

CV of Laurent DANIEL

Full Professor at CentraleSupélec, Université Paris-Saclay

Group of Electrical Engineering – Paris (GeePs)

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i) Academic qualifications:

2011: Habilitation in Physics, University Paris-Sud, France

2003: PhD in Mechanics and Materials Science, Ecole Normale Supérieure de Cachan, France

2000: MScEng in Mechanics and Materials Science, Univ Paris 13, France

ii) Previous academic positions held:

2003-2004: Lecturer (ATER) at Ecole Normale Supérieure de Cachan, Cachan, France
Department of Mechanical Engineering

2004-2015: Associate Professor at Univ Paris-Sud, Orsay, France - Department of Physics
(on leave from 02/2011 to 09/2014)

2011-2014: Visiting Researcher at the University of Manchester, UK - School of Materials

iii) Present academic position:

2015-... : Full Professor at CentraleSupélec, Université Paris-Saclay, Gif-sur-Yvette, France
Group of Electrical Engineering -Paris (GeePs)

Since October 2014: Automotive Mechatronics Chair, Director

iv) Publication records:

120 Peer-Reviewed Publications in International Journals, 141 International Conference
Communications, 4 Patents, 67 National Conference Communications

Keywords: Ferromagnetic materials; Ferroelectric materials; Smart materials; Multiphysics; Material modelling; Micromechanics; Multiscale methods; Homogenisation; Magnetostriction; Magnetoelasticity.

v) Bibliometric data:

ResearcherID: D-3506-2012

Number of citations (GoogleScholar/Scopus, 17/10/2023): 3014/1897

H-index (GoogleScholar/Scopus, 17/10/2023): 30/25

vi) Extract of professional activities

- Supervisor or co-supervisor of approx. 30 master students, 24 PhD and 16 post-docs.
- Member of the evaluation panel (as external examiner) of 32 PhD theses and 2 Habilitations.
- Participant or principal investigator of Research projects funded at local (Labex LaSIPS), national (FUI, ANR, ADEME, EPSRC-UK) or international (CEFIPRA, PHC PROCORE, CAPES-COFECUB) level or directly funded from industrial partners (Faurecia, CEA, GRT-Gaz, MMT, CETIM,...).
- Coordinator of the “Multiphysics” group at GeePs (2006-2011 and 2014-2019).
- Member of the steering committee of the Nat. Res. Group for Electrical Engineering, GDR CNRS Seeds (since 2014).
- Member of the Scientific Council of the Engineering College ENIB (since 2018).
- Member of the Scientific Council of the Institute of Polytechnic Science and Aeronautics (since 2022).
- Member of the Industrial Research Committee (IRC) for the Indo-French Centre for the Promotion of Advanced Research (IFCPAR/CEFIPRA), since 2022.
- Occasional reviewer for several journals including IEEE Trans. Magn., J. Appl. Phys., Eur. Phys. J. Appl. Phys., Appl. Phys. Lett., J. Magn. Mater., Acta Mater., Proc. Roy. Soc. A, Advanced Electromagnetics, IEEE Trans. Energy Convers., J. Mech. Phys. Solids, Eur. J. Mech. A/Solids, Int. J.

Solids Struct., Smart Mater. Struct., Sensors and Actuators A, Sci. Rep., Measurement, Comput. Mater. Sci., Int. J. Numer. Model., Meccanica, Materials, Mater. Today Commun.

- Associate Editor in Chief of Advanced Electromagnetics: <http://aemjournal.org> (2016-2022), member of the Editorial Board (2012-2022).
- Member of the Editorial Board of Materials: <https://www.mdpi.com/journal/materials> (since 2021).
- Member of the Editorial Board of the IEEE Transactions on Magnetics (magconf-ieee) for the post-conference publications at CEFC2018, CEFC2020 and CEFC2022.
- Co-chair of MECAMAT 2012 colloquium, Aussois, France.
- Member of the organizing committee of the conferences PIERS 2011 (Marrakech, Morocco), AES 2012 (Paris, France), SGE 2014 (Cachan, France), AES2014 (Hangzhou, China), Compumag 2019 (Paris, France).
- Member of the Scientific committee of the conferences SGE 2014 (Cachan, France), SGE 2016 (Grenoble, France), SGE 2018 (Nancy, France), SMMM 2018 (Kraków, Poland), SGE 2020/2021 (Nantes, France), SMM 2021/2022 (Grenoble, France).
- Expert for the French Research Agency ANR (calls "Concepts, Systèmes et Outils pour la Sécurité Globale" (2011) and "programme blanc" (2013, 2018)).
- Member of the evaluation panel CES05 for the ANR ("défi 2", 2016-2017).
- Expert for the Deutsche Forschungsgemeinschaft (DFG, Germany) and the Fonds zur Förderung der wissenschaftlichen Forschung (FWF, Austria), CRC Transregio (2021).
- Expert for the European M-ERA.NET program (2021).
- Expert for various French Research funding bodies (Labex Lanef (2015), Institut Farman (2018), IDEX Univ. Grenoble Alpes (2020), Région Auvergne-Rhône-Alpes (2020), Labex LaSIPs (2021)).

vi) Extract of fundings obtained

Recent research projects funded by public bodies

- Contributor to the ADEME project COCTEL ("Conception Optimale de Chaines de Traction ELectriques", 2014-2019): 15 100 k€ (total cost), 9 partners.
- Contributor to the ANR project ETAE ("Écoulement Tournant et Actionneurs Electroactifs", 2016-2021): 345 k€ (funding obtained), 2 partners (GeePs, LIMSI).
- Coordinator of the CEFIPRA project PASATS ("Piezoelectric Actuator System for Automotive Translation Systems", 2017-2020): 445 k€ (total cost), 3 partners (GeePs, Faurecia, CSIR-CMERI).
- Scientific leader for the ANR project -ENCORE- ("Evaluations Non-destructives des CONtraintes RESiduelles", 2022-2025): 682 k€ (funding obtained), 4 partners (CEA, CETIM, GeePs, Industeel).
- Scientific leader for the ANR project PIMCOMAP ("Procédés Innovants pour des Matériaux et Composants MAGnétiques de Puissance", 2022-2026): 627 k€ (funding obtained), 4 partners (SAFRAN, Ampère, GeePs, CEA).
- Coordinator or contributor to experiments at ISIS (RB1120308, 2012; RB1220428, 2012), ORNL (IPTS-7417, 2013), Diamond (EE8699, 2013), ESRF (MA1727, 2013; MA2102, 2014), APS Argonne (GUP-56867, 2018).
- And participation to or coordination of smaller projects for national or international cooperation funding (LASIPS MAETEC (2016-2017), LASIPS POPIBIO (2017-2018), PHC PROCORE (2018-2019), CAPES-COFECUB (2019-2023), LASIPS SWITCH (2021-2022), ...).

Recent research projects co-funded by private sector

- Director of the Automotive Mechatronics Chair (Faurecia/CentraleSupélec/Esigelec, 2014-2024): 5 500 k€ (funding obtained).
- Coordinator (with Y. Le Bihan) of a GRTGaz project (2019-2022): 240 k€ (funding obtained).
- And participation to or coordination of smaller projects (< 40 k€) with Industry, often for master projects (Engie, Faurecia, CEA, MMT, CETIM, LEM).

vii) Full list of publications available at: <http://www.geeps.centralesupelec.fr/daniel>