



جامعة الملك عبد الله  
للعلوم والتقنية

King Abdullah University of  
Science and Technology

## GILLES LUBINEAU

PhD, HDR

Professor Mechanical Engineering.

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### AFFILIATIONS:

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## BIOGRAPHY

Dr. Gilles Lubineau is a Professor of Mechanical Engineering and Associate Dean of the Physical Science and Engineering Division at KAUST. He is the principal investigator of COHMAS (Composite and Heterogeneous Materials Analysis and Simulation) Lab, an integrated environment for composite engineering he created in 2009 when joining KAUST.

Following his "aggregation" in theoretical mechanics, Dr. Lubineau earned a PhD degree in Mechanical Engineering from École Normale Supérieure de Cachan (ENS-Cachan), France.

Before joining KAUST, Dr. Lubineau was a faculty member at the École Normale Supérieure de Cachan, and a non-resident faculty member at the École Polytechnique, France. He also served as a visiting researcher at UC-Berkeley.

His research interests include: integrity at short and/or long-term of composite materials and structures, inverse problems for the identification of constitutive parameters, multi-scale coupling technique, nano and/or multifunctional materials.

His expertise covers a wide range of fields related to composite materials, he has over 200 published papers in journals spanning from material science (Advanced Materials, Macromolecules, etc..) to theoretical mechanics (JMPS, CST, Scientific Reports) and applied maths (IJNME, CMAME, etc..).

He is a board member for various journals, including the International Journal of Damage Mechanics.

Dr. Lubineau is an elected Member of the European Academy of Sciences and Arts.

### EDUCATION

- 2008, Research Habilitation in Mechanical Engineering (with Distinction), ENS-Cachan, France.
- 2002, Ph.D. in Mechanical Engineering (with Distinction), École Normale Supérieure de Cachan (ENS-Cachan), Paris VI University, France.
- 1999, "Agrégation" (French High-Level Qualification for Teaching) in Theoretical Mechanics.
- 1998, M.S. in Mechanical Engineering (with Distinction), École Normale Supérieure de Cachan (ENS-Cachan), France.

### PROFESSIONAL PROFILE

- 2020, Associate Dean Physical Science and Engineering Division, KAUST.
- 2017-2019, Faculty Chair of faculty of Mechanical Engineering, KAUST.
- 2009-2012, Acting (and founding) Program Chair of KAUST Mechanical Engineering Program.
- 2008-2009, Instructor, Department of Mechanics, Ecole Polytechnique, France.



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### CONT'D

- 2007-2008, Visiting Researcher (French Ministry of Defense and CNRS), Department of Mechanical Engineering (Host: Prof. Tarek I. Zohdi), UC Berkeley, USA.
- 2006, Delegated Researcher (in partnership with ENS Cachan), EADS (European Agency for Defense and Space) InnovationWork, France.
- 2005-2009, Head of the "Composites, Micro and Nanostructure" research group of LMT-Cachan (ENS Cachan, France).
- 2003-2009, Assistant Professor, École Normale Supérieure de Cachan, LMT-Cachan, France.

### SCIENTIFIC AND PROFESSIONAL MEMBERSHIPS

AMAC (French Association of Composite Material).

AIAA (American Institute of Aeronautics and Astronautics).

ASME (American Society Mechanical Engineers).

CSMA (Computational Structural Mechanics Association).

### AWARDS

- "Daniel Valentin Award" 2004 - The prize is awarded each year to one researcher under the age of 35 by the French Association for Composite Materials (AMAC) to recognize a global, innovative and promising research activity related to composite materials (<http://www.amac-composites.org>).
- Member of the European Academy of Sciences and Arts

### SELECTED PUBLICATIONS

**Buckled Conductive Polymer Ribbons in Elastomer Channels as Stretchable Fiber Conductor.**

J. Zhou, G. Tian, G. Jin, Y. Xin, R. Tao and G. Lubineau.

*Advanced Functional Materials* (2019).

**Characterizing and modeling the pressure- and rate-dependant elastic-plastic-damage behavior of polypropylene-based polymers.**

D.A. Pulungan, A. Yudhanto, S. Goutham, G. Lubineau, R. Yaldiz and W. Schijve.

*Polymer Testing* (2018).

**Computational Investigation of the Morphology, Efficiency, and Properties of Silver Nano Wires Networks in Transparent Conductive Film.**

F. Han, T. Maloth, G. Lubineau, R. Yaldiz and A. Tevtia.

*Scientific Reports* (2018).

**Laser-based surface patterning of composite plates for improved secondary adhesive bonding.**

R. Tao, M. Alfano and G. Lubineau

*Composites Part A: Applied Science and Manufacturing* (2018).

**Coaxial thermoplastic elastomer-wrapped carbon nanotube fibers for deformable and wearable strain sensors.**

J. Zhou, X. Xu, Y. Xin and G. Lubineau

*Advanced Functional Materials* (2018).



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### CONT'D

**Toughness amplification in copper/epoxy joints through pulsed laser micro-machined interface heterogeneities.**

E. Hernandez, M. Alfano, D. Pulungan and G. Lubineau.  
*Scientific Reports (2017).*

**Ultrasensitive, Stretchable Strain Sensors Based on Fragmented Carbon Nanotube Papers.**

J. Zhou, H. Yu, X. Xu, F. Han and G. Lubineau.  
*ACS Appl. Mater. Interfaces, (2017).*

**Adaptive coupling between damage mechanics and peridynamics: a route for objective simulation of material degradation up to complete failure.**

F. Han, G. Lubineau and Y. Azdoud.  
*Journal of the Mechanics and Physics of Solids (2016).*

**Double-Twisted Conductive Smart Threads Comprising a Homogeneously and a Gradient-Coated Thread for Multidimensional Flexible Pressure-Sensing Devices.**

Y. Tai and G. Lubineau.  
*Advanced Functional Materials (2016).*