Curriculum Vitae: Shin'ichiro Ando

CONTACT DETAILS

Name:	Shin'ichiro Ando
Position:	Associate Professor
Institution:	Gravitation and AstroParticle Physics Amsterdam (GRAPPA) & Institute for Theoretical Physics, University of Amsterdam
Address:	Science Park 904, 1098 XH Amsterdam, The Netherlands
Phone:	+31-(0)20-525-6316
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APPOINTMENTS

- Associate Professor, University of Amsterdam — Sep 2015–present
- Assistant Professor, University of Amsterdam — Sep 2011–Aug 2015
- Senior Research Scholar, California Institute of Technology — Sep 2009–Aug 2011
- Sherman Fairchild Postdoctoral Scholar in Theoretical Physics, California Institute of Technology — Apr 2006–Aug 2009
- JSPS Research Fellow (PD), University of Tokyo — Aug 2005–Mar 2006

EDUCATION

University of Tokyo
PhD of Science, Physics — Jul 2005
Thesis: "Neutrino Probes of Galactic and Cosmological Supernovae"
Advisor: Katsuhiko Sato

University of Tokyo
Master of Science, Physics — Mar 2003
Thesis: "Supernova Neutrinos: Their Relic Background and Resonant Spin-Flavor Conversion"
Advisor: Katsuhiko Sato

University of Tokyo

Bachelor of Science, Physics Mar 2001

FELLOWSHIPS, AWARDS, AND GRANTS

- FOM Grant on "The Missing Universe: What is the subatomic constituent of Dark Matter?" (€2,000,000; Co-I, PI: M.P. Decowski)
  Jan 2013–Dec 2018
- NWO Vidi Grant on "Probing Dark Matter with High-Energy Gamma Rays and Neutrinos" (€800,000; personal grant)
  Oct 2012–Sep 2017
- Japan Society for Promotion of Science (JSPS) Fellowship for Research Abroad, California Institute of Technology
  Sep 2009–Aug 2011
- NASA Fermi Grant GI Cycle 2 (#NNX09AT74G) on "Anisotropy and Energy Spectrum of the Gamma-Ray Background as Probes of Dark Matter and Astrophysical Sources" ($80,000; Co-I, PI: V. Pavlidou)
  Aug 12, 2009–Aug 11, 2010
- Inoue Research Award for Young Scientists, Inoue Foundation for Science
  Feb 5, 2007
- Sherman Fairchild Postdoctoral Prize Fellowship in Theoretical Physics, California Institute of Technology
  Apr 2006–Aug 2009
- JSPS Research Fellowship (PD) Aug 2005–Mar 2006
- JSPS Research Fellowship (DC1) Apr 2003–Jul 2005

STUDENTS AND POSTDOCS

Postdocs

- Irene Tamborra (University of Amsterdam, started 2013; faculty at University of Copenhagen, starting January 2016)
- Fabio Zandanel (University of Amsterdam, started 2013)
- Mattia Fornasa (University of Amsterdam, started 2015)

PhD students

- Shunsaku Horiuchi (PhD at University of Tokyo 2009; co-supervised with Prof. K. Sato; faculty at Virginia Tech)
- Michael R. Feyereisen (PhD student at University of Amsterdam, started 2013)
- Roberta Diamanti (PhD student at University of Amsterdam, started 2013)
- Niki Klop (PhD student at University of Amsterdam, started 2014)

Master students supervised

- Richard Bartels (Master at University of Amsterdam 2014; PhD student at University of Amsterdam)
- Andrea Chiappo (Master at University of Amsterdam 2014; PhD student at Stockholm University)
- David Homan (Master at University of Amsterdam 2014; received best thesis prize in astronomy; PhD student at University of Edinburg)
- Omer Tzuk (Master at University of Amsterdam 2014; PhD student at Ben-Gurion University)
- Laura van der Schaaf (Master at University of Amsterdam 2014; PhD student at University of Amsterdam)

ORGANIZATION OF SCIENTIFIC MEETINGS

- Organizer: Amsterdam-Stockholm-Paris Meeting on Astroparticle Physics (Amsterdam, October 2014)
- Organizer: Astroparticle Physics 2014 "A Joint TeVPA/IDM Conference" (Amsterdam, June 2014)
- Organizer: DRSTP Postgraduate AIO/OIO School on Theoretical High Energy Physics (Doorn, The Netherlands, February 2014)
- Organizer (chair): Workshop on "Anisotropic Universe: From Microwaves to Ultrahigh Energies" (Amsterdam, September 2013)

TEACHING ACTIVITIES

- Lecturer: *GRAPPA Student Seminar* (taught every year since 2013; 12 hours per week by 4 weeks), Master Program, University of Amsterdam
- Lecturer: *General Relativity* (taught every year since 2012; 4 hours per week by 7 weeks), Master Program, University of Amsterdam
- Supervisor of exercise session: *General Relativity* (2012; 4 hours per week by 7 weeks), Master Program, University of Amsterdam

OTHER PROFESSIONAL ACTIVITIES

- Referee for *Astroparticle Physics; Astrophysical Journal; Astrophysical Journal Letters; Journal of Cosmology and Astroparticle Physics; International Journal of Modern Physics D; Journal of High-Energy Physics; Monthly Notices of Royal Astronomical Society; Physical Review D; Physical Review Letters; Physics Letters B; Physics of the Dark Universe; Physics Reports*
- Referee for Proceedings of the National Academy of Sciences, USA
- Referee for DFG Research Grant Program, Germany
- Member of the Postdoctoral and PhD search Committees, GRAPPA, University of Amsterdam (since 2012)

