QBIC Workshop 2013 on IDAQP

Dates:

From January 11, Friday to January 12 Saturday, 2013

Venue:

Research Center of Computational sciences,
Noda Campus of Tokyo University of Science
Noda City, Chiba 278-8510, Japan

a) Main Session

January 11, Friday 10:00 – 18:00
January 12, Saturday 10:00 – 16:00
at Conference Room (4F) in Research Center of Computational sciences
Noda Campus, Tokyo University of Science

Access (No.12 in the map) :
http://www.tus.ac.jp/en/campus/noda.html

b) Poster Session

January 11, Friday to January, 12, Saturday
at 4F in Research Center of Computational sciences
(Question and Answer, January 12, Saturday)

Welcome Party

January 11, Friday 18:00 –
at Cafeteria (2F) in Canal Hall

URL http://www.rs.noda.tus.ac.jp/qbic/qbic.html

QBIC Workshop 2013 on IDAQP

Purpose

The main aim of QBIC and the conference is to create a new paradigm synthesizing Quantum Information and Bio-Informatics based on efforts by active researchers traversing various fields of Mathematics, Physics, Information and Life Science.

Organizer

M. Ohya, Chief (Tokyo University of Science, Japan)
N. Watanabe (Tokyo University of Science, Japan)
Si Si (Aichi Prefectural University, Japan)

Advisory Committee

L. Accardi (Roma II University, Italy)
T. Hida (Emeritus Professor,Nagoya University, Japan)
A. Jamiolkowski, Nicolaus Copernicus University, Poland
I. Volovich (Steklov, Mathematical Institute, Russia)

Local Committee

Y. Togawa (Tokyo University of Science, Japan)
S. Iriyama (Tokyo University of Science, Japan)
I. Yamato (Tokyo University of Science, Japan)

Contacts

Noboru Watanabe
Tokyo University of Science
Noda City, Chiba 278-8510 Japan
Tel:+81-4-7124-1501 ext. 3319
Fax:+81-4-7124-1532
E-mail:watanabe@is.noda.tus.ac.jp

QBIC Workshop 2013 on IDAQP

Invited Speakers

L. Accardi, Roma II University, Italy

Louis H. Y. Chen, Institute for Mathematical Sciences,
National University of Singapore, Singapore

T. Hida, Emeritus Professor, Nagoya University, Japan

A. Jamiolkowski, Nicolaus Copernicus University, Poland

Un Cig Ji, Chungbuk National University, Korea

*A. Khrennikov, University of Växjö, Sweden

Si Si, Aichi Prefectural University, Japan

*I. Volovich, Steklov, Mathematical Institute, Russia

Some QBIC members in Tokyo University of Science

Accommodation

Mitsui Garden Hotel Kashiwa

(URL: http://www.gardenhotels.co.jp/eng/kashiwa/access)

4-3-1 Kashiwa, Chiba 277-0005, Japan

TEL : 04-7166-3111, FAX : 04-7166-3194

Sponsor

RIST, Tokyo University of Science

Program of QBIC Workshop 2013 on IDAQP

January 11, 2013, Friday - Main Session (1)

10:00 ～ 10:15 M. Ohya, Tokyo University of Science, Japan
Opening Address

10:15 ～ 10:55 Louis H. Y. Chen, Institute for Mathematical Sciences,
National University of Singapore, Singapore
Multivariate Normal Approximation by Stein's Method:
The Concentration Inequality Approach

10:55 ～ 11:35 T. Hida, Emeritus Professor, Nagoya University, Japan
An approach to non-commutative analysis on the space of generalized white noise functionals

11:35 ～ 13:00 **Lunch Break and Poster Presentation**

13:00 ～ 13:40 L. Accardi, Roma II University, Italy
TBA

13:40 ～ 14:20 Si Si, Aichi Prefectural University, Japan
Boundary of Homogeneous Chaos

14:20 ～ 14:40 **Coffee Break**

14:40 ～ 15:20 N. Watanabe, Tokyo University of Science, Japan
Entropy Type Complexities in Quantum Communication Processes

15:20 ～ 16:00 S. Iriyama, Tokyo University of Science, Japan
Polynomial Time Quantum Algortihm for an NP-hard Problerm

16:00 ～ 16:20 **Coffee Break**

16:20 ～ 17:30 Louis H. Y. Chen, M. Ohya, T. Hida, L. Accardi, Si Si, Y. Togawa,
I. Volovich, N. Watanabe,
Future Development of IDAQP (IMS workshop 2014)

18:00 ～ **Welcome Party**

January 12, 2013, Saturday - Main Session (2)

10:00 ～ 10:40 A. Jamiolkowski, Nicolaus Copernicus University, Poland
Quantum dynamics - semigroups and beyond

10:40 ～ 11:20 Un Cig Ji, Chungbuk National University, Korea
Quantum Extension of Girsanov Theorem

11:20 ～ 13:00 **Lunch Break and Poster Presentation**

13:00 ～ 13:40 M. Asano, Tokyo University of Science,
A. Khrennikov, University of Växjö, Sweden
Towards unification of Darwinian and Lamarckian models of cellular evolution on the basis of theory of open quantum systems

13:40 ～ 14:20 T. Hara, Tokyo University of Science, Japan
On a Recent Extension of MTRAP Alignment Method for RNA Sequences

14:20 ～ 14:40 **Coffee Break**

14:40 ～ 15:20 M. Asano, Tokyo University of Science,
A Mathematical Realization of von Neumann's Measurement Scheme

15:20 ～ 16:00 Y. Tanaka, Tokyo University of Science, Japan
*Adaptive Systems and Escherichia Coli's Behavior in Metabolis*m

16:00 ～ 16:10 T. Hida, Emeritus Professor, Nagoya University, Japan
Closing Address

List of Poster Presentations

1. Note on Construction of Quantum Logical Gate by ESR,
   Kenichirou Mayuzumi 1, Noboru Watanabe 2 and Igor Volovich 3
   1,2 Tokyo University of Science, Japan
   3 Steklow Mathematical Institute, Russia
2. Exponential Asymmetry Model for Ordinal Square Contingency Tables
   Hiroyuki Kurakami 1, Kouji Yamamoto 2 and Sadao Tomizawa 3
   1,3 Tokyo University of Science, Japan
   2 Osaka University, Japan
3. On Incomplete Point-Symmetry Model for Multiway Tables
   Kouji Tahata and Sadao Tomizawa
   Tokyo University of Science, Japan
4. Non-Kolmogolovian probability and adaptive dynamics for Escherichia coli's glucose effect
   Masanari ASANO1, Irina BASIEVA2, Andrei KHRENNIKOV3, Masanori OHYA4, Yoshiharu TANAKA5 and Ichiro YAMATO6
   1,4,5,6 Tokyo University of Science, Japan
   2,3 Linnaeus University, Sweden
5. An approach to improve the homology search quality using the Entropy Evolution Rate
   Hiroki Teramoto, Toshihide Hara, Masanori Ohya
   Tokyo University of Science, Japan
6. Indicators of Chaos and Examples
   Takeo Kamizawa, Toshihide Hara, Masanori Ohya
   Tokyo University of Science, Japan
7. Separable condition for a subclass of circulant states in the $\mathbf{C}^3 \otimes \mathbf{C}^3$system
   Tatsunori Saito1, Masanari Asano2, Takashi Matsuoka3 and Masanori Ohya4
   1,2,4 Tokyo University of Science,
   3 Tokyo University of Science, Suwa