

## CURRICULUM VITAE

of

Toshitaka KAJINO



Contact Address: National Astronomical Observatory of Japan  
2-21-1 Osawa, Mitaka, Tokyo 181-8588, Japan

Phone/Fax: +81 422 34 3740 / +81 422 34 3746

E-mail: kajino\_at\_ao.ac.jp

Contact Address in China: Beihang University  
(Beijing University of Aeronautics and Astronautics)  
New Main Bldg H1113, Beijing 100083, P.R. China

Phone: +86 15201573880

E-mail: kajino\_at\_buaa.edu.cn

Home Page: <http://th.nao.ac.jp/MEMBER/kajino/e/>

### Education Background :

1975 Apr - 1979 Mar B.S., Department of Physics, Faculty of Science, The University of Tokyo  
1979 Apr - 1981 Mar M.S., Graduate School of Science, The University of Tokyo  
1981 Apr - 1984 Mar PhD, Graduate School of Science, The University of Tokyo  
1984 Mar Doctor of Science in Theoretical Nuclear Physics, The University of Tokyo  
(Supervised by Prof. Akito Arima)

### Professional Record :

1984 Apr - 1993 Aug Assistant Professor, Tokyo Metropolitan University  
1993 Sep - present Professor, National Astronomical Observatory of Japan  
1994 Apr - present Professor, Graduate School of Science, The University of Tokyo  
1995 Apr - present Adjunct Professor, The Graduate University for Advanced Studies  
2017 Mar - present Distinguished University Professor,  
Director, International Research Center for Big-Bang Cosmology and  
Element Genesis, Beihang University

### International Awards and Honors :

2004 APS Fellow, American Physical Society (USA)  
2017 One Thousand Talents Plan, Foreign Expert (P.R. China)  
2018 Honorary State Special Recruited Expert (P.R. China)

1986 Jun - 1987 Aug Visiting Research Associate, National Superconducting Cyclotron  
Laboratory, Michigan State University  
1987 Sep - 1992 Aug Consultant, Physics Division, Lawrence Livermore National Laboratory,  
University of California  
1989 May - Jun Visiting Professor, Harvard Smithsonian Center for Astrophysics,  
1989 Jul, 1992 Feb-Apr Visiting Professor, Research School of Physical Sciences,  
Institute for Advanced Studies, Australian National University

1992 Jan Visiting Professor, Research Center for Theoretical Astrophysics,  
University of Sydney

1995 May - Jun Visiting Professor, Laboratory for Nuclear and High-Energy Physics,  
M & P. Curie University of Paris

1996 Oct, 1998 Aug Visiting Professor, Department of Physics, Ohio State University

1996 Jun - Aug, 2001 Jul - Sep Visiting Professor, Department of Physics and Center for  
Astrophysics, University of Notre Dame

2013 Dec Paper selected as Highlight of Journal of Physics G in 2013:  
T. Suzuki, and T. Kajino, J. Phys. **G40** (2013), 083101, “Element  
Synthesis in Supernova Environment and Neutrino Oscillations”

**Domestic Awards, Honors, Visiting Professorship and Lectureship :**

2004 The Mitsubishi Award on “Nucleo-cosmochronometry and the Age of Galaxies”

1991 Osaka City University, Rikkyo University

1992 Tohoku University

1993 Nagoya University

1994 Tsukuba University, Hiroshima University

1995 Tokyo Institute of Technology, Tohoku University, Rikkyo University

1996 Konan University, Rikkyo University

1997 Kagoshima University, Rikkyo University

1998 Kagoshima University, Chiba University

1999 Konan University

2000 Rikkyo University

2001 Ryukyu University, Niigata University

2002 Kyushu University, Konan University, Rikkyo University, Tsukuba University

2003 Shizuoka University, Nagoya University of Commerce and Business

2004 Tohoku University, Nagoya University of Commerce and Business

2005 Nagoya University, Saitama University, Gakushuin University,  
Japan Women’s University, Nagoya University of Commerce and Business

