

MASAMUNE OGURI

Curriculum Vitae
(as of May 12, 2023)

CONTACT INFORMATION

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EDUCATION

University of Tokyo, Tokyo, Japan *Apr 2002 – Jul 2004*
Ph.D. in Physics, July, 2004
Dissertation: “Strong Gravitational Lenses in a Cold Dark Matter Universe”
Adviser: Yasushi Suto

University of Tokyo, Tokyo, Japan *Apr 2000 – Mar 2002*
M.S. in Physics, March, 2002
Dissertation: “Resolving the Central Density Profile of Dark Matter Halos with Gravitational Lensing Statistics”
Adviser: Yasushi Suto

University of Tokyo, Tokyo, Japan *Apr 1996 – Mar 2000*
B.A. in Physics, March, 2000

PROFESSIONAL EXPERIENCE

Feb 2022 – present	Professor	Center for Frontier Science, Chiba University
Apr 2022 – present	Professor	Department of Physics, Chiba University
May 2014 – Jan 2022	Assistant Professor (with tenure)	Research Center for the Early Universe, University of Tokyo
Oct 2013 – Jan 2022	Associate Scientist	Kavli Institute for the Physics and Mathematics of the Universe, University of Tokyo
Aug 2013 – Jan 2022	Assistant Professor (with tenure)	Department of Physics, University of Tokyo
Apr 2011 – Aug 2013	Assistant Professor	Kavli Institute for the Physics and Mathematics of the Universe, University of Tokyo
Jul 2009 – Apr 2011	Postdoctoral Fellow	National Astronomical Observatory of Japan
Jul 2006 – Jun 2009	Research Associate	Kavli Institute for Particle Astrophysics and Cosmology, Stanford University
Sep 2005 – Jun 2006	Postdoctoral Fellow	Department of Astrophysical Sciences, Princeton University
Sep 2004 – Aug 2005	Visiting Research Fellow	Department of Astrophysical Sciences, Princeton University
Apr 2004 – Aug 2005	JSPS Research Fellow	Department of Physics, University of Tokyo

RESEARCH INTERESTS

Cosmology, Astrophysics, Cosmological Structure Formation, Gravitational Lensing

PROFESSIONAL SOCIETIES

- Astronomical Society of Japan
- Physical Society of Japan
- Association of Japanese Theoretical Astronomy and Astrophysics
- Group of Optical and Infrared Astronomers
- International Astronomical Union

PRIZES AND AWARDS

- Mar 2019 Hayashi Chushiro Prize, Astronomical Society of Japan
- Mar 2009 Young Scientist Award, Physical Society of Japan
- Feb 2006 Inoue Research Award for Young Scientists
- Mar 2005 President's Prize of the University of Tokyo

PRIZES AND AWARDS (CO-RECIPIENT)

- Mar 2021 PASJ Excellent Paper Award, Astronomical Society of Japan (for Hikage, Oguri, et al. 2019)
- Mar 2023 PASJ Excellent Paper Award, Astronomical Society of Japan (for Matsuoka et al. 2018)

TEACHING EXPERIENCE

Chiba University

- Course on *Frontier Science Seminar IA, IB* (mechanics, mathematics) in FY2022–
- Course on *Astrophysics A* in FY2022–
- Course on *Astrophysics B* in FY2023–
- Course on *Introduction to Astrophysics* in FY2023–
- Course on *Special Lecture on Advanced Science and Engineering Ia* in FY2023–

University of Tokyo

- Course on *Exercise in Physics* (quantum mechanics, analytic mechanics) in FY2014–FY2017, FY2019–FY2021
- Course on *Senior Projects in Theoretical Physics* (astrophysics) in FY2014–FY2016, FY2018, FY2020
- Teaching assistant (general relativity, astrophysics) in FY2002, FY2003

Invited Lectures

- Lecture on weak lensing given in summer school at ITB, Bandung, West Java, Indonesia (Sep 2020)
- Intensive lecture on weak lensing cosmology given in winter school at KEK (Jan 2020)
- Intensive lecture on gravitational lensing given at Kyoto University (Mar 2017)
- Intensive lecture on gravitational lensing given in summer school at Beijing Normal University (Jul 2012)

