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Introduction

The eleventh edition of the Spintronics symposium gathered about one hundred and thirty speakers in San Diego, California (United States) from Sunday 19 August to Thursday 23 August 2018.

In line with the previous editions, Spintronics XI symposium, held in the framework of the Optics + Photonics symposium, covered hot topics in Spintronics. The conference was an invaluable opportunity for informal and stimulating discussions between experts as well as for networking in a friendly atmosphere, testifying to the continued dynamism of our field of research.

With 34 oral sessions, the symposium gave a broad spectrum of the active and emerging fields in spintronics. Recent results at the forefront of theoretical, experimental, and technological developments have been discussed. An important place has been given to Spinorbitronics Phenomena with 5 focused sessions, Topological Matter (4 sessions), Dzyaloshinskii-Moriya Interaction and Skyrmions (3 sessions), Ultrafast Magnetism and THz Spintronics (3 sessions), whose application prospects are promising.

Special attention has been paid (with 2 sessions) to the developments of Magnetic MTJ and RAMs in connection with industrial applications, Spin Injection, Spin Pumping, Two-Dimensional Materials, Spin-to-Charge Conversion, and Emerging Concepts.

Many other challenging topics were covered including (with one session) Magnetic Imaging, Spin Logic, Spin VECSELs, Neuromorphic and Bio-Inspired Applications, Spin Dynamics, Molecular Spintronics, and Oxide-Based Spintronics.

Additionally, we are grateful to the SPIE staff and to the Program Committee members who did a tremendous work. Special thanks to all colleagues and friends who helped organizing focused sessions. We warmly thank all the authors and speakers for their active participation: they have again made this conference a great success.

Henri-Jean Drouhin
Jean-Eric Wegrowe
Manijeh Razeghi
Henri Jaffrès