2006 Gakushuin University, Japan Women’s University

2007 Tokyo Institute of Technology, Gakushuin University, Japan Women’s University

2008 Gakushuin University, Japan Women’s University

2009 Gakushuin University, Japan Women’s University

2010 Kyoto University, Tsukuba University, Kitasato University, Gakushuin University,  
Japan Women’s University

2011 Gakushuin University, Japan Women’s University, Jissen Woman’s University

2012 Meiji University, Gakushuin University, Japan Women’s University,  
Jissen Woman’s University,

2013 Meiji University, Gakushuin University, Japan Women’s University,  
Jissen Woman’s University

2014 Hokkaido University, Meiji University, Gakushuin University, Japan Women’s  
University, Jissen Woman’s University

2015 Meiji University, Gakushuin University, Japan Women’s University,  
Jissen Woman’s University

2016 Meiji University, Gakushuin University, Japan Women’s University,  
Jissen Woman’s University

2017 Meiji University, Gakushuin University, Japan Women’s University,  
Jissen Woman’s University

2018 Tohoku University GUPP

## **Selected Professional Activities :**

### **Society Members :**

1980-present Member, Japanese Physical Society  
1986-present Member, American Physical Society  
1988-present Member, Japanese Astronomical Society  
1995-present Member, International Astronomical Union

### **International Committee Members :**

2005-present International Referee, Canadian Science Foundation (NSERC)  
2006-2015 Editorial Board Member, Journal of Physics G  
2007-present Editorial Board Member, Open Nuclear and Particle Journal  
2009-2014 International Referee, European Science Foundation (EuroGENESIS)  
2009-present International Friends Committee, American Physical Society  
2010-present ECT\* Associate, European Center for Theoretical Studies in Nuclear Physics and related Areas (ECT\*)  
2012-present International Referee, Swiss National Science Foundation (SNSF)  
2017-present International Review Referee, Partnership for Advanced Computing in Europe (PRACE)

### **Domestic Committee Members :**

1994-present PhD Referee Committee, The University of Tokyo  
1995-1997 Future Project Committee (Chairman), Osaka University, RCNP  
1997-1999 SUBARU Committee, National Astronomical Observatory of Japan  
1997-2002 Project Committee, National Astronomical Observatory  
1998-2000 Science Promotion Committee, Space Science Developing Center  
1998-2001 Space Program Committee, Science and Technology Agency  
1998-2001 Referee Committee, Japan Society of Promotion of Science  
1999-2012 Research Committee, RIKEN  
2001-2006 Advisory Scientist, National Institute for Fusion Science  
2002-2006 Research Committee, National Astronomical Observatory of Japan  
2003-present Sigma Committee, Japan Atomic Energy Agency  
2003-2004 Advisory Scientist, Japan Atomic Energy Research Institute  
2004-2006 SUBARU Committee, National Astronomical Observatory of Japan  
2005-2006 Program Advisory Committee, Center for Nuclear Study, University of Tokyo  
2007-2008 Board Member, Science Council of Japan  
2008-present Theory Advisory Committee, National Astronomical Observatory of Japan  
2011-present Referee Committee, Japan Society for the Promotion of Science  
2012-2014 Promotion Committee, Advances in Radioactive Isotope Science, RIKEN  
2012-present Evaluation Board Committee, National Astronomical Observatory of Japan  
2016-present Evaluation Board Committee, Council of Yamada Science Foundation  
2017-present Board Member, Yamada Science Foundation

### **Chairmanship and IAC, SOC & LOC Members of International Conferences :**

1991, Jun. Int. WS on Unstable Nuclei in Astrophysics, Tokyo (Co-Chair)  
1991, Jul. Int. Symp. on Structure and Reactions of Unstable Nuclei, Tokyo (SOC)  
1992, Oct. Int. Symp. on Origin and Distribution of the Elements, Tokyo (Chair)  
1994, Mar. Int. Symp. on Frontiers of Nuclear Physics, Tokyo (SOC)  
1995, Jul. Gordon Conference on QCD in Physics and Astrophysics, Upton in USA (IAC)  
1996, Jan. Int. Symp. on Origin of Matter & Evolution of Galaxies, Atami (Chair)