External Examining

- Examined Master's theses at Univ. of Hong Kong (2018, 2021), PCU of Chile (2013)

GRADUATE STUDENTS SUPERVISED

- Hiroki Kawai (Univ. of Tokyo, M.S. in Physics in 2022, as a co-supervisor)
- Xiangchong Li (Univ. of Tokyo, Ph.D. in Physics in 2021, as a co-supervisor)
- Ryoma Murata (Univ. of Tokyo, Ph.D. in Physics in 2020)
- Taizo Okabe (Univ. of Tokyo, Ph.D. in Physics in 2020, as a co-supervisor)
- Akinari Hamabata (Univ. of Tokyo, M.S. in Physics in 2018)
- Ryota Kawamata (Univ. of Tokyo, Ph.D. in Astronomy in 2018, as a co-supervisor)
- Masafumi Ishigaki (Univ. of Tokyo, M.S. in Physics in 2015, as a co-supervisor)
- Shohei Omote (Univ. of Tokyo, M.S. in Physics in 2015)
- Cristian E. Rusu (Univ. of Tokyo, Ph.D. in Astronomy in 2014)
- Yuichi Higuchi (Univ. of Tokyo, Ph.D. in Astronomy in 2014)
- Yozo Kawano (Nagoya University, Ph.D. in Physics in 2006)

UNDERGRADUATE STUDENTS SUPERVISED

- Ayari Kitamura (Chiba Univ., B.Sc. in Physics in 2023)
- Takumi Shimasue (Chiba Univ., B.Sc. in Physics in 2023)
- Hirotaka Yarimoto (Chiba Univ., B.Sc. in Physics in 2023)
- Kai-Feng Chen (National Taiwan Univ., B.Sc. in Physics and Math in 2020)

POSTDOCTORAL RESEARCHERS MENTORED

- Kenneth C. Wong (Univ. of Tokyo, 2018–2021, now a project assistant professor at Univ. of Tokyo, Japan)
- Anupreeta More (Univ. of Tokyo, 2012–2018, now a research faculty at IUCAA, Pune, India)

EXTERNAL GRANTS

Ongoing

- PI, 16,510,000 JPY, Grant-in-Aid for Scientific Research (B), FY2022–FY2025
- PI, 6,240,000 JPY, Grant-in-Aid for Challenging Research (Exploratory), FY2022–FY2024
- Co-I (PI: S. Miyazaki), 688,610,000 JPY, Fund for the Promotion of Joint International Research (International Leading Research), FY2022–FY2028
- Co-I (PI: S. Miyazaki), 152,750,000 JPY, Grant-in-Aid for Transformative Research Areas (A), FY2020–FY2024
- Co-I (PI: N. Okabe), 16,510,000 JPY, Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), FY2019–FY2024

Finished

- Co-I (PI: S. Miyazaki), 44,200,000 JPY, Grant-in-Aid for Scientific Research (A), FY2020–FY2022
- PI, 4,420,000 JPY, Grant-in-Aid for Scientific Research (C), FY2018–FY2022
- PI, 2,600,000 JPY, Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), FY2020–FY2021
- PI, 2,340,000 JPY, Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), FY2018–FY2019
- Co-I (PI: S. Miyazaki), 127,790,000 JPY, Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), FY2015–FY2019
- PI, 3,640,000 JPY, Grant-in-Aid for Young Scientists (B), FY2014–FY2017
- PI, 4,290,000 JPY, Grant-in-Aid for Young Scientists (B), FY2011–FY2013
- Science PI (Budget PI: R. Blandford), 49,063 USD, Chandra grant, FY2010

SERVICE

2022–	Subaru Science Advisory Committee (2022– chair), National Astronomical Observatory of Japan
2022–	Harassment Prevention Committee, Chiba University
2022–	Cyber Security Incident Response Team, Chiba University
2022–	Privacy Officer, Chiba University
2022–	Budget Committee, Center for Frontier Science, Chiba University
2022–	Admission Committee, Center for Frontier Science, Chiba University
2022–	Academic Affairs Committee, Center for Frontier Science, Chiba University
2018–2022	Hiring Committee, National Astronomical Observatory of Japan
2013–2018	Library Committee, Department of Physics, Univ. of Tokyo
2013–2017	Editorial Board, The Astronomical Herald, Astronomical Society of Japan