- Member of Physical Society of Japan
- Member of Astronomical Society of Japan
- Member of Dutch Research School of Theoretical Physics
- Member of International Astronomical Union
- Organizer of GRAPPA Seminar at University of Amsterdam (Jan 2012–present)
- Organizer of Theoretical Astrophysics and Relativity Seminar at California Institute of Technology (Sep 2008–Dec 2009)
- Organizer of Theoretical Astrophysics Seminar at University of Tokyo (Apr 2005–Mar 2006)

PUBLICATION LIST

ARTICLES PUBLISHED IN REFEREED JOURNALS

1. "*Tomographic Constraints on High-Energy Neutrinos of Hadronuclear Origin*"
   Shin'ichiro Ando, Irene Tamborra & Fabio Zandanel
   Phys. Rev. Lett. (2015) to be published [arXiv:1509.02444 [astro-ph.HE]]

2. "*Boosting the annihilation boost: Tidal effects on dark matter subhalos and consistent luminosity modeling*"
   Richard Bartels & Shin'ichiro Ando
   Phys. Rev. D (2015) to be published [arXiv:1507.08656 [astro-ph.CO]]

3. "*Dark protohalos in MSSM-9 and implications for direct and indirect detection*"
   Roberta Diamanti, Maria Eugenia Cabrera Catalan & Shin'ichiro Ando
   Phys. Rev. D **92**, 065029 (2015) [arXiv:1506.01529 [hep-ph]]

4. "*The role of the eROSITA all-sky survey in searches for sterile neutrino dark matter*"
   Fabio Zandanel, Christoph Weniger & Shin'ichiro Ando
   J. Cosmol. Astropart. Phys. **1509**, 060 (2015) [arXiv:1505.07829 [astro-ph.CO]]

5. "*Diffuse emission of high-energy neutrinos from gamma-ray burst fireballs*"
   Irene Tamborra & Shin'ichiro Ando
   J. Cosmol. Astropart. Phys. **1509**, 036 (2015) [arXiv:1504.00107 [astro-ph.HE]]

6. "*Modelling the flux distribution function of the extragalactic gamma-ray background from dark matter annihilation*"
   Michael R. Feyereisen, Shin'ichiro Ando & Samuel K. Lee
   J. Cosmol. Astropart. Phys. **1509**, 027 (2015) [arXiv:1506.05118 [astro-ph.CO]]

7. "*Testing the Dark Matter Scenario for PeV Neutrinos Observed in IceCube*"
   Kohta Murase, Ranjan Laha, Shin'ichiro Ando & Markus Ahlers
   Phys. Rev. Lett. **115**, 071301 (2015) [Editors suggestion; arXiv:1503.04663 [hep-ph]]

8. "*Indirect and direct detection prospect for TeV dark matter in the MSSM-9*"

Maria Eugenia Cabrera Catalan, Shin'ichiro Ando, Christoph Weniger & Fabio Zandanel

Phys. Rev. D **92**, 035018 (2015) [arXiv:1503.00599 [hep-ph]]

9. *"Constraints on decaying dark matter from the extragalactic gamma-ray background"*

   Shin'ichiro Ando & Koji Ishiwata

   J. Cosmol. Astropart. Phys. **1505**, 024 (2015) [arXiv:1502.02007 [astro-ph.-CO]]

10. *"Inverse-Compton Emission from Clusters of Galaxies: Predictions for ASTRO-H"*

    Richard Bartels, Fabio Zadanel & Shin'ichiro Ando

    Astron. Astrophys., to be published [arXiv:1501.06940 [astro-ph.HE]]

11. *"High-energy gamma-ray and neutrino backgrounds from clusters of galaxies and radio constraints"*

    Fabio Zadanel, Irene Tamborra, Stefano Gabici & Shin'ichiro Ando

    Astron. Astrophys. **578**, A32 (2015) [arXiv:1410.8697 [astro-ph.HE]]

12. *"Power spectrum tomography of dark matter annihilation with local galaxy distribution"*

    Shin'ichiro Ando

    J. Cosmol. Astropart. Phys. **1410**, 061 (2014) [arXiv:1407.8502 [astro-ph.CO]]

13. *"Star-forming galaxies as the origin of diffuse high-energy backgrounds: Gamma-ray and neutrino connections, and implications for starburst history"*

    Irene Tamborra, Shin'ichiro Ando & Kohta Murase

    J. Cosmol. Astropart. Phys. **1409**, 043 (2014) [arXiv:1404.1189 [astro-ph.HE]]

14. *"Mapping dark matter in the gamma-ray sky with galaxy catalogs"*

    Shin'ichiro Ando, Aurélien Benoit-Lévy & Eiichiro Komatsu

    Phys. Rev. D **90**, 023514 (2014) [arXiv:1312.4403 [astro-ph.CO]]

15. *"Constraints on diffuse gamma-ray emission from structure formation processes in the Coma cluster"*

    Fabio Zandanel & Shin'ichiro Ando

    Mon. Not. R. Astron. Soc. **440**, 663 (2014) [arXiv:1312.1493 [astro-ph.HE]]

16. *"Constraints on the annihilation cross section of dark matter particles from anisotropies in the diffuse gamma-ray background measured with Fermi-LAT"*

Shin'ichiro Ando & Eiichiro Komatsu

Phys. Rev. D **87**, 123539 (2013) [arXiv:1301.5901 [astro-ph.CO]]

17. *"Multimessenger astronomy with gravitational waves and high-energy neutrinos"*
    Shin'ichiro Ando et al.
    Rev. Mod. Phys. **85**, 1401 (2013) [arXiv: 1203.5192 [astro-ph.HE]]

