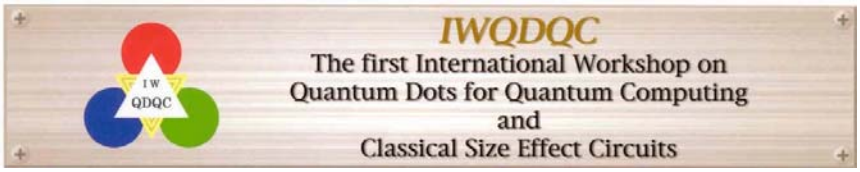

TABLE OF CONTENTS

Quantum Computing General

General Theoretic and Prospective

11. Interdependence Analysis in a Composite Quantum System and its Application to Partitioning of Quantum Dot Register

    Hiroshi Watanabe, Mukuta Research Institute,Japan

12. Electron Transfer through Pumped Quantum Dots

    Valdimir Yudson, Chiba University, Japan; Russian Academy of Science, Russia

13. Giant Photon-Photon Interactions and Entanglement in Photonic Crystals -Quantum Optics in Photonic Crystals

    Gershon Kurizki, Tomas Opatrny, David, Petrosyan, Miriam Blaauboer

    Weizmann Institute of Science, Israel

14. A Complete Set of Transformation Rules for Quantum Boolean Circuits with CNOT gates

    Kazuo Imawa , Shigeru Yamashita, ERATO; Kyoto University; NTT, Japan

Coherence in Quantum Dots and Quantum Networks

15. Long Lived Coherence in Self-Assembled Quantum Dots

    D. Birkedal. K. Leosson, and Jorn M. Hvam, Technical University of Denmark, Denmark

16. Photon Beats from a Single Semiconductor Quantum Dot: A Coherence Study

    T. Flissikowski, A. Hundt, M. Lowisch, M. Rabe, and Fritz Henneberger Humboldt-Universitaet zu Berlin, Institut fuer Physik, Germany

17. Coherence Generation by Resonance Dynamic Dipole-Dipole Interaction among Quantum Dot Ensemble〕

    Hideaki Matsueda, Kochi University, Japan

18. Control of Dipole-Dipole Interactions in Dielectric Structures

    Gershon Kurizki, Weizmann Institute of Science, Israel

19. Field-Coupled Devices for Nanoelectronic Integrated Circuits

    Wolfgang Porod and Arpad Csurgay, Uiversity of Notre Dame, USA

Quantum Computing Devices with Quantum Dots - Photonic 1

20. Quantum Dots: Artificial Atoms and Quantum Computing 〔40〕

Anthony S. Lenihan, Gang Chen, T.H. Stievater, E.A. Tabak, X. Li, M.V.G. Dutt, D.G. Steel, S. Ghosh, P.K.Bhattacharya, The University of Michigan; D.S. Katzer, D.Park, D. Gammon, The Naval Research Laboratory; L.J. Sham, University of California, San Diego, USA

21. Coherent Control of Single Dot Exciton Wavefunction

Hidehiko Kamada, H. Gotoh, NTT Basic Research Laboratories; H. Ando, Konan UniversityT. Takagahara, Kyoto Institute of Technology; J. Temmyo, Shizuoka University, Japan

22. Single Quantum Dots and Quantum Dot Molecules in Externally Controllable Fields

Alfred Forchel, M. Bayer, G. Bacher, J. P. Reithmaier, M. Kamp, University of Wuerzburg,Germany; T. L. Reinecke, Naval Research Laboratory, USA; P. Hawrylak,

Institute for Microstructural Science, Canada

23. Ultrafast Quantum Information Processing using Excitons in Quantum Dots

E. Biolatti I.D'Amico, Paolo Zanardi, F. Rossi, Politecnico di Trino; ISI Foundation, Italy

24. Intrinsic Exciton-Exciton Coupling in GaN-based Quantum Dots: Application to Solid-State Quantum Computing

I.D'Amico, E. Biolatti, Paolo Zanardi, Fausto Rossi, S. De Rinaldis R. Rinaldi R. Cingolani, ISI Foundation; Politecnico di Trino; Universita di Lecce, Italy

25. Quantum Computation with Coupled-Quantum-Dots Embeded in Optical Microcavities

Xin-Qi Li, National Laboratory for Superlattices and Microstructures, China

Quantum Computing Devices with Quantum Dots - Electronic and Spintronic 1

26. Quantum Information Processing with Ferroelectrically Coupled Quantum Dots
    Jeremy Levy, University of Pittsburgh, USA
27. Time-Dependent Phenomena of Charge State and Spin State in Quantum Dots
    Toshimasa Fujisawa, NTT Basic Research Laboratories, Japan
28. Qubit System in Capacitively Coupled Semiconductor Quantum Dots
    Tetsufumi Tanamoto, Toshiba Corporation, Japan
29. Quantum Computation Using Artificial Molecules
    Nan-Jian Wu, National Laboratory for Superlattices and Microstructures, China
30. Coherent Control of Quantum State in Josephson Junction Circuits
    Jaw-Shen Tsai, Yasunobu Nakamura, Yuri Pashikin, Tsuyoshi Yamamoto
    NEC Fundamental Research Laboratories, Japan

Quantum Computing Devices with Quantum Dots
Electronic and Spintronic 2

Molecular and other Quantum Dots for Quantum Computing

Poster Session

P1. Giant Photon-Photon Interactions and Entanglement in Photonic Crystals

Quantum Optics in Photonic Crystals

Gershon Kurizki, Tomas Opatrny, David Petrosyan, Miriam Blaauboer

Weizmann Institute of Science, Israel

P2. Melting and Reentrant Freezing of Finite Electron Systems on Two-Dimensional Quantum Dots

Yoshihisa Enomoto and Takashi Mitsuda, Nagoya Insitute of Technology, Japan

P3. Quantum Computing and Modern Supercomputing

Leland Jameson and John Johnson, Lawrence Livermore National Laboratory, USA