ECEA 2017

4th International Electronic Conference on Entropy and Its Applications

Chaired by Prof. Philip Broadbridge
21 November–1 December 2017

CHAIR

Prof. Dr. Philip Broadbridge
La Trobe UEniversity,
Melbourne, Australia

You are cordially invited to participate in the 4th International Electronic Conference on Entropy and Its Applications. The conference will be organized into six sessions, which reflect the inter-disciplinary nature of entropy and its applications:

- A. **Statistical Physics** (Chaired by: Prof. Antonio M. Scarfone and Prof. Dr. Miguel Rubi)
- B. **Information and Complexity** (Chaired by: Prof. Dr. Raúl Alcaraz Martínez)
- C. **Thermodynamics in Materials** (Chaired by: Prof. Dr. Leslie Glasser)
- D. **Quantum Information and Foundations** (Chaired by: Prof. Giacomo Mauro D'Ariano and Prof. Dr. Andrei Khrennikov)
- E. **Machine Learning** (Chaired by: Dr. Dawn E. Holmes and Prof. Dr. Alexander Gorban)
- F. **Astrophysics and Cosmology** (Chaired by: Dr. Michael J. Way)

SCIENTIFIC COMMITTEE

Prof. Anne Humeau-Heurtier (University of Angers, Angers cedex, France)
Dr. Takuya Yamano (Kanagawa University, Kanagawa, Japan)
Prof. Dr. Carlo Cattani (University of Tuscia, Viterbo, Italy)
Dr. Renaldas Renaldas Urniezius (Kaunas University of Technology, Lithuania)
Dr. Robert Niven (The University of New South Wales at ADFA, Canberra, Australia)

KEYNOTE SPEAKERS

Prof. Dr. Geert Verdoolaege

Topic: Pattern Recognition in Nuclear Fusion Data by Means of Geometric Methods in Probabilistic Spaces

Dr. Cemal Basaran

Topic: Using Entropy to Unify Mechanics and Thermodynamics

Prof. Dr. Andrea Puglisi

Topic: Clausius relation for Active Particles

Dr. Joseph Lizier

Topic: Pointwise Information Decomposition Using the Specificity and Ambiguity Lattices

Prof. Dr. Karsten Keller

Topic: Theory and Practice of Permutation Entropy

Dr. Karoline Wiesner

Topic: The role of information in complex systems -- Self-organisation in stem cells and glass formers

Prof. (em.) Ingo Müller
Dr. Wolf Weiss

Topic: On the roles of energy and entropy in thermodynamics

Prof. Mikhail Prokopenko

Topic: Relating Fisher information and thermodynamic cost of near-equilibrium computation