

Graziano Rossi

Associate Professor

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Faculty Appointments

- Mar 18 – present **Associate Professor**, *Sejong University, Department of Physics and Astronomy, Seoul, Republic of Korea.*
- Mar 14 – Feb 18 **Assistant Professor**, *Sejong University, Department of Physics and Astronomy, Seoul, Republic of Korea.*

Italian National Scientific Qualification

- 29/03/21 **Full Professor Qualification**, *ANS – D.D. 2175/2018 – Art.16 – 30 December*
29/03/30 *2010, n.240 – Competition Sectors: 02/C1 Astronomia, Astrofisica, Fisica della Terra e dei Pianeti, and 02/A2 Fisica Teorica delle Interazioni Fondamentali.*

Professional Experience

- Sep 12 – Feb 14 **Research Associate**, *Institut de Recherche sur les Lois Fondamentales de l'Univers (IRFU), CEA-Saclay, Gif-sur-Yvette, France.*
- Sep 08 – Aug 12 **Postdoctoral Research Fellow**, *Korea Institute for Advanced Study (KIAS), Seoul, Republic of Korea.*
- Sep 07 – Aug 08 **Research Fellow Instructor**, *Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, PA, USA.*
- Jul 05 – Jun 08 **Graduate Research Assistant**, *Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, PA, USA.*
- Aug 03 – Jun 05 **Graduate Teaching Assistant**, *Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, PA, USA.*

Higher Education

- Aug 2008 **Ph.D. in Astrophysics**, *University of Pennsylvania*, Philadelphia, PA, USA.
Thesis: “Gaussianity, Non-Gaussianity, and Photometric Redshift Surveys.”
- Dec 2004 **M.Sc. in Physics**, *University of Pittsburgh*, Pittsburgh, PA, USA.
- Mar 2003 **Laurea in Astronomy**, *Università degli Studi di Padova*, Padova, Italy.
Thesis: “A New Code for the Shapes of Dark Matter Halos.”
Grade: Magna cum Laude

Research Interests

- **Neutrino Science and Particle Physics Synergies.**
- **Computational Cosmology.**
- **Large-Scale Structure and Dark Energy Science.**
- **Cosmology with Large-Volume Surveys.**
- **Advanced Statistical Techniques.**
- **Cosmic Microwave Background and Early-Universe Science.**
- **Galaxy Formation Science.**

Grants and Proposals

- 05/21–04/24 • **CoI – Sejong University Promotion Plan**
Title: “Graduate School Research Specialization Project Promotion Plan”
Period: 05/2021 – 04/2024 – (3 years)
Amount: KWN 90,000,000 \simeq \$90,000 USD
Support for improving the research environment for the graduate school in Astronomy, in preparation for the BK21.
- 03/20–02/25 • **PI – National Research Foundation of Korea (KNRF) – Medium Research – Category: Natural Sciences – (Number: 2020R1A2C1005655)**
Title: “Neutrinos, Dark Sector, and Cosmic Web”
Period: 03/2020 – 02/2025 – (5 years)
Amount: KWN 500,000,000 \simeq \$500,000 USD
Personal management. Selection procedure with $< 15\%$ success rate across all natural sciences.

- 01/20–12/20 • **PI – Sejong University Physics and Astronomy Department Funding Program (2020)**
Title: “Novel Supercomputing System for Cosmology: Construction and Power Management (II)”
Period: 01/2019 – 12/2019
Amount: KWN 10,750,000 \simeq \$10,750 USD
 Special individual support for new supercomputing equipment.
- 01/19–12/19 • **PI – Sejong University Physics and Astronomy Department Funding Program (2019)**
Title: “Novel Supercomputing System for Cosmology: Construction and Power Management (I)”
Period: 01/2019 – 12/2019
Amount: KWN 7,500,000 \simeq \$7,500 USD
 Special individual support for new supercomputing equipment.
- 01/18–01/19 • **PI – Sejong University Faculty Research Special Funding Program (2018)**
Title: “Dark Universe and Cosmic Web”
Period: 01/2018 – 31/2018
Amount: KWN 50,000,000 \simeq \$50,000 USD
 Special individual support for research, business travels, new laboratory equipment, and survey participation.
- 11/17–10/20 • **PI – National Research Foundation of Korea (KNRF) – Strategic Research – Category: Big Data – (Number: 2017R1E1A1A01077508)**
Title: “Big Data, Smart Algorithms: The Universe Inside a Supercomputer”
Period: 11/2017 – 10/2020 – (3 years)
Amount: KWN 300,000,000 \simeq \$300,000 USD
 Personal management. Interview and selection procedure with $< 12\%$ success rate across all scientific disciplines.
- 09/14–05/17 • **PI – National Research Foundation of Korea (KNRF) Small Grant for Exploratory Research (SGER 2014055950)**
Title: “Cosmology with the LyA Forest: Challenges to the Standard Model”
Period: 09/2014 – 05/2017 – (2 years & 8 months)
Amount: KWN 232,912,000 \simeq \$230,000 USD
 Personal management. Evaluation and interview after 8 months, with a 50% chance of funding cut. Passed interview and review, and the awarded amount was doubled.

