

Dr. Hiroaki ISOBE

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Dr. Hiroaki Isobe is an associate professor at GSAIS, Kyoto University. He completed his Ph.D. thesis "Observational and numerical studies on magnetic reconnection in the solar corona" at Kyoto University in 2005. Then he became a postdoctoral fellow of JSPS and continued to work on solar physics at the University of Tokyo and the University of Cambridge. In 2008 he came back to Kyoto University to join the newly established Unit of Synergetic Studies for Space (USSS) as a faculty member, where his mission was to promote and pioneer interdisciplinary studies about space science and space utilization. He joined GSAIS in 2014. His main research fields are solar physics, space plasma physics and space weather. He also collaborates with humanities scholars and started several projects such as space ethics, space anthropology and the survey of historical aurora records.

Selected Publications:

"Aurora candidates from the chronicle of Qíng dynasty in several degrees of relevance" Kawamura, A. D., Hayakawa, H., Tamazawa, H., Miyahara, H., Isobe, H. *Publications of Astronomical Society of Japan*, 68, 12 (2016)

"Records of sunspot and aurora during CE 960-1279 in the Chinese chronicle of the Sòng dynasty", Hayakawa, H., Tamazawa, H., Kawamura, A. D., Isobe, H. *Earth, Planets and Space*, 67, 14 (2015)

"Do we disturb the universe?: Diversity in space as a grotesque hope for humankind" Hiroaki Isobe, *Jaxa Research and Development Memorandum*, JAXA-RM-14-012E pp75 (2015)

"Flux Emergence (theory)" Cheung, M.C.M., Isobe, H. Living Review in Solar Physics, 11, 3 (2014)

"Can Superflares Occur on Our Sun?", Shibata, K., Isobe, H. and 10 other authors, *Publications of Astronomical Society of Japan*, 65, 8 (2013)

"Numerical Simulations of the Magnetic Rayleigh-Taylor Instability in the Kippenhahn-Schlueter Prominence Model" Hillier, A., Isobe, H., Shibata, K., Berger, T., The Astrophysical Journal Letters, 736, L1-L5 (2011)

"Reconnection in solar flares: Outstanding questions", Isobe, H. and Shibata, K., J. Astrophys. Astronomy, 30, 79 (2009)

"Convection-Driven Emergence of Small Scale Magnetic Fields and their Role in Coronal Heating and Solar Wind Acceleration" Isobe, H., Proctor, M. R. E., and Weiss, N. O., ApJ, 679, L57 (2008)

"Flare Ribbons Observed with G-band and FeI 6302 •, Filters of the Solar Optical Telescope on Board Hinode" Isobe, H., Kubo, M., Minoshima, T. et al., PASJ, 59, S807 (2007)

"Large amplitude oscillation of a polar crown filament in the pre-eruption phase" Isobe, H. and Tripathi, D, A&A, 449, L17 (2006)

"Filamentary structure on the Sun from the magnetic Reylihg-Taylor instability" Isobe, H., Miyagoshi, T., Shibata, K. and Yokoyama, T., Nature, 434, 478 (2005)



Prof. Dr. Naoko Tosa

Academic Center for Computing and Media Studies, Kyoto University

Naoko Tosa is an internationally renowned Japanese media artist. After receiving PhD from the University of Tokyo, she was artist fellow at the Centre for Advanced Visual Studies at MIT from 2002 to 2004. Currently she is a professor at Kyoto University. Her artworks have been focusing the expression of Japanese tradition and culture utilizing technology. She exhibited her artworks at the Museum of Modern Art in New York, the New York Metropolitan Art Museum, ARS Electronica, etc.

In 1997, the L'Oreal Grand Prix awarded her art and science first prize. In 2012 she exhibited her artwork on LED screen of 250mx30m at Yeosu Expo in Korea. She has been appointed by the Agency for Cultural Affairs, Government of Japan as a Japan Cultural Envoy 2016.

Museum Collection: The Museum of Modern Art in New York, The National Museum of Art, Osaka/Japan, The Museum of Modern Art, Toyama/Japan, Nagoya City Art Museum, Nagoya/Japan, and Takamatsu City Museum of Art, Takamatsu/Japan. <u>www.naokotosa.com</u>

Research reference http://www.tosa.media.kyoto-u.ac.jp/index.html

Art works reference <u>Naoko Tosa's Official Website</u> <u>Sound of Ikebana (Spring)</u> <u>Sound of Ikebana (Spring) splashes color across the screens of Times</u> <u>Square</u>



Associate Professor Dr. Liang Zhao

Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS), Kyoto University

Dr. Liang Zhao graduated from Tsinghua University, China, in 1995, with B.S. (Dept. Applied Math.) and B.E. (Dept. Computer Science and Technology) degrees, then from Kyoto University in 1999 with M.E. (Dept. Applied Mathematics and Physics) degree, and in 2002 Doctor of Informatics (Dept. Applied Mathematics and Physics). He worked as an Assistant Professor at the Department of Engineering, Utsumoniya University, and as a Senior Lecturer at the Graduate School of Informatics, Kyoto University. He was also a Visiting Professor at Karlsruhe Institute of Technology (KIT), Germany, from April 2013 to Feb. 2014.

Since April 2014, Dr. Zhao has been an associate professor at the Graduate School of Advanced Integrated Studies in Human Survivability (also known as Shishukan), Kyoto University. His research interests include applied algorithms for graph and network problems, combinatorial optimizations, Big Data, AI, AW (Artificial Wisdom) and their applications. At present, he is working in the areas related to Traditional Chinese Medicine (TCM) Big Data, sociology, disaster prevention, art and others, using AI, AW and optimizations. He is a member of IEEE, ACM, IEICE and ORSJ. The latest information about his research and other activities can be found at

http://www.gsais.kyoto-u.ac.jp/staff/liang/.