

# Dr CHRISTIAN MÁLAGA-CHUQUITAYPE

Assoc. Prof. in Structural and Engineering Structures

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Research Group: <http://www.imperial.ac.uk/emerging-structural-technologies>

## I. Education

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- 2012 **PhD** in Structural and Earthquake Engineering, **Imperial College London** (UK) **Unwin Prize for the best PhD Thesis in Civil & Environmental Engineering**. Thesis: Seismic design and assessment of steel structures incorporating tubular members
- 2007 **MSc** in Earthquake Engineering, **ROSE School**, *Università degli studi di Pavia* (Italy) – PGA: A+ including a first term at Imperial College with all A\*s & As
- 2007 **MProf** (Master Professionnel) in Engineering Seismology, **Université Joseph Fourier** (France)
- 2000 **BEng** (Bachiller) en Ingeniería Civil, **Universidad Nacional San Agustín de Arequipa** (Peru)

## II. Research Expertise

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- Earthquake engineering and structural dynamics
- Artificial intelligence in structural design
- Advanced building technologies and digital design and manufacture
- Low-cost vibration and image-based sensing
- Structural timber engineering
- Experimental methods (large and reduced scale)
- Performance-based design and assessment in extreme scenarios (e.g. earthquake, off-Earth)

## III. Selected Awards & Prizes

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Best Research Paper, Institution of Structural Engineers UK	2019
Commendation for Excellence in Engineering Education, Institution of Structural Engineers UK	2018
TK Hsieh Research Award, Best Paper, Institution of Civil Engineers	2015
Unwin Prize, Best PhD Thesis, Department of Civil and Environmental Engineering	2012
Dorothy Hodgkin Postgraduate Award, PhD studies from the EPSRC and Tata Steel	2007-2011
Prize for Highly Commended Poster, Graduate School, Imperial College London	2010
Prize for Highly Commended Poster, Department of Civil & Environmental Engineering	2010
Macedonian Association for Earthquake Engineering Student Grant, to present at 14 <sup>th</sup> ECEE	2010
Paviors Laing Award, Worshipful Company of Paviors. To visit UC Berkeley, USA	2009
Old Centralians' Trust Award	2009
Huixian Earthquake Engineering Foundation Young Researcher Grant, to present at 14 <sup>th</sup> WCEE	2008
Imperial College Trust Award	2008
European Commission Full Scholarship, towards MSc studies	2005-2007
Public Commendation (highest honour) for the best Degree Dissertation, UNSA, Peru	2004

## IV. Publications

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A strong publication record with over 117 publications including 60 high-quality journal papers in the areas of earthquake engineering, artificial intelligence, structural mechanics, applied dynamics and advanced numerical modelling. Many of these publications have received highly-cited and most-downloaded certificates. **See Appendix A**

## V. Employment

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### **Academic:**

- Since 2017     **Assoc. Prof. (Senior Lecturer) in Structural Engineering**, Department of Civil and Environmental Engineering, *Imperial College London (UK)*. Research, teaching and admin responsibilities at the UG and PG levels.
- Director of UG admissions
  - Director of the MSc Programme in Earthquake Engineering
  - Post-doc and Fellows Champion
- 2013-2017     **Assist. Prof. (Lecturer) in Structural Engineering**, Department of Civil and Environmental Engineering, *Imperial College London (UK)*.
- 2011-2013     **Research Associate**, *Imperial College London (UK)*. Actively involved in:
- **Advanced design methods for blast loaded steel structures – ADBLAST**. A large collaborative European project studying industrial structures subjected to vapour cloud explosions.
  - **Seismic response of composite timber/bamboo lightweight structures**. In collaboration with Arup. Experimental studies on the seismic response of low-cost sustainable houses for El Salvador.
- 2010-2013     **Academic Advisor**, *CinERGIA (Peru)*. CinERGIA. A student-led initiative aimed at generate impact on the urban environment through a better interaction between engineering and architecture professionals.
- 2007-2011     **Research Assistant**, *Imperial College London (UK)*. PhD funded by Tata Steel and EPSRC to develop design guidance for the design of connections to tubular members.
- 2009            **Visiting Lecturer**, *Universidad Católica de Santa Maria (Peru)*. In charge of the organization and delivery of a post-graduate course in Earthquake Resistant Design.
- 2004-2005     **Assistant Professor**, *Universidad de San Agustín (Peru)*. Lecturing various courses at the undergraduate level. I was also involved in the management of the Faculty of Civil Engineering's social projects.

