

# Curriculum Vitae

Hajime Takami

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## CONTACT DETAILS

Position: Project Researcher  
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the University of Tokyo  
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Date of Birth: October 27th, 1980  
Gender: Male  
Nationality: Japan

## EDUCATION

The University of Tokyo  
**Ph.D, Physics**, March, 2009  
Thesis: "Investigation of the sources of ultra-high-energy cosmic rays  
with numerical simulations"  
Adviser: Katsuhiko Sato  
The University of Tokyo  
**Master of Science, Physics**, March, 2006  
Thesis: "Propagation of Ultra-high-energy Cosmic Rays  
in Cosmic Magnetic Fields"  
Adviser: Katsuhiko Sato  
The University of Tokyo  
**Bachelor of Science, Physics**, March, 2004

## FELLOWSHIPS

-JSPS Research Fellow (DC1), the University of Tokyo: April 2006- March 2009

## RESEARCH BUDGET

2009: Grand-in-Aid for Scientific Research from the MEXT of Japan (No.21840019)

## **PROFESSIONAL ACTIVITIES**

- Reviewer for
  - Astroparticle Physics
  - Astrophysical Journal Letters
  - Monthly Notices of Royal Astronomical Society
- Member of
  - Physical Society of Japan
  - Astronomical Society of Japan

# PUBLICATION LIST

## ARTICLES PUBLISHED IN REFEREED JOURNALS

- [1] "*Cross-correlation between UHECR arrival distribution and Large-scale Structure*"  
H. Takami, T. Nishimichi, K. Yahata, & K. Sato,  
Journal of Cosmology and Astroparticle Physics, 06 (2009) 031 [arXiv:0812.0424]
- [2] "*Cosmogenic neutrinos as a probe of the transition from Galactic to extragalactic cosmic rays*"  
H. Takami, K. Murase, S. Nagataki & K. Sato,  
Astroparticle Physics, **31** (2009) 201
- [3] "*Implications to Sources of Ultra-high-energy Cosmic Rays from their Arrival Distribution*"  
H. Takami & K. Sato,  
Astroparticle Physics, **30** (2009) 306 [arXiv: 0807.3442]
- [4] "*Nonthermal neutrinos from supernovae leaving a magnetar*"  
S. Horiuchi, Y. Suwa, H. Takami, S. Ando & K. Sato,  
Monthly Notices of Royal Astronomical Society, **391** (2008) 1893 [arXiv: 0807.0267]
- [5] "*Implications to Ultra-high-energy Cosmic Rays for Transient Sources in the Auger Era*"  
K. Murase & H. Takami,  
Astrophysical Journal Letters, **690** (2009) L14 [arXiv: 0810.1813]
- [6] "*Distortion of Ultra-high-energy sky by Galactic Magnetic Field*"  
H. Takami & K. Sato,  
Astrophysical Journal, **681** (2008) 1279 [arXiv: 0711.2386]
- [7] "*Toward Unraveling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources*"  
H. Takami & K. Sato,  
Astrophysical Journal, **678** (2008) 606 [arXiv: 0710.0767]
- [8] "*Estimation Prospects of the Source Number Density of Ultra-high-energy Cosmic Rays*"  
H. Takami & K. Sato,  
Astroparticle Physics, **28** (2007) 529 [arXiv: 0710.1434]

- [9] "*Propagation of Ultra-High Energy Cosmic Rays above  $10^{19}$  eV in a Structured Extragalactic Magnetic Field and Galactic Magnetic Field*"  
H. Takami, H. Yoshiguchi & K. Sato,  
Astrophysical Journal **639** (2006) 803 [astro-ph/0506203], Erratum *ibid* **653** (2006) 1584

#### ARTICLES SUBMITTED TO REFEREED JOURNALS

- [1] "*Systematic Survey of the Correlation between Northern HECR events and SDSS Galaxies*"  
H. Takami, T. Nishimichi, & K. Sato  
Submitted to Journal of Cosmology and Astroparticle Physics [arXiv:0910.2765]
- [2] "*Does Galactic Magnetic Field Disturb the Correlation of the Highest Energy Cosmic Rays with their Sources?*"  
H. Takami & K. Sato  
Submitted to Astrophysical Journal [arXiv:0909.1532]

#### **CONFERENCE PROCEEDINGS**

- [1] "*Possibility to Constrain the Galactic Magnetic Field by the Highest Energy Cosmic Rays*"  
H. Takami & K. Sato,  
Proceedings of the 31th International Cosmic Ray Conference, submitted
- [2] "*Towards Unravelling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources*"  
H. Takami & K. Sato,  
Proceedings of International Workshop on Advances in Cosmic Ray Science, in press
- [3] "*Towards Unravelling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources*"  
H. Takami & K. Sato,  
Proceedings of KEK Cosmophysics Group Inaugural Conference on Accelerators in the Universe, AIP Conference Proceedings Volume 1040, pp.211
- [4] "*Propagation of Ultra-high-energy Protons in Cosmic Magnetic Fields*"  
H. Takami & K. Sato,  
Proceedings of 30th International Cosmic Ray Conference, in press