- 01/17–12/17 • **Sejong-KISTI Collaboration**
Title: “Optimizing Cosmological Code”
Period: 01/2017 – 12/2017
 Collaborative research with KISTI staff for cosmological code optimization on KISTI supercomputers – including 400,000 CPU scalar hours on Tachyon2.
- 01/17–12/17 • **Korean PI and Group Leader – LYAWDM – FKPPL 2017**
Title: “Lyman- α Forest and Warm Dark Matter”
Period: 01/2017 – 12/2017
Amount: 5000 euros
 Bilateral collaboration between France & Korea.
- 03/16–01/17 • **PI – Sejong University Faculty Research Funding Program (2016)**
Title: “Neutrinos, Cosmic Web, and Large-Volume Surveys”
Period: 03/2016 – 01/2017
Amount: KWN 5,782,400 \simeq \$6,000 USD
 Support for research, business travels, and new laboratory equipment.
- 01/15–12/15 • **PI – Sejong University Faculty Research Funding Program (2015)**
Title: “SDSS-IV Associate Membership Contribution”
Period: 01/2015 – 12/2015
Amount: KWN 55,000,000/yr \simeq \$50,000 USD
 Contribution towards the membership fees required to join the SDSS-IV collaboration as an Associate Institution.
- 03/14–02/15 • **PI – Sejong University Faculty Research Funding Program (2014)**
Title: “Morphology and Statistics of the Cosmic Web: From Massive Neutrinos to Dark Energy”
Period: 03/2014 – 02/2015
Amount: KWN 10,000,000/yr \simeq \$12,000 USD
 Start-up support for independent research, business travels, and equipment.
- 09/10–08/12 • **PI – KIAS Research Grant**
Period: 09/2010–08/2012
Amount: KWN 10,000,000/yr for a total of \simeq \$22,000 USD
 For independent research, business travels, collaborators, and equipment.
- 09/08–08/10 • **PI – KIAS Research Grant**
Period: 09/2008–08/2010
Amount: KWN 8,000,000/yr for a total of \simeq \$18,000 USD
 For independent research, business travels, collaborators, and equipment.

Supercomputing Time Awards

- 2021 • **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation #0017731)**
Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”
Period: 01/01/2021 – 31/12/2021
Amount: 2.5 million NERSC MPP hours + 500 TB Disk Space
Computational time requested at NERSC (Cori & Perlmutter) for eBOSS-related work – Full control of facilities & full proposal writing.
- 2020 • **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation #0014674 – Additional Extension)**
Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”
Period: 01/01/2020 – 31/12/2020
Amount: 2.5 million NERSC MPP hours (additional)
Computational time extension requested at NERSC (Cori) for eBOSS-related work – Full control of facilities & full proposal writing.
- **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation #0014674)**
Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”
Period: 01/01/2020 – 31/12/2020
Amount: 3.8 million NERSC MPP hours
Computational time requested at NERSC (Cori) for eBOSS-related work – Full control of facilities & full proposal writing.
- 2019 • **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation #0010635)**
Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”
Period: 01/01/2019 – 31/12/2019
Amount: 5 million NERSC MPP hours
Computational time requested at NERSC (Cori & Edison) for eBOSS-related work – Full control of facilities & full proposal writing.
- 2018 • **PI – KISTI Supercomputing Center (Allocation KSC-2018-T1-0061)**
Title: “High-Fidelity Lyman- α Forest Mocks (III) and Flux Power Spectra”
Period: 10/12/2018 – 09/02/2019
Amount: 10,000 CPU scalar hours (fat nodes)
Computational time granted on KAT & Skylake systems (fat nodes) at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **PI – KISTI Supercomputing Center (Allocation KSC-2018-T1-0033)**

