

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 |