, 2014 (2011.12 - 2012.04 maternity leave)
Thesis title "*Thermal-mechanical behaviour of hierarchical structure of human dental tissue*"

2009.09 – 2010.09 Xi'an Jiaotong University

- **Ph.D candidate** in Solid Mechanics, School of Aerospace, Xi'an Jiaotong University
Project: *Mechanical properties of blood vessel aneurysm*

2005.09 – 2009.07 Xi'an Jiaotong University

- **Bachelor of Engineering** in Engineering Mechanics, School of Aerospace
Fourth year Project: "*Three-dimensional fluid-structure interaction modelling on abdominal aortic aneurysm*"
(GPA=3.7/4, ranking 1st among 60 in the School of Aerospace)

Employment

2018.02- present **Lecturer**, Department of Mechanical Engineering Sciences, University of Surrey

- **Research**

- Advanced functional materials

Research partners: Oak Ridge National Laboratory (ORNL), Purdue University, Chinese Academy of Sciences (CAS), National Physical Laboratory (NPL), TESCAN Brno s.r.o., Pilkington Technology Management Ltd

- Natural and bio-inspired novel composites

Research partners: University of Birmingham, University of Bristol, Chalmers University of Technology, Diamond Light Source (DLS), National Physical Laboratory (NPL), Agency for Science, Technology and Research (A*STAR)

- Structural integrity assessment

Research partners: Culham Centre for Fusion Energy (CCFE), University of Bristol, ISIS neutron and Muon Source, TESCAN Brno s.r.o., TISICS Ltd

- **Supervision**

- Supervisor of **1** Research Fellow (PI), **4** PhD (PI), **1** PhD (CI) and **2** EngD (CI) students
- Supervisor of MSc, MEng and BEng project students
- Professional Training Tutor for students
- IMechE Mentor
- Personal tutors for undergraduate students and MSc students

- **Expertise**

- Multi-modal synchrotron- and lab- based X-ray techniques
2D/3D SAXS/WAXS, Imaging/Tomography, Spectroscopy
- Multi-beam microscopy techniques
Micromechanics, FIB-DIC, FIB-SEM/TOF-SIMS
- Analytical and numerical methods
Eshelby inclusion-based model, Finite Element Method (FEM)

2017.02-2018.02 **Senior Researcher in Engineering and Microscopy**, Department of Engineering Science, University of Oxford (promotion to Grade 8, approved by MPLS Division)

- Researcher Co-investigator (EP/P005381/1)
- Member of Departmental Researcher Committee
- Member of Departmental Women in Engineering Committee
- Member of PDRA Interview Panel
- Overseeing and coordinating multiple projects in a University Research Facility (MBLEM lab)

2014.04-2017.01 **Postdoctoral Researcher**, Department of Engineering Science, University of Oxford

- FP7 EU large-scale integrating collaborative research project (iStress, 604646).
My research focuses on the development of the Focused Ion Beam (FIB) - Digital Image Correlation (DIC) approaches on the evaluation of residual stress at micro- and nano-scale.
- Member of Rolls-Royce funded University Technology Centre (UTC) in Solid Mechanics.
I gave an overview talk on the topic of "Probing the Processing-Structure-Stress relationships in aerospace alloys" at the Oxford Solid Mechanics UTC Annual Review, 2016

- Advisor to DPhil postgraduate students
- Co-supervisor of undergraduate fourth year projects
lab-based X-ray diffraction of teeth; FIB-DIC analysis of Ti alloys and Ni-base superalloys

Research funding

- **EPSRC New Investigator Award** (PI, EP/S022813/1 ~£252k).
- Diamond Light Source **joint PhD studentship** 2019 (PI, ~£150k).
- University Strategic Priorities Funding, PI, **£10k**
- University of Surrey's **Doctoral College Studentship Award** 2018 (PI, ~£80k in-cash and **£50k** in-kind).
- **Capital Award** (PI, ~£43k) from the Faculty of Engineering and Physical Science, Surrey.
- TESCAN Brno s.r.o., Auto-DIC software, PI, ~£60k in-kind
- EPSRC CDT **EngD studentship** (~£64k from Pilkington Technology Management Ltd, UK)
- **Principal Investigator** (Beamlines I22, I13, I18, B16) and Co-investigator for over **40** experimental visits (in-kind funding ~£80k per visit) to use large scale facilities: Diamond Light Source, UK (I11, I15, I18, I22), European Synchrotron Radiation Facility, France (BM32, ID15B), Swiss Light Source, Switzerland (TOMCAT), and Shanghai Synchrotron Radiation Facility, China (BL16B1).
- **Leading investigator** in a research project approved as the major program of scientific instrument research by National Natural Science Foundation of China (NSFC), with Shanghai Jiaotong University (China) and Shanghai Synchrotron Radiation Facility (China) (**Awarded**, I am responsible for 10% of the total grant of over ~**CN¥7.9M**).
- **Researcher Co-Investigator** for EPSRC grant (EP/P005381/1) by the University of Oxford and University of Birmingham on the topic of human dental caries (**Awarded**, ~£1.8M).

Teaching commitments

- 'Learning, Teaching and Assessing' certificate from SEDA, aligned to the **UK Professional Standards Framework at Descriptor 2** (equivalent to **Fellow of the Higher Education Academy**).
- University of Surrey
 - ENG2093: **Non-Destructive Testing** (Ultrasonic testing)
 - ENG1063: **Materials & Statics, Module leader** (Fracture, Fatigue, Creep, Polymer, Ceramics)
 - ENG2087: **Design Project** (Biomedical Engineering)
- University of Oxford
 - **College Tutor** for the course "A3 Structures, Materials and Dynamics", St Anne's College & Oriel College (Jan 2015 - Jan 2018).
 - Lab Demonstrator for the course of "A5 Dynamics Laboratory", Department of Engineering Science (Oct 2014 - Oct 2016).

Affiliations and memberships

- **EPSRC Associate Peer Review College Member**
- **EPSRC affiliated WES membership**: A Centenary Celebration: Women's Engineering Society Membership
- **Reviewer** for the Swiss National Science Foundation (SNSF)
- **Approved Assessor, CSci and MIMMM**, the Institute of Materials, Minerals and Mining (IOM3)
- **Journal reviewer**, *ACS Nano*, *Nano Energy*, *Acta Biomaterialia*, etc.
- **Managing Editor**, *Materials & Design*, Elsevier (Feb 2015 - Oct 2017)
- **Committee Member**, Advances in Functional Materials (AFM), International Conference on Mechanical and Aerospace Engineering (ICMAE), International MultiConference of Engineers and Computer Scientists (IMECS) and World Congress on Engineering (WCE)
- **"Building a Business"** certificate, Saïd Business School, University of Oxford

Awards

- **"Excellent Oral Presentation"** ICMAE, London, 2016
- **"Best Paper Award"** IMECS, Hong Kong, 2015; WCE, London, 2014; ICF13, Beijing, 2013.
- **"Certificate of Merit"** IMECS, Hong Kong, 2014; WCE, London, 2015