### **Industrial experience:**

- 2015, 2013     **Imperial Consultants**, Expert opinion for Advanta Global on behalf of Swiss Re on the causes of damage and collapse of high-profile structures.
- 2004-2005     **Engineering Consultant**, *Peruvian College of Engineers (Peru)*. Expert advice on the structural safety of seismically damaged structures after the 2001 Great Ica Earthquake on behalf of the Peruvian College of Engineers.
- 2003            **Infrastructure Supervisor**, *PRONAMACHS Agencia General Sánchez Cerro (Peru)*. Supervision of the construction works of a number of hydraulic projects and formulation of sustainable development strategies for Andean micro-basins.
- 2002            **Resident Engineer**, *PRONAMACHS Agencia Caylloma-Arequipa (Peru)*. Construction management of a number of irrigation projects and several small-scale community development infrastructure works.
- 2001            **Geographic Information Systems (GIS) Developer**, Design and development of GIS systems in support of strategic development schemes: *PRONAMACHS Gerencia Departamental Arequipa (Peru)*, *Proyecto Majes-Siguas – AUTODEMA (Peru)*.

## VI. Research Supervision

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**Doctoral research supervision:** I have graduated **9 PhD** students and I have supervised **2 Post-doctoral researchers**. My group has currently **9 PhDs** students. Many of my students have won important research prizes from the IStructE and the Engineering Faculty at Imperial College. **See Appendix B**

I have supervised and co-supervised **over 75 MSc and MEng students**.

## VII. Funds attracted and Contracts

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Over £1M in contracts and research grants from UK, EU, Latin American and African funding bodies, and industrial investors. **See Appendix C.**

## VIII. Services to the Profession

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- Member of the BSI B/525/8 UK mirror committee for Eurocode 8
- Member of the Working Group in FE Guidelines in Timber Structures
- Associate Editor of the Journal of Innovative Infrastructure Solutions, Springer, from 2022- present
- Past Regional Editor for Europe of the International Journal for Earthquake and Impact Engineering (Inderscience, Switzerland)
- Review Editor for Frontiers in the Built Environment, Earthquake (EFPL)
- Panel member of the FLF UKRI
- External Examiner for PG Earthquake Engineering and Infrastructure Resilience MSc at the University of Bristol (UK) from 2022-2025
- External Examiner, UG Civil Engineering MEng programme, University of Brighton (UK) 2017-2021
- Subject External Examiner for several UG modules, University of Portsmouth (UK) 2017-2025
- External Examiner for PhD theses at: University College London (UK)x2, University of Bristol (UK), University of Trieste (Italy) x2, University of Trento, Griffith (AU), University of Edinburgh (UK), ETH Zurich (Switzerland) x2.
- Elected Committee member of SECED (UK Society for Earthquake and Civil Engineering Dynamics) and Deputy Delegate to the EAEE and IAEE (European and International Associations of Earthquake Engineering)
- Internal Examiner for 9 PhD theses at Imperial College and over 70 Master theses.
- Scholarships committee panel member for several College and departmental calls.
- Research Grant Panel member for National International Bodies (UK, Switzerland, Peru, Chile)
- Actively participated in the organization of National and International Conferences and member of various learned societies
- Member of the steering committee for the MSc in Structural Engineering of the Escuela Superior Politecnica del Litoral (Ecuador)
- Knowledge transfer activities: a) Seismic Design of Steel Structures and b) Seismic Protective Systems at the Universidad Católica San Pablo (Peru)

For outreach activities, community involvement and a list of invited and keynote talks **see Appendix D.**