Kazumasa A. TAKEUCHI

Contact

Tel/Fax : ask by email
kat@kaztake.org

Personal Information

Date of birth	16 February 1983
Place of birth	Tokyo, Japan
Nationality	Japanese
Postal address	Mail box H-85, Tokyo Institute of Technology, 2-12-1 Ookayama, Meguro-ku, Tokyo, 152-8551, JAPAN.

Research Interests

Areas of research	non-equilibrium physics, statistical physics, nonlinear science, soft matter, liquid crystal, fluid mechanics.
Keywords	spatiotemporal chaos, scaling laws, critical phenomenon, interface fluctuations, Kardar-Parisi-Zhang class, turbulence, directed percolation, absorbing state, liquid crystal, collective behavior, Lyapunov analysis, Lyapunov vectors.

Positions

since Apr. 2015	**Associate Professor,** **Department of Physics, Tokyo Institute of Technology, Japan.**
Apr. 2011 to Mar. 2015	Assistant Professor (since May 2012), Project Assistant Professor (until May 2012) Department of Physics, The University of Tokyo, Japan.
Sep. 2010 to Mar. 2011	JSPS Postdoctoral Fellow for Research Abroad, Service de Physique de l'État Condensé, CEA-Saclay, France.
Apr. 2010 to Aug. 2010	Research Fellow, Department of Physics, The University of Tokyo, Japan.

Education

Apr. 2007 to Mar. 2010	**Ph.D. in Science (March 2010)** Supervisor: Prof. Masaki Sano, Department of Physics, The University of Tokyo, Japan.
Apr. 2005 to Mar. 2007	**M.S. in Science (March 2007)** Supervisor: Prof. Masaki Sano, Department of Physics, The University of Tokyo, Japan.
Apr. 2003 to Mar. 2005	**B.S. in Science (March 2005)** Research internship supervisors: Prof. Hiroshi Fukuyama and Prof. Shinji Tsuneyuki Department of Physics, The University of Tokyo, Japan.
Apr. 2001 to Mar. 2003	College of Arts and Sciences, The University of Tokyo, Japan.

Honors (selected)

Aug. 2016	**2016 Tokyo Tech Challenging Research Award,** Tokyo Tech, Japan.
July 2013	**Young Scientist Prize**, IUPAP (C3 commission).
Mar. 2012	**6th Young Physicist Incentive Award**, Division 11, The Physical Society of Japan, Japan.
Feb. 2012	**28th Inoue Research Award for Young Scientists**, Inoue Foundation for Science, Japan.
Mar. 2010	**Research Encouragement Award (PhD course)**, Graduate School of Science, The University of Tokyo, Japan.
Mar. 2007	**President's Award & President's Special Award**, The University of Tokyo, Japan.

Languages

Japanese (native) **English** **French**

Updated on 28 Mar. 2017. (See http://www.kaztake.org or mail to kat@kaztake.org for the latest CV)

Selected Publications (peer-reviewed)

- Timothy Halpin-Healy and Kazumasa A. Takeuchi,
  “A KPZ Cocktail - Shaken, not stirred...: Toasting 30 years of kinetically roughened surfaces”,
  J. Stat. Phys. **160**, 794-814 (2015).
- Kazumasa A. Takeuchi,
  " Crossover from Growing to Stationary Interfaces in the Kardar-Parisi-Zhang Class",
  Phys. Rev. Lett. **110**, 210604 (2013).
- Kazumasa A. Takeuchi and Masaki Sano,
  "Evidence for Geometry-Dependent Universal Fluctuations of the Kardar-Parisi-Zhang Interfaces in Liquid-Crystal Turbulence",
  J. Stat. Phys. **147**, 853-890 (2012).
- Kazumasa A. Takeuchi, Masaki Sano, Tomohiro Sasamoto, and Herbert Spohn,
  “Growing interfaces uncover universal fluctuations behind scale invariance”,
  Scientific Reports (Nature Publishing) **1**, 34 (2011).
- Kazumasa A. Takeuchi, Hugues Chaté, Francesco Ginelli, Antonio Politi, and Alessandro Torcini,
  “Extensive and Sub-Extensive Chaos in Globally-Coupled Dynamical Systems”,
  arXiv:1103.4536 (2011).
- Kazumasa A. Takeuchi and Masaki Sano,
  "Universal Fluctuations of Growing Interfaces: Evidence in Turbulent Liquid Crystals",
  Phys. Rev. Lett. **104**, 230601 (2010).
- Kazumasa A. Takeuchi, Masafumi Kuroda, Hugues Chaté, and Masaki Sano,
  "Experimental realization of directed percolation criticality in turbulent liquid crystals",
  Phys. Rev. E **80**, 051116 (2009).
  Selected for a Viewpoint in Physics: Physics **2**, 96 (2009).
- Kazumasa A. Takeuchi, Francesco Ginelli, and Hugues Chaté,
  "Lyapunov Analysis Captures the Collective Dynamics of Large Chaotic Systems",
  Phys. Rev. Lett. **103**, 154103 (2009).
- Hong-liu Yang, Kazumasa A. Takeuchi, Francesco Ginelli, Hugues Chaté, and Günter Radons,
  "Hyperbolicity and the effective dimension of spatially extended dissipative systems",
  Phys. Rev. Lett. **102**, 074102 (2009).
- Kazumasa A. Takeuchi, Masafumi Kuroda, Hugues Chaté, and Masaki Sano,
  "Directed percolation criticality in turbulent liquid crystals",
  Phys. Rev. Lett. **99**, 234503 (2007).

and 15 others (in total 25). See http://www.kaztake.org for the complete list.

Invited Talks at International Conferences (selected)

- Frontiers in Mathematical Physics,
  “Integrability and universality behind a random growth experiment”,
  Tokyo (Japan), Jan. 9th, 2017.
- Interdisciplinary Applications of Nonlinear Science,
  "Geometry-dependent interface fluctuations and their implications for chaos instability",
  Kagoshima (Japan), Nov. 5th, 2016.
- School on Non-linear Dynamics, Dynamical Transitions and Instabilities in Classical and Quantum Systems,
  “Experimental evidence of KPZ growing interfaces and beyond”,
  Trieste (Italy), Aug. 1st, 2014.
- APS March Meeting 2014,
  “Exploring universal scaling laws far from equilibrium with turbulent liquid crystal”,
  Denver (USA), Mar. 4th, 2014.

and 20 others (in total 50 presentations, including 24 invited talks). See http://www.kaztake.org for the complete list.

Japanese conferences: in total 46 presentations, including 19 invited talks.