

First Call for Paper

MORIS 2009

Magnetics and Optics

Research International Symposium for New Storage Technology

June 16 – 18, 2009



Awaji Yumebutai International Conference Center
Hyogo, Japan

Website

MORIS: <http://mst.nagaokaut.ac.jp/~moris2009>

Conference center : <http://www.yumebutai.org/english/index.html>

SCOPE

MORIS (Magnetics and Optics Research International Symposium for New Storage Technology) will provide you an opportunity for fruitful discussions about not only the basic research of thermal, magnetic, and optical physics, but also the recent applications such as spintronics, nano-fabrication technologies, and novel optical/magnetic materials. More than a half of oral presentations will be invited talks from a variety of research field as follows;

1. **Heat Assisted Magnetic Recording**
(Head integration, Surface Plasmon Resonance, Antenna Devices, Recording Physics)
2. **Functional Media for High Density Recording**
(Patterned Media, Multilayer, High Ku Material)
3. **Nano Structures, New Materials**
(Nano Particles, Patterned Structure)
4. **Fast Spin Reversal Phenomena**
(Pump & Probe, All-optical Magnetic Recording)
5. **New Devices & Fabrication Technologies**
(MRAM, Magnetic Semiconductor, Spintronics, Metamaterials, Magnetic Dot Memory)
6. **Magneto-Optical Phenomena & Devices**
(MOSLMs, Nonlinear Effect, Magnetophotonic Crystals)
7. **Thermo-magnetic Phenomena**
(Thermodynamics Theory & Simulation)



Sponsored by
The Magnetics Society of Japan (MSJ)

INTRODUCTION

The 12th MORIS 2009 will be held in Japan in 2009. The conference will cover combined effects of optical, thermal and magnetic natures from fundamental new materials to application of functional media. The scope is shown as below. Using a recent advanced nano structure technology, the size can be less than optical wavelength, then the electric permittivity and magnetic permeability are strongly affected due to the influences of electron and spin response by local plasmon effect. After that, the average property can be controlled, such as a metamaterial (a negative refractive index) and a photonic crystal devices. On the other hand, laser optics and magnetic recording media can be applied to heat assisted magnetic recording (HAMR), which is desired for future high density HDD. When 100 femtosecond pulse laser is irradiated to a recording media, the data rate could be beyond the limit of the conventional magnetic recording, because the pulse laser in a flush breaks the magnetic ordering, then ultra fast spin reversal can be realized. And also, a new magnetic recording method without switching magnetic field can be performed with only polarity change of circle polarization light. This is named as all optical recording. Thus, MORIS 2009 will have hot discussions with synergic effects of optically, thermally and magnetically phenomena.

MORIS 2009 is sponsored by [The Magnetics Society of Japan](#) in cooperation with the following academic societies. (*under negotiation):

- The IEEE Magnetics Society*
- The IEEE Magnetics Society Japan Chapter
- The IEEE Japan Council
- Materials Research Society*
- Materials Research Society of Japan
- The Japan Society of Applied Physics
- The Physical Society of Japan
- The Institute of Electrical Engineers of Japan
- The Institute of Electronics Information and Communication Engineers
- The Institute of Image Information and Television Engineers
- Optoelectronic Industry and Technology Development Association
- Optical Society of Japan
- Japan Optomechatronics Association
- Storage Research Consortium
- IDEMA JAPAN

LOCATION AND CLIMATE

The Awaji Yumebutai International Conference Center is placed at Awaji Island where the romance of magnificent Japanese mythology and natural scenery still exist. The location is easily accessible from Kobe and Osaka via the Akashi Kaikyo Bridge. You can access Awaji Yumebutai in 2hours from Kansai International Airport and 1 hour 30 minutes from Osaka International Airport by Highway Bus. The temperature in June is around 25°C.

SECRETARIAT

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PREPARATION OF ABSTRACT

Contributed papers related to new storage technology are cordially invited. Authors are requested to submit an electronic version of their 2-page abstract written in English as described below. All electronic documents for the abstract should be prepared in the Portable Document Format (as a .pdf file). The abstract must be written within a 17 cm x 22 cm rectangular area for reproduction by offset on A4-size paper and is limited to two pages in length, including figures, tables, results, discussion and references. The abstract must be submitted via the abstract submission website at the URL shown below.

<http://mst.nagaokaut.ac.jp/~moris2009>

The deadline for submission is **March 2, 2009**. The website will not accept abstract after this deadline. DO NOT submit abstract to the MORIS 2009 Secretariat.

Abstracts will be selected on the basis of their originality and the significance of the results. If an abstract is accepted, it will appear in the Technical Digests to be distributed at the symposium.

PUBLICATION

The selected paper from presented papers at the symposium will be published as a special issue of the Journal of the Magnetics Society of Japan.

REGISTRATION

The following registration fees for members will be applicable to the MORIS2009.

	Before May 14, 2009	After May 15, 2009
Regular	JPY 45,000	JPY 50,000
Student/Retiree	JPY 6,000	JPY 8,000

For further information, please visit our Home Page

<http://mst.nagaokaut.ac.jp/~moris2009>

or mail to secretariat: moris2009@pac.ne.jp

ORGANIZATION

Symposium General

Chair: Katsuji Nakagawa, Nihon University
Vice Chairs: Masahiro Birukawa, Matsushita/Panasonic
Jimmy Zhu, Carnegie Mellon University
Theo Rasing, Radboud University Nijmegen

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