1996, May 14<sup>th</sup> Int. Conf. on Particles and Nuclei, USA (SOC)  
 1996, Jun. 4<sup>th</sup> Int. Conf. on Nuclei in the Cosmos, Notre Dame in USA (IAC)  
 1997, May Int. Conf. on Quark-Lepton Physics, Osaka (SOC)  
 1997, Nov. Int. Symp. on Origin of Matter & Evolution of Galaxies, Atami (Chair)  
 1998, Mar. Int. Symp. on Numerical Astrophysics, Tokyo (LOC)  
 2000, Jan. Int. Symp. on Origin of Matter & Evolution of Galaxies, Tokyo (Chair)  
 2000, Mar. Int. Symp. on Shell Model 2000, Wako (IAC)  
 2000, Oct. Int. Conf. on Nuclear Data for Science and Technology, Tsukuba (LOC)  
 2000, Dec. 2<sup>nd</sup> Int. WS on Neutrino Oscillations & their Origin, Tokyo (LOC)  
 2002, Jul. 7<sup>th</sup> Int. Conf. on Nuclei in the Cosmos, Fuji-Yoshida (Co-Chair)  
 2003, Aug. 5<sup>th</sup> Int. Tours Symp. on Nuclear Physics, France (LOC)  
 2003, Nov. Int. Symp. on Origin of Matter & Evolution of Galaxies, Tokyo (Chair)  
 2003, Nov. 8<sup>th</sup> Int. Conf. on Clustering Aspects in Nucl Struct and Dynamics, Nara (IAC)  
 2004, Feb. Int. WS on Neutrino Oscillations & their Origin, Tokyo (LOC)  
 2004, Jul. 8<sup>th</sup> Int. Conf. on Nuclei in the Cosmos, Vancouver in Canada (IAC)  
 2005, May Aspen meeting on Physics of the S-Process, Colorado in USA (SOC)  
 2005, Nov. Int. Conf. on Origin of Matter & Evolution of Galaxies, Tokyo (Chair)  
 2006, Jul. 8<sup>th</sup> Int. Conf. on Nuclei in the Cosmos, CERN in Switzerland (IAC)  
 2006, Sept. 6<sup>th</sup> Int. Tours Symp. on Nuclear Physics, France (LOC)  
 2007, Jun. Int. Nuclear Physics Conference (INPC2007), Tokyo (LOC)  
 2007, Sept. 9<sup>th</sup> Int. Conf. on Clustering Aspects in Nucl Struct and Dynamics, UK (IAC)  
 2007, Oct. Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2007, Nov. Int. Conf. on Cosmology and Particle Astrophysics, Taipei (IAC)  
 2007, Dec. Int. Symp. on Origin of Matter & Evolution of Galaxies, Sapporo (Chair)  
 2008, Feb. 10<sup>th</sup> Int. Conf. on Ultra-Relativistic Nucleus Collisions (QM2008), India (IAC)  
 2008, Nov. Italy-Japan Symp. on Nuclear Physics and Astrophysics, Tokai (LOC)  
 2009, Sept. Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2009, Nov. 5<sup>th</sup> Japan-China Joint Symp. on Nuclear Physics, Tsukuba (LOC)  
 2009, Nov. IAU Symp. on Light Elements in the Universe, Switzerland (IAC)  
 2009, Nov. 7<sup>th</sup> Int. Tours Symp. on Nuclear Physics, France (LOC)  
 2010, Mar. Int. Symp. on Origin of Matter & Evolution of Galaxies, Osaka (Chair)  
 2011, Jan. 7<sup>th</sup> CPS Int. School on Theory of Stellar Evolution and Application, Kobe (LOC)  
 2011, Sept. Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2011, Dec. Int. Symp. on Origin of Matter & Evolution of Galaxies, Wako (Chair)  
 2011, Nov. YKIS on Frontier Issues in Physics and Exotic Nuclei, Kyoto (IAC)  
 2012, Jul. 4<sup>th</sup> Int. Conf. on Neutrinos and Dark Matter, Nara (Co-Chair)  
 2012, Jun. 4<sup>th</sup> Carpathian Summer School on Exotic Nuclei & Astrophys., Romania (IAC)  
 2012, Sept. 10<sup>th</sup> Int. Conf. on Clustering Aspects in Nucl Struct and Dynamics, Hungary (IAC)  
 2012, Oct. 1<sup>st</sup> NAOJ Int. WS on Element Genesis and Cosmic Chemical Evolurion, Wako (Chair)  
 2013, Jul. 25<sup>th</sup> Int. Nuclear Physics Conf., Italy (IAC)  
 2013, Nov. YKIS on Supernovae and Gamma-Ray Bursts, Kyoto (SOC)  
 2013, Sept. Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2013, Nov. Int. Symp. on Origin of Matter & Evolution of Galaxies, Tsukuba (Co-Chair)  
 2014, Jun. Advances in Radioactive Isotope Sciences (ARIS14), Tokyo (LOC)  
 2014, Jul. 5<sup>th</sup> Carpathian Summer School on Exotic Nuclei & Astrophys., Romania (SOC)  
 2014, Sept. Int. Conf. on Nuclear Physics and Astrophysics, Turkey (IAC)  
 2014, Sept. ECT\* Workshop on Neutron-Star Mergers, SNe and R-Process, Italy (SOC)  
 2015, Jun. 12<sup>th</sup> Int. Conf. on Nucleus-Nucleus Collisions, Italy (IAC)  
 2015, Jun. Int. Symp. on Origin of Matter & Evolution of Galaxies, Beijin (IAC)  
 2015, Jun. 5<sup>th</sup> Int. Conf. on Neutrinos and Dark Matter, Jyvaskyla, Finland (IAC)

