

Biography of Sebastian Volz

55 years old, french

Present and past positions

2018-: Director of the Laboratory for Integrated Micro Mechatronic Systems (LIMMS), IRL 2820 - CNRS/UTokyo.

2016-: CNRS Senior Research Fellow at the University of Tokyo, LIMMS

Invited Professor in the University of Tongji and Kyushu Institute of Technology (-2018)

2010-16: CNRS Senior Research Fellow at Paris-Saclay University - Ecole Centrale Paris
Laboratoire d'Energétique Moléculaire et Macroscopique, Combustion (EM2C)

2008-2010: CNRS Senior Research Fellow at The University of Tokyo – LIMMS Laboratory

2002-2008 : CNRS Research Fellow at Paris-Saclay University - Ecole Centrale Paris – EM2C

1998-2002 : Associate Professor at the National Engineering School of Mechanics and Aerotechnics (ISAE-ENSMA). Laboratoire d'Etudes Thermiques.

1997-1998 : Post-doctoral stay at University of California Los Angeles. Pr. Gang Chen (now at MIT).

Cursus

2004: Professor thesis (HDR) at ISAE-ENSMA – University of Poitiers.

1996: PhD degree ISAE-ENSMA – University of Poitiers.

1993: Master degree in Heat Transfer, Poitiers University.

1993: Engineering degree from the ISAE-ENSMA.

Responsibilities

Head of the CNRS and University of Tokyo Laboratory LIMMS, 2018-.

Head of the CNRS European Network “Thermal Nanosciences and Nanoengineering”, 2001-2018.

Head of the division “Transfer Physics” in the EM2C Laboratoire 2012-2016.

Head of the team “Thermal Nanosciences” in the EM2C Laboratoire 2010-2016.

Head of the Thales R&T/Ecole Centrale Paris Research Team, 2009-2017.

French delegate to the International Heat Transfer Conference (AIHTC).

Head of the Microscale Heat Transfer Track in the French Thermal Society (2001-2017).

Associate editor of the journals *Nanoscale* and *Microscale Thermophysical Engineering*, *ES Energy & Environment* and *Journal of Nanoelectronics and Optoelectronics*

Books: *Thermal Nanosystems and Nanomaterials, Topics in Applied Physics, 118, Springer (2010).*

Microscale and Nanoscale Heat Transfer, Topics in Applied Physics, 107, Springer (2007).

Reviewer in more than 20 journals: *Nature*, *Science*, *Nat. Materials*, *Nat. Nanotechnology*, *Nat. Comm.*, *PRL*, *NanoLetters*, *IJHMT*, *JHT*, *IJTS*...

Organization of scientific events

Co-Chairman, *iMRC 2024 Symposium, Cancun, 2024*

Co-Chairman, *MRS Spring Meeting Symposium, Seattle, 2024*

Delegate organizer, *17th International Heat Transfer Conference, Le Cap, 2023*

Co-Chairman, *e-CLEO/EQEC Symposium, Munich, 2023*
Co-Chairman, *Thermal Polaritonics Workshop, Tokyo, 2023*
Co-Chairman, *Summer School, Photothermal Effect in Plasmonics, Porquerolles, 2018*
Delegate organizer, *16th International Heat Transfer Conference, Pékin, 2018*
Co-Chairman, *International Workshop, Thermal Nanosciences and Nanoengineering, Lille, 2017*
Co-Chairman, *Summer School, Wave Phenomena and Phonon Thermal Transport, Oléron, 2017*
Co-Chairman of *THERMINIC 2016*
Chairman, *International Workshop, Thermal Nanosciences and Nanoengineering, Paris, 2015*
Co-Chairman of *THERMINIC 2015*
Co-Chairman of the *e-MRS Symposium Phonons and Fluctuations, Spring 2014, Lille, France.*
Co-Chairman of the Phonons and Fluctuations *International Workshops (2010, 2011, 2012, 2013).*
Scientific committees: IHTC, ASME, EURO THERM, THERMINIC, PHONONS, PHONONICS....

Award

Bronze Medal of the CNRS 2004

Publications in Figures

526 communications including 1 book, 10 chapters, 238 articles in peer reviewed journals, 89 invited conferences, 67 proceeding articles with peer review, 126 communications without papers.

Citations: 12 800 Google. h factor: 58 Google.

Recent Publications

X Huang, R Anufriev, L Jalabert, K Watanabe, T Taniguchi, Y Guo, Y Ni, ..., A graphite thermal Tesla valve driven by hydrodynamic phonon transport, *Nature*, 634, 1086, (2024).

S Tachikawa, J Ordonez-Miranda, L Jalabert, Y Wu, R Anufriev, Y Guo, H Fujita, S Volz, M Nomura, Enhanced Far-Field Thermal Radiation through a Polaritonic Waveguide, *Physical Review Letters* 132 (18), 186904, (2024).

X Huang, Y Guo, Y Wu, S Masubuchi, K Watanabe, T Taniguchi, Z Zhang, S Volz, T Machida, M Nomura, 'Observation of phonon Poiseuille flow in isotopically purified graphite ribbons', *Nature Communications* 14 (1), 2044, (2023).

Z Zhang, Y Guo, M Bescond, J Chen, M Nomura, S Volz, Heat conduction theory including phonon coherence, *Phys. Rev. Lett.*, 128 (1), 015901, (2022).

Y. Wu, J. Ordonez-Miranda, S. Gluchko, R. Anufriev, D. De Sousa Meneses, L. Del Campo, S. Volz, and M. Nomura, «Enhanced thermal conduction by surface phonon-polaritons», *Science Advances* 6(40):eabb4461, (2020).