- [5] *"Propagation of Extremely High-Energy Protons"*  
H. Takami & K. Sato,  
Proceedings of International Workshop on Astronomy and Astrophysics  
in Extreme Universe, in press
- [6] *"Propagation of Ultra-high-energy Protons in Cosmic Magnetic Fields"*  
H. Takami & K. Sato,  
Proceedings of International Workshop on Cosmic-rays and High Energy  
Universe, Universal Academy Press, Inc., pp.207-210
- [7] *"Propagation of Ultra-High Energy Cosmic Rays above  $10^{19}eV$  in a Structured Extragalactic Magnetic Field and Galactic Magnetic Field"*  
H. Takami & K. Sato,  
Proceedings of International Workshop on Energy Budget in the High  
Energy Universe, World Scientific, pp.307-310
- [8] *"Propagation of Ultra-High Energy Cosmic Rays above  $10^{19}eV$  in a Structured Extragalactic Magnetic Field and Galactic Magnetic Field"*  
H. Takami, H. Yoshiguchi & K. Sato,  
Proceedings of 29th International Cosmic Ray Conference (ICRC2005),  
vol.17,pp.175-178
- [9] *"Propagation of Ultra-High Energy Cosmic Rays above  $10^{19}eV$  in a Structured Extragalactic Magnetic Field and Galactic Magnetic Field"*  
H. Takami, H. Yoshiguchi & K. Sato,  
Proceedings of 59th Yamada Conference on Inflating Horizons of Particle  
Astrophysics and Cosmology, Universal Academy Press, Inc., pp.255-258

## INVITED INTERNATIONAL CONFERENCE TALKS

- [1] *"Propagation of the Highest Energy Cosmic Rays and the correlation with the local Universe"*  
JEM-EUSO International Workshop (June, 2009, Ewha Womans University, Seoul, Korea)
- [2] *"Towards Unravelling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources"*  
The 2nd international JEM-EUSO meeting (November, 2007, RIKEN, Wako, Japan)
- [3] *"Propagation of Extremely-high-energy Cosmic Rays"*  
International Symposium on Astronomy Astrophysics of Extreme Universe (March, 2007, RIKEN, Wako, Japan)
- [4] *"Propagation of Ultra-High Energy Cosmic Rays in Cosmic Magnetic Fields"*  
4th Korean Astrophysics Workshop (May, 2006, Korean Astronomy and Space science Institute, Deajeon, Korea)

## OTHER INTERNATIONAL CONFERENCE TALKS

- [1] *"The Possibility to Constrain the Galactic Magnetic Field by the Highest Energy Cosmic Rays"*  
H. Takami & K. Sato,  
The 31th International Cosmic Ray Conference (Jul., 2009, Lodz University, Lodz, Poland)
- [2] *"Cross-correlation Between UHECR Arrival Distribution and Nearby Large-scale Structure"*  
H. Takami & K. Sato,  
International School of Cosmic Ray Astrophysics (Erice School, Erice, Italy, Jul. 2008)
- [3] *"Theoretical Predictions of the Positional Correlation between the Highest Energy Cosmic Rays and Nearby Cosmic Ray Sources"*  
H. Takami & K. Sato,  
International Astroparticle Physics Symposium (Colorado School of Mines, Colorado, USA, May 2008)

- [4] *"Towards Unravelling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources"*  
H. Takami & K. Sato,  
 International Workshop on Advances in Cosmic Ray Science (Waseda University, Shinjuku, Japan, Mar. 2008)
- [5] *"Towards Unravelling the Structural Distribution of Ultra-high-energy Cosmic Ray Sources"*  
H. Takami & K. Sato,  
 International Workshop on Accelerators in the Universe (KEK, Tsukuba, Japan, Mar. 2008)
- [6] *"Propagation of Ultra-high-energy Cosmic Rays in Cosmic Magnetic Fields"*  
H. Takami & K. Sato,  
 30th International Cosmic Ray Conference (ICRC2007) (Merida, Mexico, June, 2007)
- [7] *"Propagation of Ultra-High Energy Cosmic Rays above  $10^{19}$  eV in a Structured Extragalactic Magnetic Field and Galactic Magnetic Field"*  
H. Takami, H. Yoshiguchi & K. Sato, 29th International Cosmic Ray Conference (ICRC2005) (Pune University, Pune, India, Aug., 2005)

## SUMMARY OF OTHER CONFERENCE TALKS

- 3 invited talks in Japanese conferences
- 19 oral presentations in Japanese conferences

## SEMINARS

- [1] *"Toward Unveiling the Sources of the Highest Energy Cosmic Rays"*  
 CCAPP, Ohio State University (Oct. 20)
- [2] *"Investigation of the origin of the highest energy cosmic rays and neutrinos"*  
 Institute for the Physics and Mathematics of the Universe (April. 2009)
- [3] *"Implications to the origin of ultra-high-energy cosmic rays"*  
 Telescope Array Collaboration, Institute for Cosmic Ray Research, the University of Tokyo (November, 2008)
- [4] *"Towards Unveiling the Origin of Ultra-high-energy Cosmic Rays"*  
 Theoretical Astrophysics Group, Waseda University (October, 2008)
- [5] *"Pioneering Charged Particle Astronomy"*  
 Theoretical Astrophysics Group, Hiroshima University (July, 2008)

- [6] "*Towards Unravelling the Origin of Ultra-high-energy Cosmic Rays*"  
Theoretical Astrophysics Group, National Astronomical Observatory of Japan (May, 2008)
- [7] "*Implications to the origin of ultra-high-energy cosmic rays from their Arrival Distribution*"  
Theoretical Astrophysics Group, Yukawa Institute of Theoretical Physics (April, 2008)
- [8] "*Towards Unveiling the Origin of Ultra-high-energy Cosmic Rays*"  
Telescope Array Collaboration, Tokyo Institute of Technology (January, 2008)