

Xiaofeng Guo

PhD, Associate Professor

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Appointments

- 2013–present **Associate Professor**, *Department of Energy*, ESIEE Paris, Université Gustave Eiffel.
2017–present **Research Associate**, *Paris Interdisciplinary Energy Research Institute, UMR 8236*, CNRS, Université de Paris.

Education

- 2013 **PhD**, *Université de Grenoble*, Chambéry, France.
2010 **MSc**, *Shanghai Jiao Tong University*, Shanghai, P.R. China.
2007 **BEng**, *Wuhan University of Technology*, Wuhan, P.R. China.

Pedagogical achievements

- 2013–present **Coordinator Dipl. Ing. Energy, ESIEE Paris.**
- Coordination of a 3-year teaching program with academic and industrial lectures
 - responsible for 10+ courses incl. Heat Transfer, Thermodynamics, CFD, Solar thermal, Energy audit, District heating, etc.
 - Confirmed success with doubled number of students from 20 to 40+ per promotion from 2014 to 2017

Grants

Coordinator.

- AUE-EU-China “Advanced Urban Energy – an EU-China comparison”, scientific coordinator, I-SITE FUTURE Mobility funding, in collaboration with Changzhou University, 15 000 Euros, 2019-2021
- SimSenseEnergie, scientific coordinator, I-SITE FUTURE, in collaboration with IFSTTAR Sense-City, 60 000 Euros, 2020-2021
- PHC Xu Guangqi, Data4EnerBat, with Shanghai Jiao Tong University, Ministère de l’Europe et des Affaires Etrangères, Campus France, 2018
- SATT IDF Innov, FLEXER, patent and maturation (23 000 Euros), 2018-2019
- EFFICACITY, funding by participative research indemnity, 50 000 Euros, 2014-2016
- ESIEE Paris, exploratory research starting grant, 3 000 Euros, 2014

Co-PI or task responsible.

- Wise Cities 3, resp. for bilateral research task “water-energy nexus”, I-SITE FUTURE, 2019-2022
- ZeroCO2 TRIGEN (CCHP with net zero CO2 emission), I-SITE FUTURE, in collaboration with IFSTTAR Satory, 2019
- CEMIP GIP-CNFM, platform for electronic cooling, 13 500 Euros, 2016
- CEMIP FINMINA, platform for microstructural thermal properties characterization, 22 000 Euros, 2015
- EFFICACITY, building energy audit, 10 000 Euros, 2015

Awards and prizes

Scientific.

- Laureate of the Jeunes Talents France Chine program, from MEAE - Campus France - Embassy of France in China, 2018
- Second prize award, TMREES16 Int’l Conf. Fall Meeting, “Technologies and Materials for Renewable Energy, Environment and Sustainability”, Paris, 2016.
- Best paper award, HEFAT2012, the 9th Int. Conf. on Heat Transfer, Fluid Mechanics and Thermodynamics, Session “Heat and Mass Transfer 6”, MALTA, 2012.
- Tyco Intl. excellence scholarship, Shanghai Jiao Tong University, Shanghai, 2009

Entrepreneurial.

- Visiting scientist (accueil en délégation) in CNRS, 2020-2021
- Grand Prix FUTURES Days, Urban Cooling Solutions (as one of the 4 team members), 2019
- Climate LaunchPad (prize for thematic Green City Solutions, KIC Climat), Urban Cooling Solutions (as one of the 4 team members), 2019
- Instructor of ESIEE team Mobiliteam, the top prize (10 000 Euros) winner of a world competition Decarbonathon, initiated by World Young Leaders and organised by ENGIE/NPL, Paris, 2016.

Services and memberships

Committee members.

- Scientific committee member, FUTURE Days 2020, Université Gustave Eiffel
- Coordinator of task group "Energy" in EquipEx SenseCity (PIA2), 2018-
- PhD defense evaluator, KTH Stockholm, Sweden, 17/12/2019
- Member of Labex Futurs Urbains, GT Ville & Energie (2017-)
- EFFICACITY Institute of Energy Transition for Cities (PIA2, 2014-2016)
- Member of Société Française de Thermique and Société Française de Génies des Procédés
- Member of China Society of Thermophysics, China Society of HVAC&R
- Evaluation expert for EPSRC The Engineering and Physical Sciences Research Council of the UK, (2019)
- Evaluator for ANR Agence Nationale de Recherche (2017)

Scientific services.