Title: “High-Fidelity Lyman- α Forest Mocks (II)”

Period: 01/08/2018 – 30/11/2018

Amount: 10,000 CPU scalar hours (fat nodes)

Computational time granted on KAT & Skylake systems (fat nodes) at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **PI – KISTI Supercomputing Center (Allocation KSC-2018-T1-0017)**

Title: “High-Fidelity Lyman- α Forest Mocks”

Period: 01/05/2018 – 31/07/2018

Amount: 10,000 CPU scalar hours (fat nodes)

Computational time granted on KAT & Skylake systems (fat nodes) at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **PI – KISTI Supercomputing Center (Allocation KSC-2018-G3-0008)**

Title: “Cosmology beyond the Standard Model (II)”

Period: 01/04/2018 – 31/10/2018

Amount: 2.0 million CPU scalar hours

Computational time granted on Tachion-II at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation #0003690)**

Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”

Period: 01/01/2018 – 31/12/2018

Amount: 6.75 million NERSC MPP hours

Computational time requested at NERSC (Cori & Edison) for eBOSS-related work – Full control of facilities & full proposal writing.

2017 • **PI – KISTI Supercomputing Center (Allocation KSC-2017-G2-0008)**

Title: “Cosmology beyond the Standard Model”

Period: 01/07/2017 – 31/06/2018

Amount: 5.75 million CPU scalar hours

Computational time granted on Tachion-II at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **PI-PROXY – NERSC Supercomputing Center (ERCAP Allocation FY1017 #90766)**
Title: “eBOSS: Extended Baryon Oscillation Spectroscopic Survey”
Period: 01/01/2017 – 31/12/2017
Amount: 6 million NERSC MPP hours
 Computational time granted at NERSC (Cori & Edison) for eBOSS-related work.

- 2016 • **PI – KISTI Supercomputing Center (Allocation KSC-2016-G2-0004)**

Title: “Lyman- α forest and massive neutrinos”
Period: 01/04/2016 – 31/03/2017
Amount: 3.5 million CPU scalar hours
 Computational time granted on Tachion-II at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- 2014 • **PI – KISTI Supercomputing Center (Allocation KSC-2014-C1-045)**

Title: “Cosmology with massive neutrinos”
Period: 10/2014 – 09/2015
Amount: 450,000 CPU scalar hours
 Computational time granted on Tachion-I at the Korea Institute of Science and Technology Information (KISTI) Supercomputing Center.

- **CoI – PRACE 9th Regular Call (Allocation 2014-t2013047004)**
Title: “Neutrino masses in cosmological large scale structures”
Period: 10/2014 – 09/2015
Amount: 8.5 million CPU scalar hours
 Computational time granted at the HPC resources of CCRT (TGCC Curie supercomputer) made by GENCI (Grand Equipement National de Calcul Intensif), France.

- 2013 • **CoI – PRACE 6th Regular Call (Allocation 2013-t2013047004)**

Title: “Lyman- α forest and neutrino mass”
Period: 10/2013 – 09/2014
Amount: 7 million CPU scalar hours
 Computational time granted at the HPC resources of CCRT (TGCC Curie supercomputer – project 2012071264) made by GENCI, France.

Leadership in Large Collaborations

- **DESI – Meetings Committee Member** – *Elected by the DESI Institutional Board to serve on the DESI Meetings Committee, to plan collaboration meetings acting as SOC and liaising to the local hosts.* – January 2021 to December 2022 (the regular appointment is a one-year term, and my appointment was extended for an additional year)

