**Curriculum Vitae**

**PERSONAL INFORMATION**

Name: RANDRIANALISOA, Jaona

ORCID: <http://orcid.org/0000-0002-6171-9970>

Date of birth: 30 June 1977

Marital status: married, 1 children

Citizenship: French

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**EDUCATION**

01/10/2002 – 04/12/2006 PhD in Thermal Engineering

Thermal Center of Lyon (CETHIL), National Institute of Applied Sciences (INSA) of Lyon, France

PhD title: *Radiative and conductive heat transfer in micro and nanostructured porous materials. Analogy between phonon and photon transports.*

Advisor: Professor Dominique Baillis, INSA of Lyon, France

01/10/2001 – 30/09/2002 Master of Sciences in Thermal Engineering

 CETHIL, INSA of Lyon, France

**CURRENT POSITION(S)**

01/09/2011 – present Assistant Professor (Maître de Conférences)

 University of Reims Champagne-Ardenne (URCA), France

**PREVIOUS POSITIONS**

01/04/2010 – 31/08/2011 Research Fellow

 CETHIL, INSA of Lyon, France

03/02/2009 – 31/03/2010 Post-doctoral Fellow

 Sciences and Engineering of Materials and Processes (SIMAP), The National Center for Scientific Research (CNRS), France

01/01/2007 – 31/12/2008 Post doctoral Fellow

 CETHIL, INSA of Lyon, France

01/09/2005 – 31/08/2006 Temporary Assistant (Attaché Temporaire d’Enseignement et de Recherche)

 CETHIL, INSA of Lyon, France

01/10/2002 – 31/08/2005 PhD Fellow

 CETHIL, INSA of Lyon, France

**FELLOWSHIPS AND AWARDS**

01/08/2013 – 20/08/2013 Visiting Scholar Fellowship, Mechanical Engineering Department, University of Minnesota, USA.

01/10/2002 – 31/08/2005 PhD Scholarship, CETHIL, INSA of Lyon, France.

**SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

01/09/2011 – present 2 Postdocs, 1 PhD and 1 Master Students

Research Group in Engineer's Sciences (GRESPI), URCA, France

01/10/2003 – 31/08/2011 4 Master Students

CETHIL, INSA of Lyon, France

**TEACHING ACTIVITIES**

01/09/2011 – present Lecturer – Thermal radiation transfer, Thermodynamics, Thermal modelling with Comsol Multiphysics, School of Engineering of Reims (ESIReims), URCA, France.

01/09/2010 – 31/08/2011 Teaching Assistant – Optic Physics, INSA of Lyon, France.

01/09/2005 – 31/08/2006 Teaching Assistant – Thermodynamic systems, INSA of Lyon, France.

**ORGANISATION OF SCIENTIFIC MEETINGS**

10/07/2013 – 12/07/2013 Member of the organizing committees and session chair of the Workshop Quantitative Micro and Nano Thermal Imaging and Analysis (QMNTIA), 100 participants, France

**INSTITUTIONAL RESPONSIBILITIES**

01/09/2014 – present Organiser of the 2nd year training of the ESIReims Thermal and Energy speciality, URCA, France

**PROFESSIONAL SERVICE**

Conference review assignments:

15th International Heat Transfer Conference (IHTC), 2014

ASME International Mechanical Engineering Congress & Exposition (IMECE), 2007 and 2013.

5th European Thermal Sciences Conference (EUROTHERM), 2008

5th International Symposium of Radiation Transfer (RAD), 2007

Journal review assignments:

2013 – present High Temperatures – High Pressures, HTHP

2012 – present Journal of Solar Energy and Engineering, JSEE

2008 – present International Journal of Thermal Sciences, IJTS

2008 – present International Journal of Heat and Mass Transfer, IJHMT

**MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

11/09/2014 – present Member, European Nanophononics community, *EUPHONON*

22/01/2014 – present Member, CNRS European Research Network “*Thermal NanoSciences and NanoEngineering*”

01/09/2011 – present Member, Research Network “*French Society of Heat Transfer* (SFT)”

01/01/2005 – 31/12/2005 Member, Research Network “*American Society of Mechanical Engineers* (ASME)”

**COMMISSIONS OF TRUST**

01/01/2015 – 31/12/2016 Member of the Scientific Council of the *International Center for Heat and Mass Transfer* (ICHMT)

**MAJOR COLLABORATIONS**

Prof. Laurent Pilon Optical and thermal properties of materials for energy conversion applications, MAE Department, UCLA, USA.

Prof. Wojciech Lipinski Optical and thermal properties of materials for biomedical and solar energy conversion applications, Solar Thermal Group, Research School of Engineering , The Australian National University of Canberra, Australia.

Dr. Leonid Dombrovsky Optical and thermal properties of materials for biomedical and energy conversion applications, Joint Institute for High Temperature (NCHMT) of Moscow, Russia.