PEER REVIEWS

- Regular referee of papers submitted to ApJ, MNRAS, A&A, JCAP, PTEP, PASJ, PRL, PRD, Nature Astronomy (150+ papers)
- Reviewer of grant proposals for NSF (USA), FNRS (Belgium), NCN (Poland), FWF (Austria), NWO (Netherlands)
- Reviewer of observing proposals for HST, Subaru, CFHT

CONFERENCES, WORKSHOPS, AND MEETINGS ORGANIZED

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| 2023 | SOC, “Subaru Users Meeting FY2022”, NAOJ, January 31–February 2, 2023 |
| 2021 | SOC, “Euclid Consortium Meeting 2021”, Lausanne, Switzerland, May 25–28, 2021 |
| 2021 | SOC co-chair, “Time-domain cosmology with strong gravitational lensing”, Kavli IPMU, Jan 25–Feb 2, 2021 |
| 2019 | SOC, “Gravity meets Plasma”, Yunnan, China, August 19–21, 2019 |
| 2019 | SOC, “Panchromatic Panoramic Studies of Galaxy Clusters: from HSC to PFS and ULTIMATE”, ASIAA, Taiwan, March 11–13, 2019 |
| 2018 | SOC, “Shedding Light on the Dark Universe with Extremely Large Telescopes at Trieste”, Trieste, Italy, July 2–6, 2018 |

- 2018 SOC, “Shedding Light on the Dark Universe with Extremely Large Telescopes at UCLA”, UCLA, USA, April 2–6, 2018
- 2017 SOC, “Shedding Light on the Dark Universe with Extremely Large Telescopes at Lanzhou”, Lanzhou, China, August 30–September 2, 2017
- 2016 LOC, “HSC collaboration meeting 2016 August”, Kavli IPMU, August 23–25, 2016
- 2015 SOC, “The Frontier Fields: Transforming our understanding of cluster and galaxy evolution”, Honolulu, USA, August 5–7, 2015
- 2014 LOC chair/SOC, “Galaxy and Cosmology in Light of Strong Lensing”, Kavli IPMU, November 17–21, 2014
- 2014 LOC, “HSC collaboration meeting 2014 August”, Hiroshima, August 25–26, 2014
- 2014 LOC, “HSC collaboration meeting 2014 March”, Hilo, USA, March 9–10, 2014
- 2013 LOC, “HSC collaboration meeting 2013 August”, NAOJ, August 30–September 1, 2013
- 2013 LOC, “4th PFS collaboration meeting”, Kavli IPMU, March 25–28, 2013
- 2012 LOC, “2nd PFS collaboration meeting”, Kavli IPMU, January 8–12, 2012
- 2010 LOC, “CL J2010: from Massive Galaxy Formation to Dark Energy”, Kavli IPMU, June 28–July 2, 2010

MAJOR INVOLVEMENT IN LARGE PROJECTS

Euclid satellite mission

- Member, Euclid Consortium Board (2021–present)
- Lead, Japanese Euclid Consortium (2021–present)
- PI, WISHES (an intensive program of Subaru telescope for Euclid) (2020–present)
- Member, Steering Group of UNIONS (consortium of Subaru, CFHT, and Pan-STARRS) (2020–present)

Hyper Suprime-Cam Subaru Strategic Program (HSC-SSP)

- ‘Builder’ status (2014–present)
- Co-chair, Cluster Working Group (2009–2017)
- Co-chair, Strong Lensing Working Group (2015–2017, 2021–present)
- Member, eROSITA-DE-HSC-SSP Collaboration Board (2018–present)

Sloan Digital Sky Survey (SDSS)

- Co-PI, SDSS Quasar Lens Search (SQLS, a survey of gravitationally lensed quasars in SDSS) (2002–2012)

MAJOR CODE DEVELOPMENTS

GLAFIC

2008 – present

- Public software for analyzing gravitational lensing. It is available at <https://www.slac.stanford.edu/~oguri/glafic/> and is widely used in the community.