- **DESI – *Speaker’s Board Chair*** – Elected by the DESI Institutional Board to serve on the DESI Speaker’s Board and act as Chair, to select a diverse group of speakers who represent DESI to the scientific community. – January 2018 – December 2020 (the regular appointment is a one-year term, and my appointment was extended for an additional year)
- **LSST – *PI Scientist*** – Within the LSST-Korea KASI group, eligible to participate in all the LSST Science Collaborations, with 4 junior researchers (students). Main LSST Science Collaborations of interest: Galaxies, Dark Energy, Informatics and Statistics – since March 2017 (till June 30, 2021)
- **CORE – *Simulations Working Group Member*** – Involvement in the survey simulations and in the mission proposal – February 2017 till proposal evaluation
- **DESI – *Speaker’s Board Member*** – Elected by the DESI Institutional Board to serve on the DESI Speaker’s Board, to select a diverse group of speakers who represent DESI to the scientific community – January 2017 to December 2017
- **DESI – *Continuing Participant, Member***
- **SDSS-IV Architect** – A formal position acknowledging significant contribution to infrastructure work, giving rights to appear on collaboration publications
- **SDSS-IV eBOSS – *NERSC Usage Lead*** – Responsible for the eBOSS computational allocation at NERSC and system management for the collaboration (including new and current user accounts) – since September 2016
- **SDSS-IV eBOSS – *Lead of the ‘eBOSS Simulations Working Group’*** – September 2017 to December 2020
- **SDSS-IV eBOSS – *Co-Lead of the newly formed ‘eBOSS Simulations Working Group’*** – January 2016 to August 2017
- **SDSS-IV – *Advisory Council (AC) Representative and Voting Member for Sejong University*** – since November 2014
- **SDSS-IV – *Lead Scientist for Sejong University*** – since November 2014

Awards

- 2021 • **DOE Excellence Award** – Given collectively to the DESI Team. Each year, the Department recognizes projects that have demonstrated excellence in the project management discipline. This is the highest DOE recognition, *July, 2021*.
- 2020 • **SDSS-IV Architect Status Award** – Awarded Architect status for my contributions particularly to the management of NERSC computational facilities for eBOSS, leadership of the eBOSS Simulations Working Group, and local organization of the SDSS-IV 2018 collaboration meeting – A formal position acknowledging significant contribution to infrastructure work, *January, 2020*.

- 2019 • **1st Prize Poster Award** – First prize poster award at the Physics & Astronomy Academic Seminar 2019 at Sejong University, won with my students Hoseok Ryu, Doohyun Choi, and Jeongin Moon on ‘*Big Data, Smart Algorithms: The Universe in a Supercomputer*’ (cash prize ~ \$500 USA), *Sejong University, Seoul, Korea*, November 13, 2019.
- 2017 • **Italian Bilateral Scientific Cooperation Award Nomination** – by the Italian Ministry of Foreign Affairs and International Cooperation (MAECI), to recognize an Italian eminent scientist who, in performing his/her research abroad, has made a remarkable contribution to the advancement of science and technology, thus improving Italy’s S&T relations with foreign countries and with International Organizations – Nominated by the scientific attache of the Italian embassy in Seoul and by the Dean of the College of Natural Sciences of Sejong University, *Seoul, Korea*, September, 2017.
- 2016 • **KAS Best Poster Award** – Best Poster Award from the Korean Astronomical Society (KAS) won with my student Doohyun Choi about our poster entitled ‘*Clustering of High- and Low-Redshift Quasars from the extended Baryon Oscillation Spectroscopic Survey*’ (cash prize ~ \$150 USA), *KAS 2016 Spring Meeting, Busan, South Korea*, April 15-16, 2016.
- 2014 • **JKAS Best Paper Award** – Best Paper Award (Kim et al. 2011, *corresponding author*) from the Korean Astronomical Society, *Seoul, South Korea*, September 22, 2014.
- 2011 • **KIAS Best Researcher 2011 – Period:** 30/09/2011 – **Amount:** ~ \$1500 Award of Excellence on KIAS 15th Anniversary, *Seoul, South Korea*.
 - **Excellences Living Abroad Recognition** – Personal CV requested at the Italian Embassy in Seoul to report excellences living abroad to the Italian Government by Dr. A. Tata, Science and Technology Attaché, *April 23, 2011*.
- 2007 • **Partnerships for International Research and Education (PIRE/NSF) Award – Period:** 19–23/03/2007 – **Amount:** \$2000.
For the exchange program – SCS PIRE Summer School “Large Scale Structure and CMB connection” at the Universidad Catolica de Chile in Santiago, Chile.
- 2003 • **Centre of Excellence MIUR Award – Ministero dell’Università e della Ricerca (Rome, IT) – Period:** 04/2003–06/2003 – **Amount:** Euro 2000.
Support for independent research within the project “Science and Applications of Advanced Computing Paradigma”.