18. *"Fermi-LAT constraints on dark matter annihilation cross section with the Fornax cluster"*
    Shin'ichiro Ando & Daisuke Nagai
    J. Cosmol. Astropart. Phys. **1207**, 017 (2012) [arXiv:1201.0753 [astro-ph.HE]]

19. *"Determination of intergalactic magnetic fields from gamma ray data"*
    Warren Essey, Shin'ichiro Ando & Alexander Kusenko
    Astropart. Phys. **35**, 135 (2011) [arXiv:1012.5313 [astro-ph.HE]]

20. *"Core-collapse astrophysics with a five-megaton neutrino detector"*
    Matthew D. Kistler, Hasan Yüksel, Shin'ichiro Ando, John F. Beacom & Yoichiro Suzuki,
    Phys. Rev. D **83**, 123008 (2011) [arXiv:0810.1959 [astro-ph]]

21. *"Evidence for Gamma-Ray Halos Around Active Galactic Nuclei and the First Measurement of Intergalactic Magnetic Fields"*
    Shin'ichiro Ando & Alexander Kusenko,
    Astrophys. J. **722**, L39 (2010) [arXiv:1005.1924 [astro-ph.HE]]

22. *"Interactions of keV sterile neutrinos with matter"*
    Shin'ichiro Ando & Alexander Kusenko,
    Phys. Rev. D **81**, 113006 (2010) [arXiv:1001.5273 [hep-ph]]

23. *"Neutrino oscillations, Lorentz/CPT violation, and dark energy"*
    Shin'ichiro Ando, Marc Kamionkowski & Irina Mocioiu,
    Phys. Rev. D **80**, 123522 (2009) [arXiv:0910.4391 [hep-ph]]

24. *"Imprint of galaxy clustering in the cosmic gamma-ray background"*
    Shin'ichiro Ando & Vasiliki Pavlidou,
    Mon. Not. R. Astron. Soc. **400**, 2122 (2009) [arXiv:0908.3890 [astro-ph.HE]]

25. *"Gamma-ray background anisotropy from Galactic dark matter substructure"*
    Shin'ichiro Ando,

Phys. Rev. D **80**, 023520 (2009) [arXiv:0903.4685 [astro-ph.CO]]

26. *"Klein-Nishina Effects on Synchrotron and Synchrotron Self-Compton Spectrum"*
    Ehud Nakar, Shin'ichiro Ando & Re'em Sari,
    Astrophys. J. **703**, 675 (2009) [arXiv:0903.2557 [astro-ph.HE]]

27. *"The gamma-ray-flux probability distribution function from galactic halo substructure"*
    Samuel K. Lee, Shin'ichiro Ando & Marc Kamionkowski,
    J. Cosmol. Astropart. Phys. **0907**, 007 (2009) [arXiv:0810.1284 [astro-ph]]

28. *"Angular correlations in the cosmic gamma-ray background from dark matter annihilation around intermediate-mass black holes"*
    Marco Taoso, Shin'ichiro Ando, Gianfranco Bertone & Stefano Profumo,
    Phys. Rev. D **79**, 043521 (2009) [arXiv:0811.4493 [astro-ph]]

29. *"Can proper motions of dark-matter subhalos be detected?"*
    Shin'ichiro Ando, Marc Kamionkowski, Samuel K. Lee & Savvas M. Koushiappas,
    Phys. Rev. D **78**, 101301(R) (2008) [arXiv:0809.0886 [astro-ph]]

30. *"Nonthermal neutrinos from supernovae leaving a magnetar"*
    Shunsaku Horiuchi, Yudai Suwa, Hajime Takami, Shin'ichiro Ando & Katsuhiko Sato,
    Mon. Not. R. Astron. Soc. **391**, 1893 (2008) [arXiv:0807.0267 [astro-ph]]

31. *"Broadband Radiation from Primary Electrons in Very Energetic Supernovae"*
    Shin'ichiro Ando & Peter Mészáros,
    Astrophys. J. **689**, 351 (2008) [arXiv:0808.1722 [astro-ph]]

32. *"GeV Emission from Prompt and Afterglow Phases of Gamma-Ray Bursts"*
    Shin'ichiro Ando, Ehud Nakar & Re'em Sari,
    Astrophys. J. **689**, 1150 (2008) [arXiv:0807.0012 [astro-ph]]

33. *"Probing new physics with long-lived charged particles produced by atmospheric and astrophysical neutrinos"*
    Shin'ichiro Ando, John F. Beacom, Stefano Profumo & David Rainwater,
    J. Cosmol. Astropart. Phys. **0804**, 029 (2008) [arXiv:0711.2908 [hep-ph]]

34. *"High-energy neutrinos from reverse shocks in choked and successful relativistic jets"*

Shunsaku Horiuchi & Shin'ichiro Ando,
Phys. Rev. D **77**, 063007 (2008) [arXiv:0711.2580 [astro-ph]]

35. *"Nonlinear Evolution of Anisotropic Cosmological Power"*
Shin'ichiro Ando & Marc Kamionkowski
Phys. Rev. Lett. **100**, 071301 (2008) [arXiv:0711.0779 [astro-ph]]

36. *"Gamma-ray probe of cosmic-ray pressure in galaxy clusters and cosmological implications"*
Shin'ichiro Ando & Daisuke Nagai,
Mon. Not. R. Astron. Soc. **385**, 2243 (2008) [arXiv:0705.2588 [astro-ph]]