Prof. Dominique Baillis Optical and thermal properties of materials for energy conversion and thermal management applications, INSA of Lyon, France.

**ACHIEVEMENTS**

**Summary:** 1 chapter in edited book, 31 articles in refereed journals, 1 keynote lecture, 1 invited talk, 16 articles in refereed conference proceeding, 8 abstracts in conference proceeding.

**Book Chapter** Randrianalisoa, J, Coquard, R, Baillis, D, Radiative transfer in two-phase materials, in *Heat transfer in multi-phase materials*, Öchnser, A; Murch, G E (Eds.), ISBN: 9783642044021, Springer-Verlag (2010).

**Keynote lecture** Baillis, D; Dombrovsky, L; Viskanta, R; Randrianalisoa, J; Coquard, R, Thermal Radiation Properties of Dispersed Materials, 7th International Conference on Computational Heat and Mass Transfer, ICCHMT, 18–22 July 2011, Istanbul, Turkey.

**Invited talk** Randrianalisoa J, Heat Transfer in Cellular Materials and Disperse Systems, 1st International School on Architectured Materials, ARCHIMAT School, 22–28 May 2011, Grenoble, France.

**Peer-review international journal articles:**

1. Randrianalisoa, J; Dombrovsky, L; Lipinski, W; Timchenko, V, Effects of short-pulsed laser radiation on transient heating of superficial human tissues, *International* *Journal of Heat and Mass Transfer*, Vol. 78, pp. 488–497 (2014)
2. Randrianalisoa, J; Lipinski, W, Effect of pore-level geometry on far-field radiative properties of three-dimensionally ordered macro-porous ceria particle, *Applied Optics*, Vol. 53, pp. 1290-1297 (2014).
3. Wheeler, V; Randrianalisoa, J; Lipinski, W; Tamma, K K, Spectral radiative properties of three-dimensionally ordered macroporous ceria particles. *Journal of Quantitative Spectroscopy & Radiative Transfer,* Vol. 143, pp. 63–72 (2014)
4. Randrianalisoa, J; Baillis D, Analytical model of radiative properties of packed beds and dispersed media, Internaltional Journal of Heat and Mass Transfer, 70, pp. 264–275 (2014)
5. Barbier, C; Michaud, P-M; Baillis, D; Randrianalisoa, J; Combescure, A, New laws for the tension/compression properties of Voronoi closed-cell polymer foams in relation to their microstructure, *European Journal of Mechanics - A/Solids*, 45, pp. 110-122 (2014).
6. Dombrovsky, L; Randrianalisoa, J; Lipiński, W; Timchenko, V, Simplified approaches to radiative transfer simulations in laser-induced hyperthermia of superficial tumors, *Computational Thermal Sciences*,Vol. 5, No. 6, pp. 521-530 (2013).
7. Ganesan, K;Randrianalisoa, J; Lipiński, W, Effect of Morphology on Spectral radiative properties of three-dimensionally ordered macroporous ceria packed bed, *Journal of Heat Transfer*, Vol. 135 (12), p. 122701 (2013).
8. Randrianalisoa, J; Coquard, R; Baillis, D, Microscale direct calculation of solid phase conductivity of voronoï’s foams, *Journal of Porous media*, Vol. 16, No. 5, pp. 411-426 (2013)
9. Baillis, D; Coquard, R; Randrianalisoa, J; Dombrovsky, L; Viskanta, R, Thermal radiation properties of highly porous cellular foams, *Special Topics & Reviews in Porous Media*, Vol. 4, pp. 111-1136 (2013)
10. Coquard, R; Randrianalisoa, J; Baillis, D, Computational prediction of radiative properties of polymer closed-cell foams with random structure, *Journal of Porous media*, Vol. 16, pages 137-154 (2013)
11. Randrianalisoa, J; Dendievel, R; Bréchet, Y; Michaud, P-M; Filippi, R, On the thermomechanical behavior of two-dimensional foam/metal joints with shear-deformable adherends: Model validation with FE analysis, *International Journal of Adhesion and Adhesives*, Vol. 37, pp. 11-18 (2012).
12. Randrianalisoa, J; Dendievel, R; Bréchet, Y, On the thermomechanical behavior of two-dimensional foam/metal joints with shear-deformable adherends – Parametric study, *Composites Part B: Engineering*, Vol. 42, No. 7, pp. 2055–2066 (2011).
13. Randrianalisoa, J; Dendievel, R; Bréchet, Y, Ablative degradation of cryogenic thermal protection and fuel boil-off: Improvement of using graded density insulators, *International* *Journal of Heat and Mass Transfer*, Vol. 54, No. 23–24, pp. 4864–4874 (2011).
