

Preface

This volume represents the proceedings of the third International Conference on Micro Nano Devices, Structure and Computing Systems (MNDSCS 2014), held in Singapore, March 1-2, 2014. MNDSCS 2014 is an international interdisciplinary conference covering research and development in the field of Micro Nano Devices, Structure and Computing Systems.

MNDSCS 2014 is an opportunity for participants from the countries all over the world to interact, present and discuss topics in their respective research areas and to learn about new developments in related fields. Given the highly non-trivial task of making talks on such a variety of recent research topics accessible to an audience with such diverse background, the speakers made a great effort to present ideas and methods in a lively and accessible way. The conference program consists of invited talks, and oral presentations, posters and discussions covering a wide range of topics in Micro Nano Devices, Structure and Computing Systems. This rich program provides all attendees with the opportunities to meet and interact with one another.

During the conference, many novel research works caught the attentions of the participants. For example, the “The Formation of Cooper Pairs and Their Role in Nondissipative Diamagnetic Currents in the Micro- and Macro-Scopic Sized Graphene Materials; Towards High-Temperature Superconductivity” by Takashi Kato suggested that any material with large $\Delta E_{\text{HOMO-LUMO},N}$ value (more than a few eV), in which valence bands are completely occupied by electrons, which has been believed to be typical insulator in view of solid state physics and chemistry, has a possibility to exhibit high temperature superconductivity in solids; The paper “Parameter Optimized LS-SVM Based on APSO for Short-term Load Forecasting” by Chia-Sheng Tsai and Sun-Wei Cho designed some experiments to evaluate the performance of our system to determine if our system was capable of achieving the load balance. These papers were highly evaluated.

More than 200 papers pre-registered authors submitted their work in the conference. MNDSCS 2014 finally accepted and host 56 papers, after peer-reviewing. The papers are grouped in the themes under which they were presented, namely 1) Material Science and Applications, 2) Mechanical Engineering, 3) Power, Energy and Environment Engineering, 4) Electronics, Computer Engineering and Information Technology.

Thanks due to many people who have given their time and goodwill freely to make the MNDSCS 2014 a success. We would like to take this opportunity to thank the program committee members and external experts for their invaluable help in producing the conference’ program. Important contributions to MNDSCS 2014 were made by author, presenters and editors. Without their support, the conference could not have been the success that it was. Especially, we acknowledge the authors themselves, without whose expert input there would have been no conference.

I hope all participants can benefit from MNDSCS 2014.

Zheng Zhang

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