37. *"Neutrino constraints on the dark matter total annihilation cross section"*
Hasan Yüksel, Shunsaku Horiuchi, John F. Beacom & Shin'ichiro Ando
Phys. Rev. D **76**, 123506 (2007) [arXiv:0707.0196 [astro-ph]]

38. *"Dark matter annihilation or unresolved astrophysical sources? Anisotropy probe of the origin of the cosmic gamma-ray background"*
Shin'ichiro Ando, Eiichiro Komatsu, Takuro Narumoto & Tomonori Totani
Phys. Rev. D **75**, 063519 (2007) [astro-ph/0612467]

39. *"Angular power spectrum of gamma-ray sources for GLAST: blazars and clusters of galaxies"*
Shin'ichiro Ando, Eiichiro Komatsu, Takuro Narumoto & Tomonori Totani
Mon. Not. R. Astron. Soc. **376**, 1635 (2007) [astro-ph/0610155]

40. *"Dark matter annihilation from intermediate-mass black holes: Contribution to the extragalactic gamma-ray background"*
Shunsaku Horiuchi & Shin'ichiro Ando
Phys. Rev. D **74**, 103504 (2006) [astro-ph/0607042]

41. *" Direct measurement of supernova neutrino emission parameters with a gadolinium-enhanced Super-Kamiokande detector"*
Hasan Yüksel, Shin'ichiro Ando & John F. Beacom
Phys. Rev. C **74**, 015803 (2006) [astro-ph/0509297]

42. *"Anisotropy of the cosmic gamma-ray background from dark matter annihilation"*
Shin'ichiro Ando & Eiichiro Komatsu
Phys. Rev. D **73**, 023521 (2006) [astro-ph/0512217]

43. *"Detection of Neutrinos from Supernovae in Nearby Galaxies"*

Shin'ichiro Ando, John F. Beacom & Hasan Yüksel
Phys. Rev. Lett. **95**, 171101 (2005) [astro-ph/0503321]

44. *"Revealing the Supernova–Gamma-Ray Burst Connection with TeV Neutrinos"*
Shin'ichiro Ando & John F. Beacom
Phys. Rev. Lett. **95**, 061103 (2005) [astro-ph/0502521]

45. *"Can Dark Matter Annihilation Dominate the Extragalactic Gamma-Ray Background?"*
Shin'ichiro Ando
Phys. Rev. Lett. **94**, 171303 (2005) [astro-ph/0503006]

46. *"Relic neutrino background from cosmological supernovae"*
Shin'ichiro Ando & Katsuhiko Sato
New J. Phys. **6**, 170 (2004) [astro-ph/0410061]

47. *"Does regenerated emission change the high-energy signal from gamma-ray burst afterglows?"*
Shin'ichiro Ando
Mon. Not. R. Astron. Soc. **354**, 414 (2004) [astro-ph/0407187]

48. *"Appearance of neutralization peak and decaying supernova neutrinos"*
Shin'ichiro Ando
Phys. Rev. D **70**, 033004 (2004) [hep-ph/0405200]

49. *"Short gamma-ray bursts as a possible probe of binary neutron star mergers"*
Shin'ichiro Ando
J. Cosmol. Astropart. Phys. **0406**, 007 (2004) [astro-ph/0405411]

50. *"Cosmic Star Formation History and the Future Observation of Supernova Relic Neutrinos"*
Shin'ichiro Ando
Astrophys. J. **607**, 20 (2004) [astro-ph/0401531]

51. *"A comprehensive study of neutrino spin-flavour conversion in supernovae and the neutrino mass hierarchy"*
Shin'ichiro Ando & Katsuhiko Sato
J. Cosmol. Astropart. Phys. **0310**, 001 (2003) [hep-ph/0309060]

52. *"Decaying neutrinos and implications from the supernova relic neutrino observation"*

Shin'ichiro Ando

Phys. Lett. B **570**, 11 (2003) [hep-ph/0307169]

53. *"Asymmetric neutrino emission due to neutrino-nucleon scatterings in supernova magnetic fields"*
Shin'ichiro Ando
Phys. Rev. D **68**, 063002 (2003) [astro-ph/0307006]

54. *"Resonant spin-flavor conversion of supernova neutrinos: Dependence on presupernova models and future prospects"*
Shin'ichiro Ando & Katsuhiko Sato
Phys. Rev. D **68**, 023003 (2003) [hep-ph/0305052]

55. *"Supernova relic neutrinos and observational implications for neutrino oscillation"*
Shin'ichiro Ando & Katsuhiko Sato
Phys. Lett. B **559**, 113 (2003) [astro-ph/0210502]

56. *"Three-generation study of neutrino spin-flavor conversion in supernovae and implication for the neutrino magnetic moment"*
Shin'ichiro Ando & Katsuhiko Sato
Phys. Rev. D **67**, 023004 (2003) [hep-ph/0211053]

57. *"Gamma-ray burst neutrino background and star formation history in the universe"*
Shigehiro Nagataki, Kazunori Kohri, Shin'ichiro Ando & Katsuhiko Sato
Astropart. Phys. **18**, 551 (2003) [astro-ph/0203481]

58. *"Detectability of the supernova relic neutrinos and neutrino oscillation"*
Shin'ichiro Ando, Katsuhiko Sato & Tomonori Totani
Astropart. Phys. **18**, 307 (2003) [astro-ph/0202450]

59. *"Determining the Supernova Direction by Its Neutrinos"*
Shin'ichiro Ando & Katsuhiko Sato
Prog. Theor. Phys. **107**, 957 (2002) [hep-ph/0110187]

