

EDITORIAL

Theory of fusion plasmas: selected papers from the Joint Varenna–Lausanne International Workshop

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The 2010 edition of the joint Varenna–Lausanne workshop on the theory of fusion plasmas was undoubtedly a great success. The programme encompasses a wide variety of topics, namely turbulence, MHD, edge physics and RF wave heating. The present PPCF issue is a collection of 19 outstanding papers, which cover these topics. It follows the publication of 22 refereed contributed papers in *Journal of Physics: Conference Series* 2010 **260**. There is no doubt that the production of articles was both abundant and of high scientific quality. This is why the Varenna–Lausanne meeting takes an important place in the landscape of conferences on fusion. Indeed this is the ideal forum for exchanging ideas on theory and modelling, and for substantiating the best results obtained in our field.

The tradition of the meeting is to provide a forum for numerical modelling activities. This custom was clearly respected given the large fraction of papers in this special issue which address this subject. This feature reflects the revolution we have been living through for some years with the fast growth of high-performance computers. It also appears that analytical theory is flourishing. This is important for bringing new ideas and guidance to numerical simulations. Finally, code validation and comparison to experiments are well represented. We believe that this is good news given the complexity of the non-linear physics that is at stake in fusion devices.

Another subject of satisfaction was the presence of many young scientists at the meeting. The encounter between young researchers and senior scientists is certainly a strong point of the Varenna–Lausanne conference.

In conclusion, we anticipate a great success for this special issue of PPCF and we hope that the readers will find therein ideas and inspiration.

X Garbet, *CEA–Cadarache, France*

O Sauter, *Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland*

Guest Editors