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Raman Kashyap
Michel Têtu
Rafael N. Kleiman
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Introduction

It is with great pleasure we welcome you to this proceedings of the SPIE supported conference, Photonics North 2011, held in Ottawa, 16–18 May 2011. This was yet another successful year for Photonics North, with 241 abstracts, attendees from 25 countries, and as well as 54 exhibitors with a delegation of French companies and a visiting delegation from China. This year saw the co-location of three conferences in Ottawa: Photonics North, Optical Fiber Sensors, and Information Photonics. Inevitably, these meetings not only drew a large audience altogether, but also fragmented the attendees into different interest groups. Additional common sessions could have eased some of the critical feedback received from the participants; certainly something to be addressed in future meetings.

We were greatly honored to have the Nobel Laureate Prof. John Hall deliver the keynote lecture on his contributions to "Time, Frequency and Timekeeping." The enormity of the task was obvious from his wonderful slides, each of which could have delivered a two-hour lecture! Photonics North again hosted a successful session on Photovoltaics and we were honored to have Prof. Thomas Baer, past president of the Optical Society of America, present a plenary lecture on the prospects of photonics playing a role as a green technology. Prof. Paul Corkum gave an illuminating plenary talk on attosecond processes, as did Dr. Alex Vitkin on the photonics in biophotonics.

For the first time, the conference held a session on "Optical Trapping, Laser Heating, Cooling, and Nano-Manipulation," and Prof. Dana Anderson opened the session with a fascinating invited talk on the atom transistor.

In these proceedings, you will see the diversity of topics that define photonics in Canada, describing the leading edge of research in high quality peer reviewed papers. The world community attending the meeting reflects the relevance of the Photonics North forum as it continues to remain an important networking and scientific platform serving not only North America but also the wider photonics community.

Raman Kashyap