

Research associate,

Department of Comprehensive Engineering,

Information and Control Systems Course,

Kindai University Technical College

7-1 Kasugaoka, Nabari, Mie

518-0459, Japan

Phone: +81-595-41-0111

Fax: +81-595-62-1320

E-mail: bando@ktc.ac.jp

Web: <http://alice.math.kindai.ac.jp/~bando/>

Education

Apr. 2010 – Mar. 2013 Ph.D., *Physics*, Kinki University, Osaka, Japan

Apr. 2008 – Mar. 2010 M.S., *Physics*, Osaka University Osaka, Japan

Apr. 2004 – Mar. 2008 B.S., *Physics*, Kinki University, Osaka, Japan

Research Experience

April 2016 – present *Research associate*, Department of Comprehensive Engineering, Information and Control Systems Course, Kindai University Technical College, Mie, Japan

April 2015 – March 2016 *Part-time Lecturer*, Department of Comprehensive Engineering, Information and Control Systems Course, Kindai University Technical College, Mie, Japan

April 2013 – March 2015 *Researcher*, Interdisciplinary Graduate School of Science and Engineering, Kinki University, Osaka, Japan

Fall 2012 – Spring 2013 *Joint researcher*, Institute for Molecular Science, Aichi, Japan

2010 – 2011 *Research Assistant*, Research Center for Quantum Computing, Interdisciplinary Graduate School of Science and Engineering, Kinki University, Osaka, Japan

Teaching Experience

April 2015 – present Kindai University Technical College :
 Programming Language I (April 2015 – March 2016),
 Data Structure and Algorithm (April 2016 – present),
 Information Engineering,
 Software Engineering,
 Experiments of Electrical and Information Engineering 5,
 Information Processing I,
 Information Processing II,
 Graduation Thesis Work

Spring 2012 Kinki University :
 Computational Physics 1 (*Teaching Assistant*)

2009 – 2013 14th - 23rd Computational Materials Design Workshops (*Tutor*)

Fall 2008 Osaka University :
 Statistical Physics 1 Exercise Advanced Class (*Teaching Assistant*)

Spring 2008 Osaka University :
 Electromagnetics 1 Exercise Standard Class (*Teaching Assistant*)

Publications (Refereed)

1. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, and Mikio Nakahara, “Robust Quantum Gates ~Composite Quantum Gates~ (in Japanese)”, BUTSURI, **68**, 459 (2013) (published by The Physical Society of Japan).
2. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, and Mikio Nakahara, “Concatenated composite pulses compensating simultaneous systematic errors”, J. Phys. Soc. Jpn., **82**, 014004 (2013).
3. Tsubasa Ichikawa, U. Güngördü, Masamitsu Bando, Yasushi Kondo, and Mikio Nakahara, “Minimal and Robust Composite Two-Qubit Gates with Ising-Type Interaction”, Phys. Rev. A **87**, 022323 (2013).
4. Tsubasa Ichikawa, Masamitsu Bando, Yasushi Kondo, and Mikio Nakahara, “Geometric Aspects of Composite Pulses”, Philosophical Transactions of the Royal Society A, **370**, 4671 (2012). (Invited paper to a special issue, “Quantum information processing in NMR: theory and experiment”.)
5. Tsubasa Ichikawa, Masamitsu Bando, Yasushi Kondo, and Mikio Nakahara, “Designing robust unitary gates: Application to concatenated composite pulses”, Phys. Rev. A **84**, 062311 (2011).
6. Yasushi Kondo and Masamitsu Bando, “Geometric Quantum Gates, Composite Pulses, and Trotter-Suzuki Formulas”, J. Phys. Soc. Jpn., **80**, 054002 (2011).
7. Yukihiro Ota, Masamitsu Bando, Yasushi Kondo, and Mikio Nakahara, “Implementation of holonomic quantum gates by an isospectral deformation of an Ising dimer chain”, Phys. Rev. A **78**, 052315 (2008).

Book Chapters

1. Masamitsu Bando, Yukihiro Ota, Yasushi Kondo, and Mikio Nakahara, “Holonomic Quantum Gates using Isospectral Deformations of Ising Model”, in Mikio Nakahara, Robabeh Rahimi and Akira SaiToh (eds.) Kinki University Series on Quantum Computing Vol.3: Decoherence Suppression in Quantum Systems 2008, World Scientific Publishing (2010) Singapore, pp. 181-184.

Selected Presentations

1. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, Mikio Nakahara, and Yutaka Shikano, “Error Robustness of Spin Echo and Composite Quantum Gates (in Japanese)”, 28th Quantum Information Technology Symposium (QIT28) (oral), Hokkaido University, Hokkaido, Japan, May 2013.
2. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, and Mikio Nakahara, “Noise Robustness of Composite Gates (in Japanese)”, Physical Society of Japan Fall Meeting 2012 (oral), Yokohama National University, Kanagawa, Japan, Sep. 2012.
3. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, and Mikio Nakahara, “Dynamical Phase of Robust Quantum Gate (in Japanese)”, Precise Control of Quantum Systems: Toward Reliable Quantum Computing (oral), Kinki University, Osaka, Japan, Sep. 2011.
4. Masamitsu Bando, Tsubasa Ichikawa, Yasushi Kondo, and Mikio Nakahara, “On Robust Quantum Control (in Japanese)”, YITP Research Meeting “Duality and Scale in Quantum-Theoretical Sciences” (oral), Kyoto University, Kyoto, Japan, Nov. 2010.

| Honors and Awards

Aug. 2011 The Best Presentation Award in Session F,
56th Condensed Matter Physics Summer School “Bussei Wakate” (Oral), Hotel Evergreen Fuji, Yamanashi, Japan

| Research Grant

2012 Sasakawa Scientific Research Grant from The Japan Science Society, 660,000 YEN

| Passed Certification Examination

Apr. 2012 Ruby Association Certified Ruby Programmer Silver

| Relevant Skills

<i>Theory</i>	Quantum Control, NMR, Composite Pulses
<i>Programming</i>	Scheme, Emacs Lisp, Ruby, C, Java, Fortran, Mathematica, JavaScript, Bash/Zsh
<i>Markup Language</i>	L ^A T _E X, HTML, CSS

| Others

<i>Membership of academic society</i>	The Physical Society of Japan The Nuclear Magnetic Resonance Society of Japan The Japan Association for College of Technology
<i>Peer Review</i>	Physical Review A, Quantum Information Processing