

# The 5th KAKENHI Quantum cybernetics General Meeting

Date: 29th – 30th June, 2011  
 Place: Hyatt Regency KYOTO (Kyoto, Japan)  
 Participants: 48p.

Program:

1st day: 29th June, 2011 (Wed)

| time          | contents   | speaker                        |
|---------------|--|--------------------------------|
| 09:00 – 09:15 | Opening speech   | Jaw-Shen Tsai                  |
| 09:15 – 10:15 | ①Study of superconducting quantum cybernetics  | Jaw-Shen Tsai                  |
| 10:15 – 10:30 | Break  |                                |
| 10:30 – 11:30 | ②Study of the control, measurement, and transfer of quantum information using a semiconductor nanoassembly | Yasuhiro Tokura                |
| 11:30 – 12:30 | ③Quantum information processing using an ion trap system   | Shinji Urabe                   |
| 12:30 – 13:30 | Luncheon meeting   |                                |
| 13:30 – 14:30 | ④Realization of quantum cybernetics using photonic quantum circuits  | Shigeki Takeuchi               |
| 14:30 – 15:30 | ⑤Light-based multi-qubit quantum control   | Masato Koashi                  |
| 15:30 – 15:45 | Break  |                                |
| 15:45 – 17:15 | ⑥Quantum control using cold atoms  | Ryotaro Inoue<br>Tetsuya Mukai |
| 17:15 – 18:30 | Discussion   |                                |
| 18:30 – 19:30 | Lamp Session   |                                |
| 19:30 – 21:30 | Poster Session   |                                |

2ne day: 30th June, 2011 (Thu)

| time          | contents  | speaker           |
|---------------|---|-------------------|
| 09:00 – 10:00 | ⑦Molecular spin quantum control   | Masahiro Kitagawa |
| 10:00 – 10:15 | Break   |                   |
| 10:15 – 11:15 | ⑧New development of quantum estimation theory in quantum cybernetics                    | Akio Fujiwara     |
| 11:15 – 12:15 | ⑨Theory on quantum coherence in hybrid quantum system of superconductor and quantum dot | Michiyasu Mori    |
| 12:15 – 13:15 | Luncheon meeting  |                   |
| 13:15 – 14:15 | ⑩Study of single NV center in diamond toward scalable multi-qubit system                | Norikazu Mizuochi |
| 14:15 – 15:15 | ⑪Manipulation of electron spin and nuclear spins in hetero-g-factor double quantum      | Keiji Ono         |
| 15:15 – 15:30 | Break   |                   |
| 15:30 – 17:00 | Discussion  |                   |
| 17:00 – 17:15 | Closing speech  | Jaw-Shen Tsai     |

Participants List:

|    | name         | affiliation                   |    | name         | affiliation                             |
|----|--------------|-------------------------------|----|--------------|---|
| 1  | Y. Tokura    | NTT Basic Research Laboratory | 25 | S. Takeuchi  | Hokkaido University                     |
| 2  | S. Tarucha   | The University of Tokyo       | 26 | R. Okamoto   | Hokkaido University                     |
| 3  | M. Yamamoto  | The University of Tokyo       | 27 | M. Fujiwara  | Hokkaido University                     |
| 4  | T. Kubo      | NTT Basic Research Laboratory | 28 | H. Zhao      | Hokkaido University                     |
| 5  | M. Kitagawa  | Osaka University              | 29 | M. Iefuji    | Osaka University                        |
| 6  | Y. Morita    | Osaka University              | 30 | T. Ono       | Hokkaido University                     |
| 7  | A. Kagawa    | Osaka University              | 31 | M. Tanida    | Osaka University                        |
| 8  | M. Negoro    | Osaka University              | 32 | T. Yokoi     | Osaka University                        |
| 9  | Y. Tabuchi   | Osaka University              | 33 | M. Koashi    | The University of Tokyo                 |
| 10 | T. Takui     | Osaka City University         | 34 | T. Yamamoto  | Osaka University                        |
| 11 | S. Nakazawa  | Osaka City University         | 35 | R. Ikuta     | Osaka University                        |
| 12 | K. Maruyama  | Osaka City University         | 36 | K. Azuma     | NTT Basic Research Laboratory           |
| 13 | K. Sugisaki  | Osaka City University         | 37 | A. Fujiwara  | Osaka University                        |
| 14 | S. Hayashi   | Osaka City University         | 38 | Y. Takahashi | Osaka University                        |
| 15 | T. Yoshino   | Osaka City University         | 39 | M. Mori      | Japan Atomic Energy Agency              |
| 16 | R. Inoue     | Kyoto University              | 40 | N. Mizuochi  | Osaka University                        |
| 17 | Y. Yoshikawa | Kyoto University              | 41 | K. Takenaka  | Nagoya University                       |
| 18 | R. Yamazaki  | Kyoto University              | 42 | K. Satoh     | Osaka City University                   |
| 19 | H. Hara      | Kyoto University              | 43 | K. Ono       | RIKEN                                   |
| 20 | R. Yamamoto  | Kyoto University              | 44 | J.S. Tsai    | RIKEN / NEC Green Innovation Laboratory |
| 21 | T. Mukai     | NTT Basic Research Laboratory | 45 | O. Astafiev  | RIKEN                                   |
| 22 | S. Urabe     | Osaka University              | 46 | F. Yoshihara | RIKEN                                   |
| 23 | U. Tanaka    | Osaka University              | 47 | T. Miyazaki  | RIKEN                                   |
| 24 | K. Toyoda    | Osaka University              | 48 | Y. Pashkin   | RIKEN                                   |