ARTICLES SUBMITTED TO REFEREED JOURNALS

CONFERENCE PROCEEDINGS

1. *"Multimessenger Astronomy and Neutrinos"*
   S. Ando, Proceedings of the Neutrino Oscillation Workshop, ed. by P. Bernardini, G. Fogli and E. Lisi, Nuc. Phys. B (Proc. Suppl.) **237–238**, 224–229 (2013)

2. *"Probing dark gamma-ray bursts with neutrinos"*
   S. Horiuchi & S.. Ando, AIP Conference Proceedings, Vol. **1178**, 2009, pp. 97–103

3. *"Joint searches between gravitational-wave interferometers and high-energy neutrino telescopes: science reach and analysis strategies"*
   V. Van Elewyck, S. Ando et al., Int. J. Mod. Phys. D 18, 1655–1659 (2009)

4. *"Neutrino Burst from Supernovae and Neutrino Oscillation"*
   K. Sato, K. Takahashi & S.. Ando, J. Phys. Soc. Jap. **77**, pp. 9-15 (2008)

5. *"Neutrino Probes of Galactic and Extragalactic Supernovae"*
   S. Ando, Proceedings of the Tours Symposium on Nuclear Physics VI, ed. by M. Arnould, M. Lewitowicz, H. Emling, H. Akimune, M. Ohta, H. Utsunomiya, T. Wada and T. Yamagata, AIP Conference Proceedings, Vol. **891**, 2007, pp. 263–271

6. *"Cosmic gamma-ray background from dark matter annihilation"*
   S. Ando, Proceedings of TeV Particle Astrophysics II Workshop, ed. by F. Halzen, A. Karle and T. Montaruli, Journal of Physics: Conference Series, Vol. **60**, 2007, pp. 247–250

7. *"Cosmic Gamma-Ray Background Anisotropy from Dark Matter Annihilation"*
   S. Ando and E. Komatsu, Proceedings of the International Workshop on "Energy Budget in the High Energy Universe", ed. by K. Sato and J. Hisano, World Scientific, 2006, pp. 331–334

8. *"Neutrino Probes of Extragalactic Supernovae"*
   S. Ando, Proceedings of the Yamada Conference LIX "Inflating Horizons of Particle Astrophysics and Cosmology", ed. by H. Suzuki, J. Yokoyama, Y. Suto and K. Sato, Universal Academy Press, 2005, pp. 281–282

9. *"Supernova Neutrino Oscillation with/without Neutrino Magnetic Moment"*

S. Ando & K. Sato, Proceedings of the Fifth International Workshop on Neutrino Oscillation and their Origin (NOON 2004), ed. by Y. Suzuki, M. Nakahata, S. Moriyama and Y. Koshio, World Scientific, 2004, pp. 307–317

10. *"A neutrino burst and gravitational wave from supernova explosions"*
    K. Sato, S. Ando, K. Kotake & K. Takahashi, Proceedings of 6th APCTP International Conference on Gravitati Conference, J. Korean Phys. Soc. **45**, S162–S171 (2004)

11. *"Supernova Relic Neutrinos and Neutrino Oscillation"*
    S. Ando & K. Sato, Proceedings of the Fourth International Workshop on Neutrino Oscillation and their Origin (NOON 2003), ed. by Y. Suzuki, M. Nakahata, Y. Itow, M. Shiozawa and Y. Obayashi, World Scientific, 2004, pp. 57–64

12. *"Supernova Relic Neutrinos and Observational Implications for Neutrino Oscillation"*
    S. Ando & K. Sato, Proceedings of the Fourth International Conference on Particle Physics Beyond the Standard Model (BEYOND 2003), ed. by H.-V. Klapdor-Kleingrothaus, Springer, 2004, pp. 717–728

13. *"Supernova Relic Neutrinos and Implications for the Neutrino Properties"*
    S. Ando & K. Sato, Proceedings of the 6th RESCEU International Symposium on Frontiers in Astroparticle Physics and Cosmology, ed. by K. Sato and S. Nagataki, Universal Academy Press, 2004, pp. 355–356

14. *"Supernova Neutrino Oscillations and the Neutrino Magnetic Moment"*
    S. Ando & K. Sato, Proceedings of the 6th RESCEU International Symposium on Frontiers in Astroparticle Physics and Cosmology, ed. by K. Sato and S. Nagataki, Universal Academy Press, 2004, pp. 95–98

15. *"Supernova Neutrinos and Neutrino Oscillation"*
    K. Sato, K. Takahashi, S. Ando & K. Kotake, Proceedings of the 6th RESCEU International Symposium on Frontiers in Astroparticle Physics and Cosmology, ed. by K. Sato and S. Nagataki, Universal Academy Press, 2004, pp. 41–59

16. *"Supernova Neutrino Oscillations and the Neutrino Magnetic Moment"*
    S. Ando and K. Sato, Proceedings of International Workshop on Astroparticle and High Energy Physics (AHEP-2003), ed. by M. Hirsch, M. Maltoni, S. Pastor and J.W.F. Valle, published as a contribution to JHEP Proceedings: PRHEP-AHEP2003 (001)

17. *"Supernova Neutrinos and Neutrino Oscillation Parameters"*

    K. Sato, K. Takahashi, S. Ando and K. Kotake, Proceedings of the 1st Yamada Symposium on "Neutrinos and Dark Matter in Nuclear Physics" (YS1-ND-M03), ed. by H. Ejiri and I. Ogawa

18. *"The Neutrino Burst from Supernovae and Implication for Neutrino Oscillation Parameters"*