Postdoctoral Scholars Hired & Supervised at Sejong University

- *Xiao, Linfeng* – August 2022 to February 2025. **Research field:** Epoch of reionization and dark sector cosmology.
- *Michaux, Michaël* – March 2022 to February 2025. **Research field:** Numerical simulations and computational cosmology.

Ph.D. Students Hired & Supervised at Sejong University

- *Moon, Jeong-In* – since August 2020. **Research field:** Mock galaxy catalogs from large-volume simulations. Lyman- α forest, neutrino cosmology.
- *Choi, Doo-Hyun* – January 2015 to June 2020. **Research field:** SDSS-IV quasar clustering science, higher order statistics (3PCF), BAO, primordial non-Gaussianity. OuterRim mocks. **International meetings participation** (personally supported): 3. **National meetings & Summer schools participation** (personally supported): 9 – Successfully defended a Ph.D. thesis entitled ‘*Higher Order Clustering and Mock Challenges with SDSS-IV eBOSS Galaxies and Quasars*’ on July 3, 2020 at Sejong University, Seoul, Korea
- *Lee, Young-Bae* – January 2017 to December 2018. **Research field:** SDSS-IV Ly α forest science. Neutrino cosmology. **International meetings participation** (personally supported): 2. **National meetings & Summer schools participation** (personally supported): 1 – Successfully defended a Master thesis entitled ‘*One-Dimensional Flux Power Spectrum and Cosmology with the SDSS-IV eBOSS Lyman- α Forest*’ on December 7, 2018 at Sejong University, Seoul, Korea.
- *Kim, Do-Yle* – January 2015 to December 2016. **Research field:** SDSS-IV galaxy clustering: LRGs and ELGs. **International meetings participation** (personally supported): 1. **National meetings participation** (personally supported): 4 – Successfully defended a Master thesis entitled ‘*Tracing the Cosmic Web with LRGs*’ on December 14, 2016 at Sejong Univ., Seoul, Korea

Undergraduate Students Hired & Supervised at Sejong University

- *Yu, Ho-Gyun* – from November 2019. **Research:** Cosmic web.
- *Kim, Ye-Won* – from September 2019. **Research:** Scientific visualization.
- *Moon, Jeong-In* – August 2019 to July 2020. **Research:** Mock galaxy catalogs from large-volume simulations. Lyman- α forest, neutrino cosmology.
- *Ryu, Ho-Seok* – from July 2019. **Research:** Sejong Suite, cosmic web.
- *Park, Keun-Woo* – July 2019 to January 2020. **Research:** Sejong Suite, neutrino cosmology
- *Kim, Yerin* – December 2018 to September 2019. **Research:** Mock galaxy catalogs from large-volume simulations. Sejong Suite analysis.
- *Ha, Jaewon* – January 2018 to August 2019. **Research:** SDSS-IV LRGs & ELGs higher-order clustering. **International meetings participation** (personally supported): 1. **National meetings participation** (personally supported): 1

- *Lee, Seung-Hee* – January 2017 to December 2017. **Research:** Mock galaxy catalogs from large-volume simulations. **National meetings participation** (personally supported): 1 - Successfully graduated in March, 2017
- *Park, Dong-Jun* – January 2016 to January 2017. **Research:** numerical simulations, SDSS-IV eBOSS. **National meetings participation** (personally supported): 1 – Joined the ‘School of Computational Science’
- *Park, Kneun-Woo* – February 2015 to February 2016. **Research:** deconvolution techniques, photometric redshifts, SDSS-IV applications. **National meetings participation** (personally supported): 1 – Successfully graduated in March, 2016

Assistants & Secretaries Hired at Sejong University

- *Park, See-Hyeon* – from February 2020. Personal assistant & secretary.
- *Kim, Heejin* – December 2018 to January 2020. Personal assistant & secretary.
- *Castillo, Michelle* – May 2018 to June 2018. Personal secretary. Hired for help with administrative tasks in relation to the organization of the SDSS-IV 2018 Annual Collaboration Meeting at Sejong University.
- *Seo, Jaewan* – January 2018 to December 2018. Personal assistant & secretary.
- *Jeong, Sojeong* – Oct. 2016 to Dec. 2017. Personal assistant & secretary.
- *Lee, In-Sol* – March 2014 to February 2015. Personal assistant & secretary.
- *Jang, Seok-Jun* – January & February 2015. Grant application and supercomputing time assistance.