14. Dombrovsky, L A; Randrianalisoa, J H; Lipiński, W; Baillis, D, Approximate Analytical Solution to Normal Emittance of Semi-Transparent Layer of an Absorbing, Scattering, and Refracting Medium, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 112, No. 12, pp. 1987-1999 (2011).
15. Dombrovsky, L A; Baillis, D; Randrianalisoa, J, Some Physical Models Used to Identify and Analyze Infrared Radiative Properties of Semi-Transparent Dispersed Materials, *Journal of Spectroscopy and Dynamics*, Vol. 1, No. 1, paper 7 (2011).
16. Dombrovsky, L A; Rousseau, B; Echegut, P; Randrianalisoa, J; Baillis, D, High Temperature Infrared Properties of YSZ Electrolyte Ceramics for SOFCs: Experimental Determination and Theoretical Modeling, *Journal of American Ceramics Society*, Vol. 94, No. 12, pp. 4310-4316 (2011).
17. Coquard, R; Baillis, D; Randrianalisoa, J, Homogeneous phase and multi-phase approaches for modeling radiative transfer in foams, *International Journal of Thermal Sciences*, Vol. 50, No. 9, pp. 1648-1663 (2011).
18. Coquard, R; Baillis, D; Randrianalisoa, J; Lallich, S, Extension of the FLASH Method to Semitransparent Polymer Foams, *Journal of Heat Transfer*, Vol. 133, No. 11, p. 112604 (2011).
19. Randrianalisoa, J; Baillis, D, Radiative properties of densely packed spheres in semitransparent media: A new geometric optics approach, *Journal of Quantitative and Radiative Transfer,* Vol. 111, No. 10, pp. 1372-1388 (2010).
20. Randrianalisoa, J; Baillis, D, Radiative Transfer in Dispersed Media: Comparison Between Homogeneous Phase and Multiphase Approaches, *Journal of Heat Transfer*, Vol. 132, No. 2, p. 023405 (2010).
21. Randrianalisoa, J; Baillis, D, Combined Analytical and Phonon-Tracking Approaches to Model Thermal Conductivity of Etched and Annealed Nanoporous Silicon, *Advanced Engineering Materials*, Vol. 11, No. 10, pp. 852-861 (2009).
22. Randrianalisoa, J; Brechet, Y; Baillis, D, Materials Selection for Optimal Design of a Porous Radiant Burner for Environmentally Driven Requirements, *Advanced Engineering Materials*, Vol. 11, No. 12, pp. 1049-1056 (2009).
23. Baillis, D; Randrianalisoa, J, Prediction of thermal conductivity of nanostructures: Influence of phonon dispersion approximation, *International Journal of Heat and Mass Transfer*, Vol. 52, No. 11-12, pp. 2516-2527 (2009).
24. Randrianalisoa, J; Baillis, D, Monte Carlo simulation of steady-state microscale phonon heat transport, *Journal of Heat Transfer*, Vol. 130, No. 7, p. 072404 (2008).
25. Randrianalisoa, J; Baillis, D, Monte Carlo simulation of cross-plane thermal conductivity of nanostructured porous silicon films, *Journal of Applied Physics*, Vol. 103, No. 5, p. 053502 (2008).
26. Dombrovsky, L; Randrianalisoa, J; Baillis D, Infrared radiative properties of polymer coatings containing hollow microspheres, *International Journal of Heat and Mass Transfer*, Vol. 50, No. 7-8, pp. 1516-1527, (2007).
27. Randrianalisoa, J; Baillis, D; Pilon, L, Improved inverse method for radiative characteristics of closed-cell absorbing porous media, *Journal of Thermophysics ans Heat Transfer,* Vol. 20, No. 4, pp. 871-883 (2006).
28. Randrianalisoa, J; Baillis, D; Pilon, L, Modeling radiation characteristics of semitransparent media containing bubbles or particles, *Journal of Optical Society of America A*, Vol. 23, No. 7, pp. 1645-1656 (2006).
29. Dombrovsky, L; Randrianalisoa, J; Baillis, D, Modified two-flux approximation for identification of radiative properties of absorbing and scattering media from directional-hemispherical measurements, *Journal of Optical Society of America A*, Vol. 23, No. 1, pp. 91-98 (2006).
30. Dombrovsky, L; Randrianalisoa, J; Baillis, D; Pilon L, Use of Mie theory to analyze experimental data to identify infrared properties of fused quartz containing bubbles, *Applied Optics*, Vol. 44, No. 33, pp. 7021-7031 (2005).
31. Baillis, D; Pilon, L; Randrianalisoa, H; Gomez, R, Viskanta, R, Measurements of radiation characteristics of fused quartz containing bubbles*, Journal of Optical Society of America A*, Vol. 21, No. 1, pp. 149-159 (2004).