    K. Sato, K. Takahashi & S. Ando, Proceedings of Tokyo-Adelaide Joint Workshop on "Quarks, Astrophysics and Space Physics," ed. by T. Hatsuda, M. Mori and K. Sato, Prog. Theor. Phys. Suppl. **151**, 31 (2003)

19. *"Resonant Spin-Flavor Conversion of Supernova Neutrinos"*

    S. Ando & K. Sato, Proceedings of the 28th International Cosmic Ray Conference (ICRC '03), eds. T. Kajita, Y. Asaoka, A. Kawachi, Y. Matsubara and M. Sasaki, Universal Academy Press, 2003, pp. 1451–1454

20. *"Detectability of the Supernova Relic Neutrinos"*

    S. Ando, K. Sato & T. Totani, Proceedings of the 16th International Conference on Particles and Nuclei (PANIC '02), eds. H. Toki, K. Imai and T. Kishimoto, Nucl. Phys. A **721**, 541c (2003)

21. *"Gamma-Ray Burst Neutrino Background and Star Formation History in the Universe"*

    S. Nagataki, K. Kohri, S. Ando & K. Sato, Proceedings of the 7th International Symposium on Nuclei in the Cosmos (NIC7), eds. S. Kubono, T. Teranishi, T. Kajino, K. Nomoto and I. Tanihata, Nucl. Phys. A **718**, 437c (2003)

22. *"The Neutrino Burst from Supernovae and Neutrino Oscillation"*

    K. Sato, K. Takahashi & S. Ando, Proceedings of ESO Astrophysics Symposia, From Twilight to Highlight: The physics of Supernovae, eds. W. Hillebrandt and B. Leibundgut, Springer, 2003, pp. 81–86

23. *"Supernova Neutrinos and Their Implications for Neutrino Parameters"*

    K. Sato, K. Takahashi & S. Ando, Proceedings of International Symposium on Cosmology and Particle Astrophysics (CosPA), 2002, pp. 229–242

24. *"Neutrino Burst from Supernovae and Neutrino Oscillation"*

    K. Sato, K. Takahashi & S. Ando, Proceedings of the 10th Yukawa International Seminar "Physics of Unstable Nuclei," Ed. by K. Hagino, H. Horiuchi, M. Matsuo and I. Tanihata, Prog. Theor. Phys. Suppl. **146**, 212 (2002)

25. *"Detectability of the Supernova Relic Neutrinos"*

S. Ando, K. Sato & T. Totani, Proceedings of the First Sendai International Conference on Neutrino Science, ed. by M. Motoki, K. Tamae and A. Suzuki, held on 14–16 March 2002, Matsushima, Miyagi, Japan

26. *"Determining the Supernova Direction by its Neutrinos"*

S. Ando & K. Sato, Proceedings of the 5th RESCEU International Symposium on "New Trends in Theoretical and Observational Cosmology," eds. K. Sato and T. Shiromizu, Universal Academy Press, 2002, pp. 261–262

INVITED CONFERENCE TALKS

1. *"Dark matter indirect searches: multi-wavelength and anisotropies"*
   Plenary talk at XIV International Conference on Topics in Astroparticle and Underground Physics (TAUP 2015, Turin, Italy, Sep 2015)

2. *"Indirect dark matter searches in the extragalactic gamma-ray sky"*
   Amsterdam-Paris-Stockholm meeting on Astroparticle Physics, (Institut d'Astrophysique de Paris, France, Dec 2013)

3. *"CTA prospects for indirect dark matter searches"*
   X-raying the Gamma-Ray Universe: CTA-X-ray LINK Meeting (Hakone-Yumoto, Japan, Nov 2013)

4. *"Seeing dark matter disappearing: astrophysical dark matter searches"*
   10th Biennial Symposium of the Dutch Research School of Theoretical Physics: Trends in Theory 2013, (Dalfsen, The Netherlands, May 2013)

5. *"Seeing dark matter disappearing: astrophysical dark matter searches"*
   Dark Matter Focus Session, Physcs@FOM, (Veldhoven, The Netherlands, Jan 2013)

6. *"Multimessenger astronomy and neutrinos"*
   Plenary talk at Neutrino Oscillation Workshop (NOW 2012), (Lecce, Italy, Sep 2012)

7. *"Constraints on dark matter annihilation from observations of galaxy clusters"*
   Symposium on Particle Astrophysics and Cosmology Including Fundamental InteraCtions (PACIFIC 2012), (Moorea, French Polynesia, September 2012)

8. *"Constraints on dark matter annihilation cross section with the Fornax cluster"*
   Workshop on Dark Matter Signatures in the Gamma Ray Sky (Texas Cosmology Center, USA, May 2012)

9. *"Search for gamma-ray halos around Fermi AGNs"*
   Snowbird Workshop on Particle Astrophysics, Astronomy & Cosmology (SNOWPAC), (Snowbird UT, February 2011)

10. *"Neutrino Probes of Dark Energy and Dark Matter"*
    Snowbird Workshop on Particle Astrophysics, Astronomy & Cosmology (SNOWPAC), (Snowbird UT, March 2010)

11. *"Astrophysical neutrinos from nearby galaxies"*

UCLA/UCSD Workshop on Supernova Physics and DUSEL, (UCLA, September 2009)

12. *"Joint emitters of gravitational waves and high-energy neutrinos"*
    Workshop on Gravitational Waves and High-Energy Neutrinos, (APC, Paris, May 2009)

13. *"Cosmic Supernova Neutrino Background"*
    Workshop on "The impact of high-energy-astrophysics experiments on cosmological physics", (KICP, University of Chicago, October 2008)

14. *"Supernova Burst and Relic Neutrino"*
    ICRR/CRC Future Plan Symposium (ICRR, University of Tokyo, August 2007)