Teaching Experience at Sejong University

- Spring 2022
- **Dark Energy and Cosmic Web** – *Level:* advanced graduate – *Students:* 3
Advanced topics in Astrophysics and Cosmology, with direct observational research applications.
 - **Modern Astrophysics** – *Level:* 3rd-4th grade undergraduate – *Students:* 25
Frontline topics in astrophysics and cosmology, with computational applications.
 - **Graduate Research and Career** – *Level:* graduate – *Students:* 1
Directed frontline research in cosmology, focused on LSS analyses and numerical simulations.
- Fall 2021
- **Observational Astronomy** – *Level:* 2nd & 3rd grade undergraduate – *Students:* 22
Intermediate/advanced observational astronomy techniques and SDSS/DESI-focused laboratory, with class projects on DESI data.

- **World of Astronomy** – *Level*: undergraduate, foreigners – *Students*: 50
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
 - **Graduate Research and Career** – *Level*: undergraduate – *Students*: 2
Directed frontline research in cosmology, focused on LSS analyses and numerical simulations.
- Spring 2021
- **Advanced Astrophysics** – *Level*: graduate – *Students*: 7
Advanced topics in Astrophysics and Cosmology, with direct observational research applications.
 - **Frontline Astrophysics** – *Level*: 3rd-4th grade undergraduate – *Students*: 19
Frontline topics in astrophysics and cosmology, with computational applications.
 - **Graduate Research and Career** – *Level*: undergraduate – *Students*: 1
Directed frontline research in cosmology, focused on LSS analyses and numerical simulations.
- Fall 2019
- **Astronomical Spectroscopy** – *Level*: graduate – *Students*: 6
Advanced topics in Astrophysics and Cosmology, with direct observational research applications.
 - **Observational Astronomy** – *Level*: 2th grade undergraduate – *Students*: 24
Intermediate/advanced observational astronomy techniques and SDSS-IV laboratory, with class projects on eBOSS data.
 - **Introductory Astronomy** – *Level*: undergraduate, foreigners – *Students*: 25
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Spring 2019
- **Modern Cosmology** – *Level*: 4th grade undergraduate – *Students*: 15
Intermediate/advanced cosmology and SDSS-IV laboratory.
 - **Introductory Astronomy** – *Level*: undergraduate, foreigners – *Students*: 30
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Fall 2018
- **Large-Scale Structure & Cosmology** – *Level*: graduate – *Students*: 8
Advanced cosmological topics.
 - **Observational Astronomy** – *Level*: 2th grade undergraduate – *Students*: 25
Intermediate/advanced observational astronomy techniques and SDSS-IV laboratory, with class projects on eBOSS and MaNGA data.
 - **Introductory Astronomy** – *Level*: undergraduate, foreigners – *Students*: 30
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Spring 2018
- **Modern Cosmology** – *Level*: 4th grade undergraduate – *Students*: 10
Intermediate/advanced cosmology and SDSS-IV laboratory.

