

# Eurotherm Conference No. 105: Computational Thermal Radiation in Participating Media V

The Eurotherm Seminar No.: 105 on Computational Thermal Radiation in Participating Media was held in Albi, France on 1–3 April 2015. It was the fifth in a series after Mons, Belgium (Eurotherm Seminar No.: 73, April 2003), Poitiers, France (Eurotherm Seminar No.: 78, April 2006) and Lisbon, Portugal (Eurotherm Seminar No.: 83, April 2009), and Nancy, France (Eurotherm Seminar No.: 95, April 2012). It was attended by 60 scientists from 15 different countries, including Australia, Belgium, Canada, China, France, Germany, Poland, Portugal, Russia, Switzerland, The Netherlands, Sweden, Tunisia, Turkey and USA. This Special Issue is based on the papers selected from this Seminar.

There is a long and rich history of using computational techniques for predicting and analyzing radiative transfer in both natural and industrial systems. These techniques are an integral part of computational thermal heat transfer problems, which require the interaction of radiation with other heat transfer modes, including conduction, convection and phase change. The CTRPM5 conference has highlighted these scientific questions that involved participating media based on the solution of the radiative transfer equation. The conference participants have addressed a diverse number of topics, identifying common

physics between different problems, solution methods, and applications to a number of practical cases.

Thirty-six presentations were given during the meeting following a strict review process performed by the members of the Scientific Committee and the other eminent experts in the field. After the seminar, the Editors of the present Special Issue selected 12 of the most notable contributions, which were modified further and went through a rigorous review process. These papers cover several aspects of computational radiation transfer problems, varying from geometrical complexities of the solution domains to spectral and directional dependencies of radiative properties.

The SI Editors wish to thank D. Lemonnier, N. Selçuk and P. Lybaert, who were the co-chairs of the Eurotherm Seminar. Special thanks are extended to the members of the International Scientific Committee, and the local organizing staff. They also gratefully acknowledge the support of 'Investissements d'avenir and labex Solstice,' Société Française de Thermique, ICHMT, Université Fédérale de Toulouse, and the additional financial sponsorship received from the Midi-Pyrénées Region and city of Albi.

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