15. *"Core-collapse supernova rate estimates in the Milky Way and nearby galaxies"*
    International Conference "Twenty Years after SN 1987A" (Hilton Waikoloa, Kona, Hawaii, February 2007)

16. *"Neutrino Probes of Galactic and Cosmological Supernovae"*
    21st Century COE International Symposium on Neutrino Processes and Stellar Evolution (University of Tokyo, February 2007)

17. *"Neutrino Probes of Galactic and Extragalactic Supernovae"*
    Tours Symposium on Nuclear Physics VI (Hotel de l'Univers, Tours, France, September 2006)

18. *"Relic supernova neutrino background: Current status and prospects of future detectors"*
    Next Generation of Nucleon and Neutrino Detectors (Centre Paul Langevin, Aussois, Savoie, France, April 2005)

19. *"Relic supernova neutrino background: Current status and prospects of future detectors"*
    3rd BNL/UCLA Workshop on Multipurpose Detectors for Proton Decay and VLBL Neutrino Physics (UCLA, February 2005)

20. *"Supernova Relic Neutrinos and Observational Implications for Neutrino Oscillation"*
    Fourth International Conference on Physics Beyond the Standard Model (BEYOND THE DESERT '03) (Castle Ringberg, Tegernsee, Germany, June 2003)

21. *"Detectability of the Supernova Relic Neutrinos"*

First Sendai International Conference on Neutrino Science (Hotel Taikanso, Matsushima, March 2002)

OTHER INTERNATIONAL CONFERENCE TALKS

1. *"Evidence of gamma-ray halos around Fermi AGN"*
   10th Theoretical Astrophysics in Southern California Meeting (Caltech, October 2010)

2. *"Search for gamma-ray halos around Fermi AGN"*
   TeV Particle Astrophysics 2010 (IAP, Paris, July 2010)

3. *"Gamma-ray background anisotropy from Galactic dark matter substructure"*
   TeV Particle Astrophysics 2009 (SLAC, July 2009)

4. *"Can proper motions of dark-matter subhalos be detected?"*
   8th Theoretical Astrophysics in Southern California Meeting (UC Irvine, October 2008)

5. *"Gamma-ray probe of cosmic-ray pressure in galaxy clusters"*
   GLAST Workshop (UCLA, May 2007)

6. *"Anisotropy of gamma-ray point sources for GLAST"*
   6th Theoretical Astrophysics in Southern California Meeting (KITP, UCSB, October 2006)

7. *"Cosmic gamma-ray background from dark matter annihilation"*
   TeV Particle Astrophysics II (University of Wisconsin, August 2006)

8. *"TeV neutrinos from jets in core-collapse supernovae"*
   TeV Particle Astrophysics (Fermi National Accelerator Laboratory, July 2005)

9. *"Cosmic star formation history and supernova relic neutrinos"*
   The DESY Theory Workshop on Particle Cosmology (DESY, Hamburg, September 2004)

10. *"Supernova Neutrino Oscillation with/without Neutrino Magnetic Moment"*
    The 5th Workshop on "Neutrino Oscillations and their Origin" (NOON2004) (TIME24 Building, Tokyo, February 2004)

11. *"Supernova Neutrino Oscillations and the Neutrino Magnetic Moment"*
    The 6th RESCEU International Symposium: Frontiers in Astroparticle Physics and Cosmology (Univ. Tokyo, November 2003)

12. *"Supernova Neutrino Oscillations and the Neutrino Magnetic Moment"*
    International Workshop on Astroparticle and High Energy Physics (AHEP-2003) (Univ. Valencia, October 2003)

13. *"Resonant Spin-Flavor Conversion of Supernova Neutrinos"*

    28th International Cosmic Ray Conference (ICRC 2003) (EPOCHAL TSUKUBA, Tsukuba, August 2003)

14. *"Supernova Relic Neutrinos and Neutrino Oscillation"*

    The 4th Workshop on "Neutrino Oscillations and their Origin" (NOON2003) (Kanazawa, February 2003)

15. *"Detectability of the Supernova Relic Neutrinos"*

    XVI Particles and Nuclei International Conference (PANIC02) (Osaka, October 2002)

SEMINARS AND COLLOQUIA

1. *"Dark matter searches in the anisotropic gamma-ray sky"*
   Theoretical Particle Physics Seminar, Kanazawa University (Oct 2015)

2. *"Dark matter searches in the anisotropic gamma-ray sky: Astroparticle physics meets observational cosmology"*
   Astrophysics Seminar, Kavli-IPMU, University of Tokyo (May 2015)

3. *"Dark matter searches in the anisotropic gamma-ray sky"*
   Theoretical Particle Physics Seminar, University of Tokyo (May 2015)

4. *"Cosmic gamma-ray and neutrino backgrounds: Astrophysical and dark matter implications"*
   iTHES Seminar, RIKEN (May 2015)

5. *"Dark matter searches in the anisotropic gamma-ray sky: Astroparticle physics meets observational cosmology"*
   Theoretical Astrophysics Seminar, University of Tokyo (May 2015)

6. *"Cosmic gamma-ray and neutrino backgrounds: Supernovae, galaxies, and clusters of galaxies"*
   Astronomy Colloquium, University of Tokyo (May 2015)

7. *"Cosmic gamma-ray and neutrino backgrounds: Astrophysical and dark matter implications"*
   Astrophysics Seminar, University of Crete (Dec 2014)

8. *"Signatures of dark matter in the extragalactic gamma-ray sky"*
   GReCO Seminar, Institut d'Astrophysique de Paris (Nov 2013)