- **Introductory Astronomy** – *Level:* undergraduate, foreigners – *Students:* 35
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Fall 2017 • **Dark Energy and the Cosmic Web** – *Level:* graduate – *Students:* 7
Selected topics in cosmology, seminar style.
- **Observational Astronomy** – *Level:* 2th grade undergraduate – *Students:* 19
Intermediate/advanced observational astronomy techniques and SDSS-IV laboratory, with a class project on eBOSS data.
- **Introductory Astronomy** – *Level:* undergraduate, foreigners – *Students:* 43
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Spring 2017 • **Directed Research** – *Level:* graduate – *Students:* 1
Directed research in cosmology, focused on the SDSS-IV.
- **Modern Cosmology** – *Level:* 4th grade undergraduate – *Students:* 20
Intermediate/advanced cosmology.
- **Introductory Astronomy** – *Level:* undergraduate, foreigners – *Students:* 40
‘Service course’ – Introductory Astronomy for non-major foreign students, very popular among students.
- Fall 2016 • **The SDSS Cosmic Laboratory** – *Level:* undergraduate – *Students:* 5
New undergraduate research training program developed, with the goal of performing hands-on research on SDSS-IV data.
- **Directed Research** – *Level:* graduate – *Students:* 1
Directed research in cosmology, focused on the SDSS-IV.
- **Modern Cosmology** – *Level:* undergraduate – *Students:* 18
Intermediate and advanced cosmology.
- **Statistical Astronomy** – *Level:* undergraduate – *Students:* 20
Advanced statistical techniques and astrophysical/cosmological applications.
- **Introductory Astronomy** – *Level:* undergraduate, foreigners – *Students:* 35
‘Service course’ – Introductory Astronomy for non-major foreign students.
- Spring 2016 • **Advanced Cosmology** – *Level:* graduate – *Students:* 7
Selected topics in cosmology, seminar style, advanced level.
- **Astrophysics** – *Level:* undergraduate – *Students:* 13
Intermediate and advanced astrophysics (part I) and cosmology (part II).
- Fall 2015 • **Dark Energy and the Cosmic Web** – *Level:* graduate – *Students:* 5
Selected topics in cosmology, seminar style, new course open and developed, which now became a core graduate course and a pillar at Sejong University.
- **Modern Cosmology** – *Level:* undergraduate – *Students:* 10
Intermediate and advanced cosmology.

- **Basic Astrophysics** – *Level:* undergraduate – *Students:* 44
Basics of stars and planets, galaxies, and cosmology.
- Spring 2015 • **Astrophysics** – *Level:* graduate – *Students:* 6
Selected topics in modern astrophysics and cosmology.
- **Astrophysics** – *Level:* undergraduate – *Students:* 20
Advanced topics in modern astrophysics and cosmology.
- Fall 2014 • **Large Scale Structure of the Universe** – *Level:* graduate – *Students:* 4
Selected topics in modern cosmology, seminar style.
- **Modern Cosmology** – *Level:* undergraduate – *Students:* 20
Introductory cosmology.
- **Basic Astrophysics** – *Level:* undergraduate – *Students:* 30
Basics of stars and planets, galaxies, and cosmology.
- Spring 2014 • **Celestial Mechanics** – *Level:* graduate – *Students:* 6
Selected topics in celestial mechanics and galactic dynamics, seminar style.
- **Introductory Astrophysics** – *Level:* undergraduate – *Students:* 20
Basics of stars and planets, galaxies, and cosmology.

Editorial, Referee & Proposal Reviewer Activities

- **Reviewer for the ‘Rita Levi Montalcini 2019 Program’ by the Italian Ministry of Education, University and Research, June 2021**, For the Recruitment of Young Researchers – Assignments of 3-year fellowships of the value of 200,000 euro/each – 1 proposal reviewed.
- **Proposal Reviewer for the Italian Ministry for University and Research (MUR) 2020 PRIN Call (d.d. 16-10-2020, n.1628) aimed at financing public research projects**, *Evaluated 7 proposals, for an aggregated request of over 8 million euros – May-June 2021.*
- **Proposal Reviewer for the French National Research Agency (ANR) – 2021 Generic Call – CE31 Panel (Physique Subatomique et Astrophysique)**, *Evaluation of a request of ~ 900k euros – May-June 2021.*
- **Peer-review evaluation and selection of proposals in Science & Technology for Young Researchers (2020 Italy-Korea Bilateral Cooperation – ‘Fifth Call’)**, for the Technical & Scientific Committee (CTS) of the Italian Embassy in Korea, *Seoul, South Korea – July 2020– 13 applications for 3 positions.*
- **Reviewer for the ‘Rita Levi Montalcini 2018 Program’ by the Italian Ministry of Education, University and Research, December 2019**, For the Recruitment of Young Researchers – Assignments of 3-year fellowships of the value of 200,000 euro/each – 4 proposals reviewed.
- **Referee for ApJ**, *since November 2019.*