- 2015, Sept. Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2016, May 11<sup>th</sup> Int. Conf. on Clustering Aspects of Nucl. Str. & Dyn., Napoli, Italy (IAC)  
 2016, Jun. 14<sup>th</sup> Int. Conf. on Nuclei in the Cosmos, Niigata (Chair)  
 2016, Sept. Int. Nuclear Physics Conference (INPC2016), Adelaide Australia (IAC)  
 2017, Jun Int. Symp. on Origin of Matter & Evolution of Galaxies, Daejeon, Korea (IAC)  
 2017, Oct Euro. Phys. Soc. Summer School on Exp. Nuclear Astrophysics, Italy (IAC)  
 2017, Oct 1st Int. Conf. on Neutrinos and Nuclear Physics, Catania, Italy (IAC)  
 2018, Jun 6th Int. Conf. on Neutrinos and Dark Matter, Daejeon, Korea (IAC)

**National Grants received :**

- 1988-1989 “Cosmological QCD Phase Transition and Big-Bang Nucleosynthesis”, JSPS Grant-C, T. Kajino (P.I.)  
 1989-1990 “Origin of Elements in the Universe and Stars”, JSPS Grant for Japan-US Collaboration, K. Nomoto (P.I.), T. Kajino (Core Member)  
 1990 “Quark-Gluon Plasma in Relativistic Heavy-Ion Collisions and Early Universe”, Monbu-Kagakusho Grant for Young Scientists, T. Kajino (P.I.)  
 1991 “Stellar Nucleosynthesis and Nuclear Reactions”, Research Program of Tokyo Metropolitan University, T. Kajino (P.I.)  
 1993-1995 “Cosmic EW and QCD Phase Transitions and the Vacuum”, JSPS Grant-C, T. Kajino (P.I.)  
 1994-1995 “Explosive Nucleosynthesis and Unstable Nuclei”, Monbu-Kagakusho Grant for Japan-Belgium Collaboration, T. Motobayashi (P.I.), T. Kajino (Member)  
 1994-1996 “Science of Radioactive Nuclear Beam”, Monbu-Kagakusho Grant for Priority Area, T. Nomura (P.I.), “Nucleosynthesis in the Early Universe and Galaxy and Galactic Chemical Evolution”, T. Kajino (P.I.)  
 1995-1996 “Unstable Nuclei and Application to Astrophysics”, Monbu-Kagakusho Grant for Japan-Belgium-France Collaboration, N. Suzuki (P.I.), T. Kajino (Member)  
 1995-1997 “Origin of Matter in the Early Universe and the Galaxy”, JSPS Grant-A, T. Kajino (P.I.)  
 1997 “Ultra High Energy Astrophysics”, Monbu-Kagakusho Grant for Priority Area, T. Kifune (P.I.), “Cosmic-Ray Nuclear Components and Origin of the Light Elements”, T. Kajino (P.I.)  
 1998-1999 “Decipherment of Cosmic History with Spectroscopy”, Monbu-Kagakusho Grant for Japan-UK-Australia-US Collaboration, T. Kijino (P.I.)  
 1998-2000 “R-Process Elements in the First Generation, High-Redshift Stellar Objects and Cosmochronology”, JSPS Grant-C, T. Kajino (P.I.)  
 1999 “Physics of CP Violation”, Monbu-Kagakusho Grant for Priority Area, Ichiro Sanda (P.I.), “Cosmological Evidence for CP Violation”, T. Kajino (P.I.)  
 2000-2003 “Neutrino Oscillation”, Monbu-Kagakusho Grant for Priority Area, Y. Suzuki (P.I.), “Precise Determination of Stellar Neutrino-Nuclear and Particle Reaction Rates, and Application to Astrophysics”, T. Kajino (P.I.)  
 2001-2003 “Synthesis of Radioactive Heavy Nuclei in Explosive Phenomena and Cosmochronology”, JSPS-Grant-C, T. Kajino (P.I.)  
 2001-2005 “Monte Carlo Shell Model”, Monbu-Kagakusho Grant for Specially Promoted Research, T. Otsuka (P.I.), “Application to Nucleosynthesis”, T. Kajino (P.I.)  
 2005-2007 “Neutrino-Nucleus Interactions, Supernova Nucleosynthesis, and Neutrino Oscillation”, JSPS-Grant-C, T. Kajino (P.I.)  
 2008-2011 “Isotope Separation of Elements Produced in Supernov Nucleosynthesis and Neutrino Oscillation”, JSPS-Grant-A, T. Kajino (P.I.)

