

The 75th Okazaki Conference Tensor Network States: Algorithms and Applications 2016

January 11th - 14th, 2016 [Okazaki Conference Center](#) (Aichi, Japan)

Venue

[Okazaki Conference Center](#)

(located near the Institute for Molecular Science (IMS))

[Access Information](#).

Closest airport is [Central Japan International Airport \(NGO\)](#) (Nagoya) at 30 km distance from Nagoya city center.

The next Shinkansen station is Nagoya (JR). From there you can travel to your final destination [Higashi-Okazaki](#) by taking the [Meitetsu line](#) (!! not the JR line !!).

Aim

Tensor networks are recognized as one of the most promising numerical tools to study quantum many body systems; representatives are the matrix product state (MPS), the multi-scale entanglement renormalization ansatz (MERA), and the projected entangled-pair states (PEPS), and Density Matrix Renormalization Group(DMRG). By now, the concept covers various fields including material science, quantum chemistry, and lattice gauge theories, and it is desired to share ideas among these fields.

This workshop will focus on the recent developments on tensor network based algorithms and applications. It will host the discussion of current problems and developments among the leading researchers, aiming to promote interactions between selected fields from statistical mechanics to condensed matter, from quantum chemistry to nano-technology and high energy physics.

[Program](#) (Final Version)

The session starts at January 11 morning and ends in the afternoon of January 14.

Invited Speakers

Takeshi Yanai (Institute for Molecular Science, National Institutes of Natural Sciences, Japan)

Naoki Nakatani (Hokkaido University, Japan)

Garnet Chan (Princeton University, USA)

Anders Sandvik (Boston University, USA)

Guifre Vidal (Perimeter Institute for Theoretical Physics, Canada)

Ying-Jer Kao (National Taiwan University, Chinese Taiwan)

Tao Xiang (Institute of Physics, Chinese Academy of Science)
Tsuyoshi Okubo (Institute for Solid State Physics, The University of Tokyo, Japan)
Frank Pollmann (Max-Planck-Institut für Physik komplexer Systeme, Germany)
Ying Ran (Boston College, USA)
Hiroshi Imai (University of Tokyo, Japan)
Didier Poilblanc (CNRS and Université de Toulouse, France)
Mari Carmen Banuls (Max-Planck-Institut für Quantenoptik, Germany)
Shuo Yang (Perimeter Institute for Theoretical Physics, Canada)

Registration

Registration fee is free. However, please register for the organization. You should register [here](#)

Submission of Poster Presentation (Deadline: December 24th, 2015 (Thu.))

The oral contribution is closed. Your poster contribution is still welcome.

Accommodation

You can find the suitable hotel around the conference venue.

Support

[Institute for Molecular Science](#)
[Computational Materials Science Initiative \(CMSI\)](#)

NINS (National Institutes of Natural Sciences) Youth Collaborative Project
DAIKO Foundation

Poster

Photo

Organizers

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Toshiya Hikihara (Gumma University, Japan)
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