

CONTENTS

Preface	v
Sponsors	vii
Committees	ix
Realistic Simulations of Single-Spin Measurement via Magnetic Resonance Force Microscopy <i>T. A. Brun and H.-S. Goan</i>	1
Continuous Variable Teleportation of Quantum Fields <i>H. J. Carmichael</i>	11
Silicon-Based Nuclear Spin Quantum Computer <i>H.-S. Goan</i>	27
Robust Dynamical Decoupling: Feedback-Free Error Correction <i>D. A. Lidar and K. Khodjasteh</i>	41
A Bell Inequality Based on Correlation Functions for Three Qubits <i>C.-F. Wu, J.-L. Chen, L. C. Kwek and C. H. Oh</i>	53
Minimum-Error Discrimination among Mixed Quantum States <i>C.-L. Chou</i>	61
Security of Quantum Key Distribution with Strong Phase-Reference Pulse <i>M. Koashi</i>	75
Limitation on the Accessible Information for Quantum Channels with Inefficient Measurements <i>K. Jacobs</i>	87
Codes for Key Generation in Quantum Cryptography <i>B.-G. Englert, F.-W. Fu, H. Niederreiter and C. Xing</i>	97
W State Generation and Effect of Cavity Photons on the Purification of Dot-Like Single Quantum Well Excitons <i>C.-M. Li, Y.-N. Chen, C.-W. Luo, J.-Y. Hsieh and D.-S. Chuu</i>	111

A Universal Quantum Estimator	123
<i>L. C. Kwek, K. W. Choo, J.-F. Du, A. K. Ekert, C. Moura Alves, M. Horodecki, P. Horodecki, D. Kaszlikowski, N. Nazimudeen, C. H. Oh and D. K. L. Oi</i>	
Toward a Practical Environment for Quantum Programming	133
<i>S. Yamashita, M. Nakanishi and K. Watanabe</i>	
Decoy State Quantum Key Distribution (Abstract Only)	143
<i>H.-K. Lo</i>	
Mixed-State Entanglement in the Light of Pure-State Entanglement Constrained by Superselection Rules	145
<i>S. D. Bartlett, H. M. Wiseman, R. W. Spekkens and A. C. Doherty</i>	
Quantum Computation Based on Electron Spin Qubits without Spin-Spin Interaction	155
<i>Y.-Z. Wu, W.-M. Zhang and C. Soo</i>	
Infrared Wavelength Quantum Communications Based on Single Electron Transistors	163
<i>D. M. T. Kuo</i>	
Recent Results in Experiments with Josephson Qubits	173
<i>O. Astafiev, Y. Pashkin, T. Yamamoto, Y. Nakamura and J. Tsai</i>	
Pulsed Endor-Based Quantum Information Processing	197
<i>R. Rahimi, K. Sato, K. Furukawa, K. Toyota, D. Shiomi, T. Nakamura, M. Kitagawa and T. Takui</i>	
Utilization of Polarized Electron Spin of Organic Molecules in Quantum Computing	205
<i>T.-S. Lin, D. J. Sloop and C.-Y. Mou</i>	
Quantum System Identification	215
<i>L.-Y. Hsu</i>	
Organic Semiconductor Micro-Pillar Processed by Focused Ion Beam Milling	223
<i>W.-C. Hung, A. Adawi, A. Tahraoui and A. G. Cullis</i>	
Optimal Design of Single-Photon Source Emission from a Quantum-Dot in Micro-Pillar Microcavity	229
<i>Y.-L. D. Ho, T. Cao, P. S. Ivanov, M. J. Cryan, I. J. Craddock, C. J. Railton and J. G. Rarity</i>	
Program	247
List of Registered Participants	251
Author Index	255