- “Research by Bridging Particle-, Nuclear- and Astro-physics in Computational Science”, Monbu-Kagakusho Grant, S. Aoki (P.I.), “Explosive Stellar Phenomena and Nucleosynthesis based on Quark Dynamics and Nuclear Structure”, H. Suzuki (P.I.), T. Kajino (Core Member)
- 2012-2014 “Element Genesis by the Use of Intensive Neutron Beams”, JSPS-Grant-B, T. Hayakawa (P.I.), T. Kajino (Member)
- 2014-2015 “Fusion and Evolution of Neutrino Physics Frontier”, Monbu-Kagakusho Grant, T. Nakaie (P.I.), “Supernova Explosion, Nucleosynthesis, and Neutrino Oscillation”, T. Kajino (P.I.)
- 2015-2017 “Linearly Polarized Gamma-Rays as a New Probe of Measuring Asymmetric Radiative Neutron Captures”, JSPS-Grant-B, T. Hayakawa (P.I.), T. Kajino (Member)
- 2017-2019 “Origin of r-Process Elements and the Meteoritic Isotopic Abundances”, JSPS-Grant-C, T. Kajino (P.I.)

**PhD and Master Students, supervised by T. Kajino :**

1. Yudai Yamazaki (Master course student of The University of Tokyo)  
Research title: Galactic and cosmic evolution.
2. Zhenyu He (Master course student of Beihang University)  
Research title: Particle Cosmology and Nuclear Astrophysics.
3. Xinqun Yao (Master course student of Beihang University)  
Research title: Supernova Explosion and Neutrino Processes.
4. Yudong Luo (PhD student of The University of Tokyo)  
Master Thesis title: Inhomogeneous Big-Bang cosmology and nucleosynthesis.  
Research title: Cosmic and Stellar Magnetohydrodynamics and nucleosynthesis.
5. Kanji Mori (PhD student of The University of Tokyo)  
Master Thesis title: Type Ia supernovae and explosive nucleosynthesis.  
Research title: Evolution of massive stars, supernova explosions, and element synthesis.
6. Hirokazu Sasaki (PhD student of The University of Tokyo)  
Master Thesis title: Neutrino collective oscillations in multi-angle and three flavors.  
Research title: MSW and self-interacting neutrino oscillations and r-process nucleosynthesis in core-collapse supernovae.
7. Yutaka Hirai (graduated in 2018 from The University of Tokyo, current position as an Research Associate at RIKEN)  
PhD Thesis title: Galactic chemo-dynamical evolution and origin of heavy elements.
8. Naoki Sunaga (graduated in 2018 Shizuoka University, current work at High School)  
Master Thesis title: High Energy Astrophysics and Nucleosynthesis.
9. Shota Shibagaki (graduated in 2017 from The University of Tokyo, current position as an Research Associate at Fukuoka University)  
Doctor Thesis title: Explosion mechanism of core-collapse supernovae, binary neutron star mergers, and nucleosynthesis.
10. Natsuko Izutani (graduated in 2015 from The University of Tokyo, current work at School)  
Master Thesis title: Supernova Nucleosynthesis with Neutrino Processes and Origin of Extremely Metal-Poor Stars.
11. Shian Izumida (graduated in 2013 from The University of Tokyo, current work at DeNA)  
Master Thesis title: Chemodynamical evolution of dwarf spheroidal: Construction of a numerical simulation code.
12. Jutaro Suzuki (graduated in 2012 from The Graduate University for Advanced Studies, current position as a Lecturer at Kokugakuin University)  
Doctor Thesis title: Cosmic History of Core-Collapse Supernovae and Supernova

