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I am a prize-winning expert in natural hazard and risk assessments, particularly those related to earthquakes, with nearly 25 years of experience at institutions in the UK, France and Iceland. Currently, I am a Senior Lecturer (US Associate Professor) in the Department of Civil and Environmental Engineering. As well as research, teaching and administrative duties, I regularly apply my skills in practice, e.g. as an expert and reviewer within seismic hazard assessments for high-value infrastructure. Following two years as a post-doctoral researcher at Imperial, I was a senior engineering seismologist at BRGM (French Geological Survey) from 2004 until 2015. From 2009 to 2014 I was a visiting professor at the Earthquake Engineering Research Centre, University of Iceland.

Higher education

- 2020-2021: **ILM Level 3 Award in Leadership and Management**
- 2015-2018: **PGDip Learning and Teaching in Higher Education**, University of Strathclyde; Glasgow; UK. Undertaken part-time while working at Strathclyde.
- 2013: **Advanced Diploma in French** (DALF, C1 'Effective Operational Proficiency', 61%)
- 2009-2010: **Habilitation à diriger des recherches (HDR, accreditation to supervise research**); University of Grenoble; France. Thesis on "Estimation of strong ground motions: Aleatory variability and epistemic uncertainties". Undertaken part-time while working.
- 1998-2001: **PhD** in Civil and Environmental Engineering; Imperial College London; UK. Thesis on "A critical reappraisal of some problems in engineering seismology".
- 1995-1998: **BSc Hons (First class honours)** in Mathematics with Applied Mathematics/Mathematical Physics; Imperial College London; UK.

Work experience (since PhD)

- 2015-now: **Senior Lecturer** (promoted in 2019 after being **Chancellor's Fellow (Lecturer)**). Department of Civil and Environmental Engineering; University of Strathclyde; Glasgow; UK.
- 2004–2015: **Expert 2 in engineering seismology** (promoted in 2012 after roles as **Qualified engineering seismologist**, **Confirmed engineering seismologist** and **Expert 1 in engineering seismology**). BRGM (French Geological Survey).
- 2009–2010: On leave from BRGM. **Visiting professor** at Earthquake Engineering Research Centre, University of Iceland, Selfoss, Iceland.
- 2001–2004: **Research Associate** (promoted after PhD from **Research Assistant**). Department of Civil and Environmental Engineering; Imperial College London; UK.

Prizes, fellowships, charterships and memberships (selected)

- **Winner** of Young Researcher Prize, French Association of Earthquake Engineering, 2011.
- **Fellow of the Higher Education Academy** (reference PR114866) since 11 October 2016.
- **Chartered Scientist** (registration number IMA/114/043412) since 5 October 2017
- **Chartered Mathematician** (membership no. P0041218) since 4 October 2017
- **Associate Member of the Institution of Civil Engineers** since 2017

Publications

I am author or co-author of over 110 journal articles in the topics of earthquake hazard and risk and related fields. A list of publications can be found at: *Google Scholar* (citations more than 10,500, *h*-index 49). These statistics place me within the top 10 listed worldwide for keywords "Engineering seismology" and "Seismic hazard". Relevant publications for ground-motion prediction include:

- 2023 G. Aldama Bustos, J. Douglas, F. Strasser, M. Davi and A. MacGregor. Methods for assessing the epistemic uncertainty captured in ground-motion models, *Bulletin of Earthquake Engineering*, **21**, 1-26.
- 2020 C. Brooks, J. Douglas and Z. Shipton, Improving earthquake ground-motion predictions for the North Sea, *Journal of Seismology*, **24**, 343-362.