CAMIRA

2014 – present

- Code for optical cluster finding and is used in SDSS and HSC-SSP.

PUBLICATIONS

As of May 2023, more than 280 papers are published in international peer-reviewed journals, and the total number of citations to these papers is approximately 18,000 according to ADS. The h-index is 74. These publications include 52 first-author papers, and the total number of citations to my first-author papers is approximately 4,000, again according to ADS. Check <https://oguri.github.io/paper.html> for the latest status. The full list is provided separately.

PRESENTATIONS AT CONFERENCES, WORKSHOPS, AND MEETINGS

As of May 2023, more than 30 invited talks at international conferences and workshops are given. The full list is provided separately.

PRESS RELEASES

2023 “First-of-its-kind measurement of the Universe’s expansion rate weighs in on a longstanding debate in physics and astronomy”, May 12, 2023

2023 “Hubble Unexpectedly Finds Double Quasar in Distant Universe”, Apr 6, 2023

2023 “How to see the invisible: Using dark matter distribution to test our cosmological model”, Apr 4, 2023

2022 “Hubble Captures 3 Faces of Evolving Supernova in Early Universe”, Nov 10, 2022

2022 “Record Broken: Hubble Spots Farthest Star Ever Seen”, Mar 31, 2022

2021 “ALMA Discovers Rotating Infant Galaxy with Help of Natural Cosmic Telescope”, Apr 22, 2021

2020 “More than Meets the Eye: Complete Imaging of a Cluster Collision”, Nov 12, 2020

2020 “Can Black Hole Fire Up Cold Heart of the Phoenix?”, Aug 30, 2020

2020 “Rare Encounters between Cosmic Heavyweights”, Aug 27, 2020

2020 “Artificial Intelligence tool developed to predict the structure of the Universe”, Feb 5, 2020

2019 “Subaru Telescope helps determine that dark matter is not made up of tiny primordial black holes”, Apr 2, 2019

2019 “Astronomers Discover 83 Supermassive Black Holes in the Early Universe”, Mar 13, 2019

2018 “Cosmological constraints from the first-year Subaru Hyper Suprime-Cam survey”, Sep 26, 2018

2018 “The Farthest Star Ever Seen”, Apr 3, 2018

2018 “Unprecedentedly Wide and Sharp Dark Matter Map”, Mar 1, 2018

2016 “Ancient Eye in the Sky”, Jul 26, 2016

2015 “Dark Matter Map Begins to Reveal the Universe’s Early History”, Jul 2, 2015

2015 “ALMA uses ‘Natural Telescope’ to Image Monstrous Galaxy near the Edge of the Universe”, Jun 9, 2015

2014 “Confirming a 3-D Structural View of a Quasar Outflow ~Conclusions drawn from additional observations~”, Oct 28, 2014

2014 “Cosmic Illusion Revealed: Gravitational Lens Magnifies Supernova”, Apr 25, 2014

2013 “‘Standard Candle’ Supernova Extraordinarily Magnified by Gravitational Lensing”, Apr 23, 2013

2013 “3-D Observations of the Outflow from an Active Galactic Nucleus”, Feb 19, 2013

2012 “‘Cosmic Mirages’ Confirm Accelerated Cosmic Expansion”, Apr 10, 2012

2012 “Precise measurement of dark matter distribution with strong and weak gravitational lensing”, Jan 17, 2012

2011 “Laser Guide Star Adaptive Optics Sharpens Subaru Telescope’s Eyesight and Opens a New Vision of the Distant Universe”, July 6, 2011

2010 “Research Illuminates the Shape of Dark Matter’s Distribution”, April 26, 2010

2009 “Mysterious Space Blob Discovered at Cosmic Dawn”, April 22, 2009

2007 “Distant quasars live in massive dark matter halos”, Feb 9, 2007

2006 “Hubble captures a ‘five-star’ rated gravitational lens”, May 23, 2006

2003 “Visual ‘Mirages’ Probe Distribution of Dark Matter”, Dec 18, 2003