**Articles in refereed proceedings of international conferences**

1. Randrianalisoa, J; Dombrovsky, L; Lipinski, W; Timchenko, V, Absorption of short-pulsed laser radiation in superficial human tissues: Transient vs quasi-steady radiative transfer, 15th International Heat Transfer Conference, paper No. IHTC15-8268, Kyoto, Japan, August 10-15, 2014.
2. Ganesan, K; Randrianalisoa, J; Lipinski, W; Spectral Radiative Properties of 3DOM Ceria Packed Beds: Effects of Morphology and Thermochemical Cycling, paper No. HT2013-17382, ASME 2013 Summer Heat Transfer Conference, Minneapolis, MN, USA, July 14 - 19 2013.
3. Wheeler, V; Randrianalisoa, J; Lipinski, W: Tamma, K K, Spectral radiative properties of three-dimensionally ordered macroporous ceria particles, paper No. RAD-13-040, 7th International Symposium on Radiative Transfer, Kusadasi, Turkey, June 2 – 8, 2013.
4. Dombrovsky, L; Randrianalisoa, J; Lipiński, W; Timchenko, V, Simplified approaches to radiative transfer simulations in laser-induced hyperthermia of superficial tumors, paper No. RAD-13-040, 7th International Symposium on Radiative Transfer, Kusadasi, Turkey, June 2 – 8, 2013.
5. Horny, N; Randrianalisoa, J; Chirtoc, M; Turgut, A; Tavman, I; Hell, J; Eisenmenger-Sittner, Ch; Kitzmantel, M; Neubauer, E; Kijamnajsuk, P; Pelzl, J, Interfacial thermal resistance characterization of planar and heterogeneous systems by photothermal radiometry, *6th European Thermal Sciences Conference*, EUROTHERM 2012, 4-7 September, 2012, Poitiers, France.
6. Randrianalisoa, J; Coquard, R; Baillis, D, Thermal conductivity of open- and closed-cell foams: influence of cell randomness, ICHMT International Symposium on Advances in Computational Heat Transfer, CHT-12, paper MM04, 1-6 July 2012, Bath, England*.*
7. Coquard, R; Randrianalisoa, J; Baillis, D, Computational prediction of radiative properties of polymer closed-cell foams with random structure, ICHMT International Symposium on Advances in Computational Heat Transfer, CHT-12, paper MM03, 1-6 July 2012, Bath, England.
8. Baillis, D; Coquard, R; Randrianalisoa, J; Radiative heat transfer in honeycomb structures-New simple analytical and numerical approaches, Computational Thermal Radiation in Participating Media IV, EUROTHERM Seminar 95, paper P7-3, 18-20 April 2012, Nancy, France, published in *J. Phys.: Conf. Ser.* Vol. 369, paper No. 012006 (2012).
9. Randrianalisoa, J; Dendievel, R; Bréchet, Y, Mechanical behavior of two-dimensional foam/metal joints with shear-deformable adherends, *Proceeding of the* *International Conference on Adhesive Bonding*, AB-2011, paper. AB114, 7-8 July 2011, Porto, Portugal.
10. Randrianalisoa, J; Baillis*,* D*, Combined an*alytical and phonon-tracking approa*c*hes to model thermal conductivity of etched and annealed nanoporous silicon, *4th Conference on Diffusion in Solids and Liquids*, DSL08, paper DSL0226, 9-11 July 2008, Barcelona, Spain.
11. Randrianalisoa, J; Baillis, D, Thermal conductivity across nanostructured porous silicon, *12th International Conference on Phonon Scattering in Condensed Matter*, paper PHONONS2007/373, 15-20 July 2007, Paris, France.
12. Dombrovsky, L; Randrianalisoa, J; Baillis, D, Infrared radiative properties of polymer coating containing hollow microspheres, *Proceeding of the 13th International Heat Transfer Conference*, IHTC-13, paper RAD-03, 13-18 August 2006, Sydney, Australia.
13. Randrianalisoa, J; Baillis, D; Ranc, J, Monte Carlo Simulation of phonon transport in nanoporous silicon, *Proceeding of the 12th International Meeting on Heat Transfer*, JITH-2005, Vol. 1, pp. 335-338, 15-17 November 2005, Tanger, Morocco.
14. Randrianalisoa, J; Baillis, D, Independent and dependent scattering for semitransparent media containing bubbles, *Proceedings of ASME International Mechanical Engineering Congress and R&D Expo*., IMECE2004, paper IMECE2004-59722, 13-19 November 2004, Anaheim, California.
15. Baillis, D; Randrianalisoa, F; Pilon, L; Viskanta, R, Identification of radiative of fused quartz containing bubbles using discrete ordinate method with Fresnel interfaces, *Proceeding of European Thermal-Sciences Conference*, EUROTHERM Seminar 73, pp. 215-224, 15-17 April 2003, Mons, Belgium.