Relic Neutrinos.

13. Kohsuke Shaku (graduated in 2012 from The University of Tokyo, current work at Tokyo Gas)  
\*Awarded Encouragement Honor of Dean of School of Science, The University of Tokyo,  
Master Thesis title: Polarization of Supernovae and Galactic Chemical Evolution.
14. Susumu Sato (graduated in 2011 from The University of Tokyo, current work at SMBC)  
Master Thesis title: R-Process Nucleosynthesis in Neutrino-Pair Heated Collapsar Model.
15. Seiji Harikae (graduated in 2010 from The University of Tokyo, current work at Mitsubishi UFJ)  
\*Awarded Encouragement Honor of Dean of School of Science, The University of Tokyo,  
Master Thesis title: Formation Mechanism of Long-GRB Central Engines.
16. Motohiko Kusakabe (graduated in 2009 from The University of Tokyo, current position  
as a 100 Talents Plan Professor at Beihang University in P.R. China)  
Doctor Thesis title: Evolution of Light Element Abundances in the Early Universe and  
Possible Signature of Relic Particles in Primordial Abundances.
17. Kazuhiko Kojima (graduated in 2009 from The University of Tokyo, current work at IBM)  
Master Thesis title: Cosmological perturbation theory with extra-anisotropic stress.
18. Takanori Nagakura (graduated in 2008 from The University of Tokyo, current work at INTEL)  
Doctor Thesis title: Star Formation Triggered by the First Generation of Stars.
19. Shio Kawagoe (graduated in 2008 from The Graduate University for Advanced Studies,  
current position as an Associate Professor of The University of Tokyo)  
Doctor Thesis title: Improved supernova model and neutrino oscillation.
20. Yuki Tanikawa (graduated in 2008 from The University of Tokyo, current work  
at Fraiss Construction)  
Master Thesis title: R-process in Gamma-Ray Bursts.
21. Dai Yamazaki (graduated in 2007 from The University of Tokyo, current position  
as an Associate Professor at Ibaraki University)  
Doctor Thesis title: CMB Anisotropies with Primordial Magnetic Fields.
22. Ken-ichi Umezu (graduated in 2007 from The Graduate University for Advanced Studies,  
current work at SC Engineering)  
Doctor Thesis title: Observational constraints on accelerating brane cosmology  
with exchange between the bulk and brane.
23. Takahiro Sasaqui (graduated in 2006 from The University of Tokyo, current work  
at Hitachi High Technology)  
Doctor Thesis title: Nucleosynthetic Signature of the First Stars.
24. Kiyotomo Ichiki (graduated in 2005 from The University of Tokyo, current position  
as an Associate Professor of Nagoya University)  
\*Awarded President Award, The University of Tokyo  
Doctor Thesis title: Observational Implications of Cosmological Theories with an  
Extra Dimension.
25. Takeru Suzuki (graduated in 2003 from The University of Tokyo, current position  
as a Professor of the University of Tokyo)  
Doctor Thesis title: Heating mechanism of corona in non-linear waves.
26. Mariko Terasawa (graduated in 2002 from The University of Tokyo, current work at High School)  
Doctor Thesis title: R-process nucleosynthesis in supernova explosion.
27. Satoshi Honda (graduated in 2002 from The Graduate University for Advanced Studies,  
current position as a Research Associate of Nishi-Harima Observatory, Hyogo)  
Doctor Thesis title: Spectroscopic studies of r-process elements in extremely metal-poor  
stars with Subaru/high-dispersion-spectrograph and cosmo-chronometry.
28. Satoshi Kawanomoto (graduated in 2002 from The University of Tokyo, current position  
as a Research Associate at NAOJ)  
Doctor Thesis title: An observational study of the Galactic chemical evolution

