

Markus Hütter*

Editorial

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Dear readers,

Last year, 63 participants from 18 countries gathered for the 8th edition of the International Workshop on Non-Equilibrium Thermodynamics IWNET (see <http://www.nonequilibrium-thermodynamics.org> for more details), which was organized by Markus Hütter (Eindhoven University of Technology) and Leonard Sagis (Wageningen University and Research) and was held in Sint-Michielsgestel, close to the city of 's Hertogenbosch in the Netherlands. Previous meetings in this series took place in Montréal (1996), Oxford (2000), Princeton (2003), Rhodes (2006), Cuernavaca (2009), Røros (2012), and Hilvarenbeek (2015).

The 5-day workshop consisted of invited lectures, regular presentations, poster sessions, and discussion sessions, on the following topics:

<i>Topic:</i>	<i>Invited speaker:</i>
New Conceptual Developments	Alexander Gorban (University of Leicester, UK)
Complex Fluids and Solids	Mike Cates (University of Cambridge, UK)
Large Fluctuations	Hugo Touchette (Stellenbosch University, South Africa)
Quantum Dissipation	Armen Allahverdyan (Yerevan Physics Institute, Armenia)

The topics thus ranged from the fundamentals of non-equilibrium thermodynamics in general, establishing links to other branches of physics and mathematics (large fluctuations, quantum dissipation), to the rather applied field of mechanical behavior of complex materials.

This issue of the Journal of Non-Equilibrium Thermodynamics contains four peer-reviewed publications of work that has been presented at the workshop last year. Particularly, the contributions are the following: In the field of New Conceptual Developments, Miroslav Grmela, Michal Pavelka, Vaclav Klika, Bing-Yang Cao, and Nie Bendian present “Entropy and entropy production in multiscale dynamics” (pp. 217–233); in the field of Complex Fluids and Solids, Paul M. Mwasame, Norman J. Wagner, and Antony N. Beris describe “Micro-inertia effects in material flow” (pp. 235–246), and Mátyás Szűcs and Tamás Fülöp elaborate on “Kluitenberg-Verhás rheology of solids in the GENERIC framework” (pp. 247–259); in the field of Quantum Dissipation, Walter Aschbacher presents his results on “A rigorous scattering approach to quasifree fermionic systems out of equilibrium” (pp. 261–275).

The 9th workshop in this series, IWNET2021, will take place in 2021 in Victoria, Canada, and will be organized by Henning Struchtrup (University of Victoria).

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Guest editor

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