- 2019 I. J. Tromans, G. Aldama-Bustos, J. Douglas, A. Lessi-Cheimariou, S. Hunt, M. Davi, R. M. W. Musson, G. Garrard, F. Strasser and C. Robertson. Probabilistic seismic hazard assessment for a new-build nuclear power plant site in the UK, *Bulletin of Earthquake Engineering*, **17**, 1-36.
- 2018 J. Douglas, Capturing geographically-varying uncertainty in earthquake ground motion models or What we think we know may change, Recent Advances in Earthquake Engineering in Europe, K. Pitilakis (ed.), Geotechnical, Geological and Earthquake Engineering, vol. 46, pp. 153-181.
- 2016 J. Douglas and B. Edwards, Recent and future developments in earthquake ground motion estimation, *Earth-Science Reviews*, **160**, 203-219.
- 2014 J. Douglas et al., Comparisons among the five ground-motion models developed using RESORCE for the prediction of response spectral accelerations in Europe and the Middle East, *Bulletin of Earthquake Engineering*, **12**, 341-358.
- 2008 J. Douglas and H. Aochi. A Survey of Techniques for Predicting Earthquake Ground Motions for Engineering Purposes, Surveys in Geophysics, **29**, 187–220.
- 2005 N. N. Ambraseys, J. Douglas, S. K. Sarma and P. M. Smit. Equations for the estimation of strong ground motions from shallow crustal earthquakes using data from Europe and the Middle East: Horizontal peak ground acceleration and spectral acceleration, *Bulletin of Earthquake Engineering*, **3**, 1-53.
- 2003 J. Douglas. Earthquake ground motion estimation using strong-motion records: A review of equations for the estimation of peak ground acceleration and response spectral ordinates, *Earth-Science Reviews*, **61**, 43–104.

Funded research projects (selected):

2009-2013: **Seismic Hazard Harmonization in Europe** (SHARE), coordinated by ETHZ. Total budget: 3.7Meuros. BRGM's budget: 0.2Meuros. EC 7th Framework Programme. *Task leader*

2019-2021: **Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response actions (TURNkey)**, coordinated by NORSAR. Total awarded contribution: 8.0Meuros. Strathclyde's awarded contribution: 565keuros. EC Horizon 2020 Programme. *Workpackage leader*

2022-2023: **Better assessment of UK earthquake ground motions for engineering purposes**, Total award: £30k. Royal Academy of Engineering Industrial Fellowship with Jacobs. *Project leader*.

Current citizenship responsibilities (selected)

Associate Editor for the Bulletin of the Seismological Society of America, since 2011.
Associate Editor of the Bulletin of Earthquake Engineering, since 2016.

Knowledge exchange

My status as one of the top seismic hazard experts in Europe has meant I am regularly invited to be consultant to a series of flagship projects. Consultancies include:

- **Chair of participatory peer review panel** for a SSHAC Level 1 to reassess the seismic hazard of two UK civil nuclear sites (Jacobs), 2023-2024.
- **Chair of peer review panel** for reassessment of seismic hazard of UK defence site, 2023.
- **Chair of peer review panel** for non-ergodic ground-motion model for a European site, 2021.
- **Seismic hazard consultant** to EDF Energy (reviews, ground-motion studies), 2018-2022
- **Member of eight-person peer review panel** for the *Groningen Long Term project* (NAM, The Netherlands) assessing the seismic hazard from induced earthquakes, 2015-2021.
- **Chair of the 12-person international scientific committee** of the SeIsmic Ground Motion Assessment (SIGMA-2) project for EDF (France), 2017-2022.
- **Proponent expert** for SSHAC Level 2 project for the Sinop site, Turkey (Tractebel), 2017.
- **Member of the participatory peer review panel** for the SSHAC Level 2 seismic hazard assessment of Moorside nuclear power plant (NuGeneration Limited, UK), 2016-2017.
- **Resource expert** for SSHAC Level 3 project *Update of seismic site characterization of the Spanish nuclear power plants* (Iberdrola S.A., Spain), 2016.
- **Ground-motion expert** for seismic hazard assessments of four UK nuclear sites, including: Hinkley Point C and Sizewell C (CH2M, now Jacobs), since 2014
- **Resource expert and speciality contractor** for SSHAC Level 3 project for the Thyspunt site (Council of Geosciences, South Africa), 2009-2012.
- **Resource expert** for SSHAC Level 4 project *PEGASOS Refinement Project* (SwissNuclear, Switzerland), 2008-2011.
- **Project manager and ground-motion expert** for seismic hazard reassessments of four UK civil nuclear sites (Halcrow/CH2MHill), 2007-2009.
- **Resource expert** for SSHAC Level 4 project *PEGASOS (Probabilistic Seismic Hazard Analysis for Swiss Nuclear Power Plant Sites)* (NAGRA, Switzerland), 2001.