- with lithium isotopic ratio in the interstellar medium.
29. Keisuke Sakai (graduated in 2001 from The University of Tokyo, current work at High School)  
Master Thesis title: Astrophysical S-factors.
  30. Akira Tokuhisa (graduated in 2000 from The University of Tokyo, current work at Nikon)  
Doctor Thesis title: Electroweak and hadronic processes of High Energy Cosmic Rays.
  31. Kaori Otsuki (graduated in 2000 from Osaka University, current position  
as an Assistant Professor of Fukuoka University)  
Doctor Thesis title: R-process nucleosynthesis in neutrino-driven winds formed by  
Core-collapse supernovae.
  32. Taiko Arima (graduated in 1999 from Tohoku University, current work at Fujitsu)  
Doctor Thesis title: Nucleo-cosmochronometry and the age of the Universe.
  33. Manabu Orito (graduated in 1997 from The Graduate University for Advanced Studies,  
current work at Mitsubishi Data Mining)  
Doctor Thesis title: Inhomogeneous Big-Bang Nucleosynthesis Model.
  34. Yasushi Yamamoto (graduated in 1997 from The Graduate University for Advanced Studies,  
current work at Fujitsu)  
Doctor Thesis title: Cosmic Quark-Hadron Phase Transition in NJL Model.
  35. Toshiyasu Kawachi (graduated in 1997 from The University of Tokyo, current work as a  
Journalist at Mainichi Newspaper)  
Master Thesis title: Accretion of heavy r- and s-elements in metal poor stars.

**Visiting Professors at NAOJ and The University of Tokyo, hosted by T. Kajino:**

- 2018 Prof. Michael A. Famiano (Western Michigan University, USA)  
Project title: Supernova Neutrinos and the Origin of Chirality of Amino Acids.
- 2018 Prof. Motohiko Kusakabe (Beihang University, China)  
Project title: Big-Bang Cosmology and Supernova Neutrino Processes.
- 2017 Prof. Yamac Pehlivan (Mimar Sinan Fine Art University, Turkey)  
Project title: MSW and collective neutrino oscillations in supernovae.
- 2017 Prof. Cemsinan Deliduman (Mimar Sinan Fine Art University, Turkey)  
Project title: Particle Cosmology and Gravity.
- 2016 Roland L. Diehl (Max Planck Institute for Extraterrestrial Physics and Technical  
University of Munich)  
Project title: Cosmic radioactivity and high-energy astrophysics.
- 2015 Prof. Myung-Ki Cheoun (Soongsil University, Korea)  
Project title: Roles of Neutrinos in R-Process Nucleosynthesis in Supernovae and  
Binary Neutron-Star Mergers.
- 2014 Prof. George M. Fuller (University of California San Diego, USA)  
Project title: Supernova Explosion, Nucleosynthesis and Cosmic Neutrinos.
- 2013 Prof. Grant J. Mathews (University of Notre Dame, USA)  
Project title: Chemo-dynamical Evolution of the Early Universe and Galaxies and  
Supernova Explosions.
- 2012 Prof. Michael A. Famiano (Western Michigan University, USA)  
Project title: Core-Collapse Supernovae associated with Neutron Star and Black Hole  
formation and the Heavy Element Synthesis.
- 2011 Prof. A. Baha Balantekin (University of Wisconsin, USA)  
Project title: Astrophysics of Neutrino Oscillation in Big-Bang Cosmology and Supernovae.
- 2010 Prof. Bradley C. Meyer (Clemson University, USA)  
Project title: Supernova Nucleosynthesis of the Heavy, Short and Long-Lived  
Radioactive Isotopes and Galactic Chemical Evolution.
- 2009 Prof. Myung-Ki Cheoun (Soongsil University, Korea)

