Acknowledgments

MICROSYSTEMS INDUSTRIAL GROUP

Analog Devices, Inc. Applied Materials Draper DSM Edwards Foxconn HARTING Hitachi High-Technologies IBM Lam Research Co. NEC TSMC Texas Instruments

MTL LEADERSHIP TEAM

Jesús A. del Alamo, Director Sherene M. Aram, Administrative Officer Duane S. Boning, Associate Director, Computation Vicky Diadiuk, Associate Director, Facilities Jing Kong, Associate Director Jeffrey H. Lang, Associate Director

MTL POLICY BOARD

Karl K. Berggren Geoffrey S. D. Beach Vladimir Bulović Gang Chen Karen K. Gleason Lionel C. Kimerling Charles G. Sodini Timothy M. Swager

MTL TECHNICAL STAFF

Daniel A. Adams, Research Specialist Bernard A. Alamariu, Research Engineer Robert J. Bicchieri, Research Specialist Kurt A. Broderick, Research Associate Whitney R. Hess, EHS Coordinator Michael J. Hobbs, Systems Administrator Donal Jamieson, Research Specialist Gonggin Li, Research Software Developer Eric Lim, Research Engineer Thomas J. Lohman, Project Leader, Computation William T. Maloney, Systems Manager Paul J. McGrath, Research Specialist Michael B. McIlrath, CAD Manager Ryan O'Keefe, Technician Kristofor R. Payer, Research Specialist Scott J. Poesse, Research Specialist and Technical Instructor Gary Riggott, Research Associate David M. Terry, Project Technician Paul S. Tierney, Research Specialist Timothy K. Turner, Technician Dennis J. Ward, Research Specialist Paudely Zamora, Research Specialist

MTL ADMINISTRATIVE STAFF

Joseph Baylon, Administrative Assistant Valerie J. DiNardo Administrative Assistant Ramon Downes, Financial Officer Margaret Flaherty, Administrative Assistant Mara E. Karapetian, Manager of Media & Design Elizabeth Kubicki, Administrative Assistant Ludmila Leoparde, Financial Officer Joanna MacIver, Administrative Assistant Jami Mitchell, Administrative Assistant Steven O'Hearn, Administrative Assistant Mary O'Neil, Senior Administrative Assistant

PROCESS TECHNOLOGY COMMITTEE

Vicky Diadiuk, Chair Akintunde I. Akinwande Xiaowei Cai Winston Chern Jeffrey Lang Danhao Ma Jörg Scholvin Max Shulaker Saima Afroz Siddiqui Noelia Vico Trivino

MTL EQUIPMENT ACQUISITION COMMITTEE

Nicholas X. Fang, Chair Vicky Diadiuk Silvija Gradečak Pablo Jarillo-Herrero Paulo C. Lozano Tomás Palacios Jörg Scholvin Michael R. Watts

MTL SEMINAR SERIES COMMITTEE

Luis Velásquez-García, Chair Valerie DiNardo Jeffrey H. Lang Jami Mitchell Vivienne Sze

Acknowledgments

MARC2018 CONFERENCE ORGANIZERS

Steering Committee

Preet Garcha, Steering Committee Co-Chair Benjamin Lienhard, Steering Committee Co-Chair Jesús A. del Alamo, MTL Director Dan Adams, Meeting Organization & Logistics Sherene Aram, Finance & Organization Nerissa Draeger, Industry Advisor Whitney Hess, Meeting Organization & Logistics Debroah Hodges-Pabon, Meeting Organization & Logistics Ludmila Leoparde, Meeting Organization & Logistics Mara Karapetian, Publications & Proceedings Paul McGrath, Meeting Organization & Logistics, Photography Jami Mitchell, Publications & Proceedings Ryan O'Keefe, Meeting Organization & Logistics

Electronics & Quantum Devices Committee

Ahmad Zubair, Chair Ethan Lee Mihika Prabhu

Circuits & Integrated Electronics Committee

Jiabao Zheng, Chair Marek Hempel Tsung-Ju Jeff Lu

Energy-efficient Circuits & Systems Committee

Rabia Yazicigil, Chair Xiaowei Cai Christopher Panuski

Photonics & Optoelectronics Committee

Jelena Notaros, Chair Sally El-Henawy Jérôme Michon

Energy Harvesting & Storage Committee

Hsin Yu Lai, Chair Giovanni Azzellino Amanda Youssef

Nanotechnology & Nanomaterials Committee

Noelia Vico Trivino, Chair Marek Hempel Yujia Yang

Materials & Manufacturing Committee

Akshay Singh, Chair Zhumei Sun Heng Zuo

Medical Devices & Biotechnology Committee

Sirma Orguc, Chair Neerja Aggarwal Malia McAvoy

Presentation Chair

Mayuran Saravanapavanantham

Publicity Chair Marianna Sofman

Seminar Chair Alex Hanson

Social Chairs Mohamed Radwan Abdelhamid, Co-Chair Wei Sun Leong, Co-Chair

Transportation Chair Navid Abedzadeh

Winter Activities Chair Alex Ji

MTL ANNUAL RESEARCH REPORT 2018