

Cédric Bellis

39 yo - Two children

Laboratoire de Mécanique et d'Acoustique
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Education

Aix-Marseille University

01/2022

Habilitation (HDR) in Mechanical Engrg

Jury: A.-S. Bonnet-Ben Dhia, E. Bonnetier (Ref.), A. Constantinescu (Ref.), D. Kochmann, G. Milton, W. Parnell (Ref.), P. Suquet

Topic: "*Multiscale Analyses of Heterogeneous Media: Inversion & Homogenization*"

École Polytechnique & University of Minnesota

2007 - 12/2010

Ph.D. in Mechanical Engrg & Civil Engrg – Joint Ph.D. program with advisors and host institutions:

- M. Bonnet, Laboratoire de Mécanique des Solides, Dept. of Mechanics, École Polytechnique, France

- B. Guzina, Dept. of Civil Engineering, University of Minnesota, USA

Topic: "*Qualitative methods for inverse scattering in solid mechanics*"

University Pierre & Marie Curie, Paris 6

2006 - 2008

MSc Applied Mathematics and Numerical Analysis.

École Normale Supérieure, Cachan

2004 - 2007

BSc, MSc Mechanical and Computational Engineering.

Professional Positions and Experience

Research Scientist, CNRS

02/2013 - date

Laboratoire de Mécanique et d'Acoustique, Marseille, France.

Recruitment year: 2012.

Associate Professor, École Polytechnique

09/2019 - date

Part time appointment – Department of Mechanics, Palaiseau, France.

Adjunct Associate Research Scientist, Columbia University

02/2013 - 07/2019

Lamont-Doherty Earth Observatory, SG&T Division, Palisades, NY, USA.

Postdoctoral Research Scientist, Columbia University

09/2012 - 01/2013

Lamont-Doherty Earth Observatory, SG&T Division, Palisades, NY, USA

Topic: "*Mechanisms and measurement of seismic attenuation*", supervised by B. Holtzman.

Postdoctoral Research Scientist, Columbia University

2011 - 08/2012

Department of Applied Physics & Applied Mathematics, New York, NY, USA

Topic: "*Theoretical and numerical aspects of inverse problem theory*", supervised by G. Bal.

Research Fields and Specialties

Theoretical and computational solid mechanics and acoustics, with applications to the following:

Multiple scales problems: Asymptotic methods; Homogenization; Effective bulk and interface models.

Wave propagation: Waves and effective dynamics of heterogeneous media; Metamaterials.

Inverse problems: Inverse scattering; Full-field measurements; Numerical methods; Imaging.

Publications & Communications

- 36 published refereed journal articles
- 34 invited seminars
- 53 participations to conferences, colloquia, workshops

Awards and Grants

- 2021 Mention for the Technological Innovation Award of *Société Française d'Énergie Nucléaire*
- 2019 Prix Jean Mandel

Professional Activities

- 2023 - *date* Member of the **Operational Committee** of the **joint laboratory MISTRAL** between the Laboratory of Mechanics and Acoustics CNRS and the CEA Cadarache.
- 2023 - *date* **Co-supervisor** of the thematic group "Geometry" within the **GDR ArchiMeta**.
- 2022 - *date* Junior member of the Board of Directors of the **Computational Structural Mechanics Association**.
- 2019 - *date* **Series editor** of ISTE-Wiley "Solid Mechanics and Mechanical Engineering" directed by Noël Challamel.
- 2018 - *date* **Co-supervisor** of the thematic group "Inverse problems, imaging, optimization" within the **GDR MecaWave**.
- 2020 - 2021 Member of the **Scientific Committee** of the **Institute for Mechanical Science and Engineering** of Aix-Marseille Université.
- 2016 - 2019 **Supervisor** of the Action "Heterogeneity, homogenization and multi-physics couplings" of Labex "Mechanics and Complexity" of Aix-Marseille Université - A*Midex.
- 01/2015 - 12/2017 **Co-head** of the **Materials & Structures group** at Laboratoire de Mécanique et d'Acoustique: 30 Researchers/Teachers (CNRS - Ecole Centrale de Marseille - Aix-Marseille Université) 6 Engineers and Admin. Officer; 15 PhD Students; 6 Postdocs.

Mentorship

- 6 Post-doctoral Researchers co-advised
- 7 PhD Students co-advised

Teaching (since 2019)

- 2019 - *date* **École Polytechnique**.
Ingénieur Polytechnicien: *Continuum mechanics 2* (PC)
Dynamics of Solids and Structures
Bachelor 1st year: *Mathematical Methods for Physics 1*
- 2020 - *date* **École Polytechnique & École Nationale Supérieure de Techniques Avancées**.
Master 1: *Mathematical Tools in Mechanics*
Introduction to 3D continuum mechanics
- 2022 - *date* **Aix-Marseille Université**
Erasmus Mundus Master WAVES: *Acoustic Imaging*