9. *"Gamma-ray probes of dark matter annihilation"*
   Astroparticle Physics Seminar, DESY/University of Hamburg (April 2013)

10. *"Gamma-ray probes of dark matter annihilation"*
    Astrophysics Seminar, University of Würzburg (June 2012)

11. *"Gamma-ray probes of dark matter annihilation"*
    High-Energy Physics Seminar, Tohoku University (October 2011)

12. *"Gamma-ray probes of dark matter annihilation"*
    IPMU Seminar, Institute of the Physics and Mathematics of the Universe, University of Tokyo, Kashiwa (October 2011)

13. *"Gamma-ray probes of dark matter annihilation"*
    Cosmology Seminar, Nagoya University (October 2011)

14. *"Gamma-ray probes of dark matter annihilation"*
    Astrophysics Seminar, Yukawa Institute for Theoretical Physics, Kyoto University (October 2011)

15. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    GRAPPA Seminar, University of Amsterdam (March 2011)

16. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    Nuclear Physics Seminar, Indiana University (March 2011)

17. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    Theory Seminar, Columbia University (January 2011)

18. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    Cosmology Seminar, Yale University (January 2011)

19. *"Toward the measurement of IGMF: Evidence of gamma-ray halos around Fermi AGN"*
    ITC Seminar, Harvard University (January 2011)

20. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    Physics Colloquium, University of Wisconsin, Milwaukee (December 2010)

21. *"Gamma-ray probes of new physics: Particle dark matter and intergalactic magnetic fields"*
    Particle Astrophysics Seminar, Fermi National Accelerator Laboratory (December 2010)

22. *"Toward the measurement of IGMF: Evidence of gamma-ray halos around Fermi AGN"*
    Gravity Group Seminar, Princeton University (scheduled November 2010)

23. *"Toward the measurement of IGMF: Evidence of gamma-ray halos around Fermi AGN"*

High Energy and Astro-Particle Seminar, University of California, Los Angeles (scheduled October 2010)

24. *"Probing Particle Dark Matter with Gamma-Ray Background Anisotropy"*
Particle Physics and Astrophysics Seminar, Arizona State University (March, 2010)

25. *"Probing Particle Dark Matter with Gamma-Ray Background Anisotropy"*
Theoretical Astrophysics Seminar, CITA, University of Toronto (December, 2009)

26. *"Probing Particle Dark Matter with Gamma-Ray and Neutrino Telescopes"*
Physics Seminar, Washington University in St. Louis (November, 2008)

27. *"Probing Particle Dark Matter with Gamma-Ray and Neutrino Telescopes"*
KIPAC Cosmology Seminar, Kavli Institute for Particle Astrophysics and Cosmology, SLAC/Stanford University (November, 2008)

28. *"Probing Particle Dark Matter with Gamma-Ray and Neutrino Telescopes"*
Theoretical Nuclear Physics Seminar, Institut de Physique Nucléaire (October, 2008)

29. *"Astrophysical Probe of New Physics: Cosmological Dark Matter and Anisotropy"*
Theoretical Astrophysics and Relativity Seminar, California Institute of Technology (May, 2008)

30. *"Astrophysical Probe of New Physics: Cosmological Dark Matter and Anisotropy"*
IPMU Seminar, Institute of the Physics and Mathematics of the Universe, University of Tokyo, Kashiwa (April, 2008)

31. *"Astrophysical Probe of New Physics: Cosmological Dark Matter and Anisotropy"*
Astrophysics Seminar, University of California, Santa Cruz (February, 2008)

32. *"Astrophysical Probe of New Physics: Cosmological Dark Matter and Anisotropy"*
Astrophysics Seminar, Pennsylvania State University (January, 2008)

33. *"Astrophysical Probe of New Physics: Cosmological Dark Matter and Anisotropy"*
Astrophysics Seminar, University of California, Irvine (January, 2008)

34. *"GeV gamma-ray astrophysics: Probe of high-energy astrophysical objects and dark matter"*
    NPAC Forum, University of Wisconsin-Madison (October 2007)

35. *"Cosmology and High-Energy Astrophysics with GeV Gamma-Rays"*
    Theoretical Astrophysics group, University of Tokyo (June 2007)

36. *"Anisotropy in the GeV gamma-ray sky"*
    GLAST Science for Lunch, Stanford Linear Accelerator Center (April 2007)

37. *"Astroparticle Physics with Supernova Neutrinos"*
    Yukawa Institute for Theoretical Physics, Kyoto University (October 2005)

38. *"Neutrino Probes of Extragalactic Supernovae"*
    Astroparticle Physics group, Max-Planck-Institut für Physik (April 2005)

39. *"Neutrino Probes of Extragalactic Supernovae"*
    Theoretical Astrophysics group, Fermi National Accelerator Laboratory (March 2005)

40. *"Neutrino Probes of Extragalactic Supernovae"*
    Astrophysics group, University of California, Irvine (March 2005)

41. *" Revealing the Supernova–Gamma-Ray Burst Connection with TeV Neutrinos"*
    Theoretical Astrophysics group, Ohio State University (February 2005)

42. *"Relic Neutrino Background from Cosmological Supernovae"*
    Astrophysics and Cosmology group, Waseda University (October 2004)

43. *"Resonant Spin-Flavor Conversion of Supernova Neutrinos"*
    Theoretical Particle Physics group, Tokyo Metropolitan University (May 2003)

44. *"Supernova Relic Neutrinos and Neutrino Oscillation"*
    Theoretical Astrophysics group, Tokyo Institute of Technology (April 2003)

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