- Session chair, the 6th International Conference on Cryogenics and Refrigeration 2018 (ICCR2018), April 12-14, 2018, Shanghai
- Scientific referee for French SFT annual meetings, 2016/2017/2019/2020
- Member of the editorial board for "Frontiers in Mechanical Engineering"
- Regular referee for Elsevier/Springer/ASME/AIP/Frontiers journals including "Int. J. Heat and Mass Transfer", "Applied Energy", "Energy", "Energy and Buildings", "Energy Efficiency", "Fuel", "Int. J. Hydrogen Energy", "Building Simulation", "ASME J. of Thermal Science and Engineering Applications", "Frontiers in Built Environment", "Frontiers in Energy Research", "Review of Scientific Instruments".

Selected journal articles (full list : <https://perso.esiee.fr/~guox/publi.html>)

- [5] Chuanyu Zhang, Xiaofeng Guo, Philippe Brunet, Maxime Costalonga, Laurent Royon, Acoustic streaming near a sharp structure and its mixing performance characterization, *Microfluidics and Nanofluidics* (2019) 23 : 104. <https://doi.org/10.1007/s10404-019-2271-5>
- [4] Cheng Wang, Ye Zhu, Xiaofeng Guo, Thermally responsive coating on building heating and cooling energy efficiency and indoor comfort improvement, *Applied Energy*, 253 (2019), 113506, <https://doi.org/10.1016/j.apenergy.2019.113506>
- [3] Mathieu Bourdeau, Xiao-Qiang Zhai, Elyes Nefzaoui, Xiaofeng Guo, Patrice Chatellier, Modelling and forecasting building energy consumption : a review of data-driven techniques, *Sustainable Cities and Society*, 48, 2019, <https://doi.org/10.1016/j.scs.2019.101533>
- [2] Xiaofeng Guo, Alain Pascal Gomba, Air source heat pump for domestic hot water supply : performance comparison between individual and building scale installations, *Energy*, 164 (2018), 794-802, <https://doi.org/10.1016/j.energy.2018.09.065>
- [1] Xiaofeng Guo, Yilin Fan, Lingai Luo, Mixing performance assessment of a multi-channel mini heat exchanger reactor with arborescent distributor and collector, *Chemical Engineering Journal*, Volume 227, pp116-127 (2013) <http://dx.doi.org/10.1016/j.cej.2012.08.068>

Issued patents

- [5] Xiaofeng Guo, Flexible heat exchanger intended to be positioned in a moving exterior fluid, comprising a collection of flexible temperature probes, French/European Patent, issued on 12/03/2020, PCT : WO2020049233A1
- [4] Xiaofeng Guo, Carole Lenchi, Lara Laugar, Andre Luiz Martins Braga, Matheus de Oliveira Vilela, Kelly Aparecida Ribeiro de Faria Santos, Buse pour système de ventilation d'habitable de véhicules et Procédé de ventilation d'air en climatisation mettant en œuvre une telle buse, French Patent, 21/07/2017, Application No. : FR3046752A1
- [3] Xiaofeng Guo, Jingyi Wu, Zaizhong Xia et.al., Generating System for Adjustable Temperature Field on a Flat Plate, Invention Patent, Issued in May 2009, No. : 2009 1004 8231.9
- [2] Xiaofeng Guo, Zaizhong Xia, Jingyi Wu, et.al., Control Method for the Quick Fluctuation of Liquid Temperature Using Heating and Cooling Counteracting, Invention Patent, Issued in May 2009, No. : 2009 1004 8232.3
- [1] Xiaofeng Guo, Zunhua Zhang and Fangping Yu, Intelligent Circuit Breaker, Application Patent, Certificate No. : ZL 2005 20096776.7. Effective in May 2005.