



Fabrice PIERRON
Professor of Solid Mechanics

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🌐 <http://www.photodyn.org>

- Royal Society – [Wolfson Research Merit Award holder](#) (2012-2017)
- EPSRC [Established Career Fellow](#) (2014-2020)
- [Fellow](#) of the Society for Experimental Mechanics, 2013
- Editor-in-Chief, [Strain](#) (Wiley), 2010-2019
- [MatchID](#) company co-founder

Employment history

- 2012-** Professor of Solid Mechanics at the University of Southampton.
- 1999-2012** Professor at [Arts et Métiers ParisTech](#) in Châlons en Champagne (France).
- 1994-1999** Assistant-professor at [École Nationale Supérieure des Mines de Saint-Étienne](#) (France).

Education

- 1998** 'Habilitation à Diriger les Recherches' ([HDR](#)) from Clermont-Ferrand University (now [Clermont-Auvergne University](#)), France.
- 1994** PhD (Doctorat) in Macromolecular Materials and Composites from [Lyon I University](#), France, obtained with the highest grade.
- 1990** Master of Science (DEA) in Mechanics and Thermodynamics from [Institut National Polytechnique de Lorraine](#) (with honours).
- 1989** Engineering Degree from [École Nationale Supérieure d'Électricité et de Mécanique](#) in Nancy (France), major in Mechanical Engineering.

Main leadership roles

- 2010-2019 Editor in Chief of the journal [Strain](#) (Wiley).
- 2018- Elected member of the University of Southampton Academic Senate.
- Deputy (2013-2015) then Head (2015-2018) of Engineering Materials Research Group at UoS.
- 2002-2010 Elected member to the Administrative Council of AM ParisTech (main governing body).
- 1999-2008 Founder and first director of the Mechanical Engineering and Manufacturing Laboratory at AM ParisTech Châlons.

Academic recognitions

- [F. Zandman Award](#) from the Society for Experimental Mechanics, 2021.
- [M. Hetényi Award](#) from the Society for Experimental Mechanics, 2019.
- [BJ Lazan Award](#) from the Society for Experimental Mechanics, 2017.
- BSSM [Measurement lecture](#), 2015.
- [SEM Fellow](#) (Society for Experimental Mechanics), 2013.
- 2010 SAGE Best Paper Award for the paper:
Pierron F., Identification of Poisson's ratios of standard and auxetic low density polymeric foams from full-field measurements, *Journal of Strain Analysis for Engineering Design*, vol. 45, n° 4, pp. 233-253, 2010. <http://dx.doi.org/10.1243/03093247JSA613>.

PhD supervision and examination

- Supervisor / cosupervisor of 27 graduated (from which 16 as main supervisor) and 5 ongoing PhD students.
- Participation to about 50 PhD jury panels in France, the UK, the USA, New-Zealand, Canada, the Netherlands, South Africa and Switzerland.

Main recent research contracts

- 2018-2023 (Co-I, £6.1M) [Surgery enabled by ultrasonics](#). EPSRC Programme Grant [EP/R045291/1](#).
- 2017-2019 (PI, 125 kUSD) Novel photomechanics approaches to determine the intra- and inter-laminar properties of composite materials at high rates of strain. Funded by the US AFOSR, FA9550-17-1-0133.

- 2015-2016 (PI, 230 kUSD) Novel imaging procedures for the identification of the high strain rate behaviour of soft materials. Funded by the US AFOSR, FA9550-15-1-0293.
- 2015-2019 (Co-I, £615k) Rooting for sustainable performance. EPSRC grant [EP/M020177/1](#).
- 2014-2020 (PI, £1.2M). [Innovative photomechanical approaches in identification of the dynamic mechanical behaviour of materials](#). EPSRC Established Career Fellowship grant [EP/L026910/1](#).
- 2013-2016 (PI, 204 kUSD) Exploration of novel heterogeneous multi-axial high strain rate tests of materials. Funded by the US AFOSR, FA8655-13-1-3041.
- 2012-2017 (PI, £75k) [Imaging the mechanical properties of materials](#). Royal Society Wolfson Research Merit Award.

Conference organization, seminars and scientific editing

Conference organization

- Co-chair of the 9 Composites Testing and Model Identification (CompTest) conferences <https://comptest.net/comptest-conferences/>
- Co-chair of the organizing committee of the French Conference on Mechanics (1200 participants) held in Troyes in September 2005.
- Chair of the joint [Dymat/IOP conference](#) on high speed imaging for materials and structures, held at the IOP in London, 22-24 November 2013. 73 participants from 13 countries.
- Co-chair of the [16th International Conference in Experimental Mechanics](#) (ICEM16) 7-11 July 2014 in Cambridge, UK. 500 participants.

Affiliation to Societies

- Since 2005 Member of the British Society for Strain Measurement (BSSM)
 - Member of the National Technical Committee (NATCO), 2006-2014.
 - Member of the SATCO committee (workshop and seminars), 2009-2014.
- Since 2000 Member of the Society for Experimental Mechanics (SEM)
 - Member of the Executive Board (2009-2011).

Scientific editing

- Associate Editor, *Strain* (Wiley), 2020 - .
- Editor-in-Chief, *Strain* (Wiley), July 2010 – December 2019.
- Associate Editor, *Strain* (Wiley), 2020 - .
- Associate Technical Editor for [Experimental Mechanics](#), Springer (2009-2011).
- Member of the Editorial Council (2007-2010) and Editorial Board (2005-2010) of 'Strain' (Wiley).

Publication overview

Book	1
Chapters of books	3
International peer-reviewed journal articles	146
Un-refereed journal articles and editorials	11
Conference communications with proceedings	261 (8 invited)
Conference communications without proceedings	132 (24 invited)

5540 citations, h-index: 43 (Scopus, Jan. 2021)

- Pierron F., Grédiac M., *The Virtual Fields Method: Extracting constitutive mechanical parameters from full-field deformation measurements*, Springer New York, 2012. ISBN 978-1-4614-1823-8, 517 p. <http://www.springer.com/materials/mechanics/book/978-1-4614-1823-8?changeHeader>
- Pierron F., Zhu H., Siviour C., Beyond Hopkinson's bar, *Philosophical Transactions of the Royal Society A*, vol. 372, n° 2023, pp. 20130195, 2014. <http://dx.doi.org/10.1098/rsta.2013.0195>
- Seghir R., Pierron F., A novel imaged-based ultrasonic test to map material mechanical properties at high strain-rates, *Experimental Mechanics*, vol. 58, pp. 183–206, 2018. <http://dx.doi.org/10.1007/s11340-017-0329-4> - Outstanding 2018 Experimental Mechanics paper award by SEM (Hetényi award)
- Fletcher L., Van Blitterswyk J., Pierron F., A novel image-based inertial impact (IBII) test for the transverse properties of composites at high strain rates, *Journal of Dynamic Behaviour of Materials*, vol. 5, n° 1, pp. 65–92, 2019. <https://doi.org/10.1007/s40870-019-00186-y>
- Pierron F., Grédiac M., Towards Material Testing 2.0. A review of test design for identification of constitutive parameters from full-field measurements. *Strain*, vol. 57, n° 1, e12370, 2021. <https://doi.org/10.1111/str.12370>