- Project title: Nucleosynthetic Signature for Cosmological Evolution of Strong-Coupling Constant and Neutrino-Nucleus Interactions.
- 2008 Prof. Yamac Pehlivan (Harik University, Turkey)  
Project title: MSW and collective neutrino oscillations in supernovae.
- 2007 Prof. Grant J. Mathews (University of Notre Dame, USA)  
Project title: Cosmological implication of nucleosynthesis.
- 2006 Prof. Richard N. Boyd (LLNL, University of California, USA)  
Project title: Symmetry breaking and origin of chirality of amino acids..
- 2005 Prof. Grant J. Mathews (University of Notre Dame, USA)  
Project title: Supernova nucleosynthesis.
- 2004 Prof. Norbert Christlieb (Hamburg University Observatory, German)  
Project title: Spectroscopic observations of extremely metal-deficient stars.
- 2002 Dr. Garik Israelian (Canary Island Observatory, Spain)  
Project title: Dwarf Spectroscopy and Elemental Abundances.
- 2000 Prof. Timothy C. Beers (Michigan State University, USA)  
Project title: Origin of Elements in Metal-deficient stars.
- 1999 Prof. Grant J. Mathews (University of Notre Dame, USA)  
Project title: Big-Bang cosmology and supernova explosion.
- 1998 Prof. David R. Tytler (University of California San Diego, USA)  
Project title: Primordial light elements.
- 1997 Prof. Nikos Prantzos (Institute of Astrophysics, France)  
Project title: Galactic chemical evolution.
- 1996 Dr. Paolo Mazzali (Trieste Observatory, Italy)  
Project title: Supernova explosion and nucleosynthesis.
- 1995 Dr. Sean G. Ryan (MSSSO, Australian National University, Australia)  
Project title: Primordial nucleosynthesis and origin of elements.
- 1994 Prof. Grant J. Mathews (LLNL, University of California, USA)  
Project title: Big-Bang cosmology and supernova explosions.

**Japanese Visiting Professors at NAOJ and The University of Tokyo, hosted by T. Kajino :**

- 2018 Dr. Takehito Hayakawa (National Institutes for Quantum and Radiological Science and Technology)  
Project title: Neutrino Processes and the Origin of Heavy Elements.
- 2017 Prof. Tatsushi Shima (Osaka University)  
Project title: Neutrinos and Dark Matter in Precise Nuclear Physics.
- 2015 Prof. Isao Tanihata (Osaka University / Beihang University)  
Project title: Explosive Nucleosynthesis and Origin of Atomic Nuclides.
- 2014 Prof. Kouichi Hagino (Tohoku University)  
Project title: Big-Bang Lithium Problem and Nuclear Astrophysics.
- 2013 Dr. Shunji Nishimura (RIKEN)  
Project title: Radioactive-Ion Beam Physics of the Neutron-rich Nuclei and Explosive Nucleosynthesis.
- 2012 Prof. Toshio Suzuki (Nihon University)  
Project title: Supernova Nucleosynthesis and Neutrino Oscillation.
- 2011 Dr. Takehito Hayakawa (Japan Atomic Energy Agency)  
Project title: Cosmochronology and Cosmic Radioactivity with Supernova Nucleosynthesis.
- 2010 Prof. Tomoyuki Maruyama (Nihon University)  
Project title: Supernova Explosion and Strongly Magnetized Proto-Neutron Stars.
- 2009 Prof. Satoshi Chiba (Tokyo Institute of Technology)  
Project title: R-process in the 1st Generations of Stars and Galactic Chemical Evolution.

- 2008 Dr. Takehito Hayakawa (Japan Atomic Energy Agency)  
Project title: Gamma-ray line astronomy and p- and neutrino-processes.
- 2007 Prof. Hideyuki Suzuki (Science University of Tokyo)  
Project title: Supernova explosion and neutrino oscillation.
- 2006 Prof. Kohsuke Sumiyoshi (Numazu National College of Technology)  
Project title: Supernova explosion and numerical evolution.
- 2005 Prof. Kohsuke Sumiyoshi (Numazu National College of Technology)  
Project title: Supernova explosion and numerical evolution.
- 2004 Prof. Masanobu Yahiro (Ryukyu University)  
Project title: Cosmic phase transition and extra dimensional Universe.
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Project title: Cosmic phase transition and extra dimensional Universe.
- 2003 Dr. Takehito Hayakawa (Japan Atomic Energy Agency)  
Project title: Supernova p-process nucleosynthesis.
- 2002 Prof. Masayuki Fujimoto (Hokkaido University)  
Project title: Origin of elements and Galactic chemical evolution.
- 1999 Prof. Masayuki Fujimoto (Hokkaido University)  
Project title: Nucleosynthesis in small-to-intermediate mass and AGB stars.