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# Ultrafast Phenomena XVI

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# Preface

This volume is a compilation of research papers presented at the Sixteenth International Conference on Ultrafast Phenomena held at the Palazzo dei Congressi Stresa, Italy, from June 9 to 13, 2008. The Ultrafast Phenomena conferences are held every two years and are the premier international forum for discussion of the latest results in ultrafast science. These meetings bring together researchers spanning numerous fields of science and engineering to deliberate the latest advances in ultrafast optics and their applications in science and engineering. The conferences and associated published proceedings effectively disseminate the latest scientific advances using ultrashort coherent pulses of light. More than 370 papers were presented at Ultrafast Phenomena XVI. Significant progress in creating ever shorter pulses of light was reported, now extending below 100 attoseconds, with new developments in high harmonic generation and frequency comb metrology. Multidimensional spectroscopy is rapidly evolving to provide new insights into quantum coherence and interactions in complex systems. Dramatic advances in time-resolved electron and x-ray diffraction and spectroscopy provide detailed information on atomic and electronic structural dynamics in molecular systems and crystalline solids. These examples are but a small subset of the research summaries gathered in this volume, which provides a valuable synopsis of the recent advances and impact of ultrafast technology in illuminating fundamental processes in physics, chemistry, and biology. There were 434 attendees at the meeting, more than a third of which were graduate and postdoctoral students. Increased student attendance energized the proceedings, and discussions were further enhanced by the beautiful lakeside setting and natural alpine surroundings in Stresa.

Many people and organizations made invaluable contributions to the success of the conference. The international program committee reviewed over 550 submissions and organized the scientific program. The local organizing committee arranged many of the logistics for the meeting including the stimulating venue at Stresa, on the shore of Lake Maggiore. Staff of the European Physical Society deserve thanks for making the conference arrangements and running a smooth and efficient meeting. We thank the Optical Society of America, European Science Foundation, European Cooperation in Scientific and Technical Research (COST P14), Politecnico di Milano, LASERLAB-Europe (a consortium of 17 European Laser Infrastructures), and European Extreme Light Infrastructure for their support. Generous support for Ph.D. student participation was provided by: European DYNA - ESF Network, Coherent Corp., Newport Corp., Kapteyn-Murnane Labs, and Quantronix Corp. We are particularly grateful to André Wobst for coordinating the conference submissions and evaluations, and for his help in bringing this volume together.

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