- **Peer-review evaluation and selection of proposals in Science & Technology for Young Researchers (2019 Italy-Korea Bilateral Cooperation – ‘Fourth Call’)**, for the Technical & Scientific Committee (CTS) of the Italian Embassy in Korea, *Seoul, South Korea – July 2019 – 16 applications for 3 positions.*
- **Reviewer for computing time on DiRAC facilities**, for the DiRAC Resource Allocation Committee of the Science and Technology Facilities Council (STFC)th Call - November 2018, DiRAC is the national HPC resource for the UK astronomy, cosmology, particle physics and nuclear physics communities.
- **Peer-review evaluation and selection of proposals in Science & Technology for Young Researchers (2018 Italy-Korea Bilateral Cooperation – ‘Third Call’)**, for the Technical & Scientific Committee (CTS) of the Italian Embassy in Korea, *Seoul, South Korea – July 2018 – 32 applications for 3 positions.*
- **Registered Expert Peer-Reviewer for Italian Scientific Evaluation (REPRISE) in fundamental research and scientific popularization**, since June 2018, for the Italian Ministry of Education, University and Research (MIUR) - sectors: cosmology, scientific computing, ERC evaluations, astronomy & astrophysics, large databases.
- **Reviewer for computing time on DiRAC facilities**, for the DiRAC Resource Allocation Committee of the Science and Technology Facilities Council (STFC), 10th Call - February 2018, DiRAC is the national HPC resource for the UK astronomy, cosmology, particle physics and nuclear physics communities.
- **Peer-review evaluation and selection of proposals in Science & Technology for Young Researchers (2017 Italy-Korea Bilateral Cooperation – ‘Second Call’)**, for the Technical & Scientific Committee (CTS) of the Italian Embassy in Korea, *Seoul, South Korea – July 2017 – 27 applications for 3 positions.*
- **Contribution to the ‘Operations and Science Analysis Integrated Computing Plan for eBOSS/DESI Cosmic Frontier Experiment’**, *Simulations and data management strategy*, May, 2017.
- **Contribution to the proposal to the Department of Energy for additional operations funding in SDSS-IV through 2017-2020**, *Simulation and mock catalogs section*, May, 2017.
- **Contribution to the ‘DESI Science Readiness Plan’**, *Simulations and data management strategy*, December, 2016.
- **Referee for ‘Physics of the Dark Universe’**, since October 2016.

- **Peer-review evaluation and selection of proposals in Science & Technology for Young Researchers (2016 Italy-Korea Bilateral Cooperation – ‘First Call’), for the Technical & Scientific Committee (CTS) of the Italian Embassy in Korea, Seoul, South Korea – July 2016 – 19 applications for 3 positions.**
- **Review Panel for the bilateral scientific cooperation document Italy-Korea for the ‘Ministero degli Affari Esteri’, Seoul, Korea – June 2016.**
- **Referee for the ‘KNRF National Graduate Fellowship Program’, Sponsorship and recommendation letter for JoonHo Kim (a graduate student at SNU, and previously an undergraduate student at Sejong University), April 2016.**
- **English Editor for the “Journal of the Korean Astronomical Society” (JKAS), since September 2010.**
- **Editorial Board - “The KIAS English Newsletter”, Coordination of the section for the “School of Physics”, September 2009 – November 2012.**
- **Referee for MNRAS, since January 2009.**
- **Referee for Astronomy & Astrophysics, since March 2013.**

Outreach Activities

- 2019 9. *“Back to the Future: Black Holes and The Arrow of Time”* – Public lecture at the 1st Meeting of the ‘*Taste of Science*’ Series organized by the Italian Science and Technology Counsellor and sponsored by the Italian Embassy to Korea. Among the invited guests, HE Italian Ambassador to Korea Federico Failla, HE Ecuadorian Ambassador to Korea Oscar Herrera Gilbert, HE Paraguayan Ambassador to Korea Raúl Silvero Silvagni – Restaurant ‘*Fine Trattoria – Paolo de Maria*’ – Seoul, May 28, 2019
- 2018 8. *“The Dark Side of the Universe”* – Public research presentation (plenary) in occasion of the ‘*First Italian Research Day in the World Celebration*’ at the Residence of the Italian Ambassador to Korea, Hannam-Dong – Invited by the Italian Science and Technology Counsellor – Seoul, April 12, 2018
- 2016 7. *“The Invisible Universe: Dark Matter, Dark Energy, and the Future of Cosmology”* – Public talk at the ‘Italy-Korea Science Club’ hosted by the residence of the Italian Science and Technology Counsellor and sponsored by the Italian Embassy to Korea – Seoul, February 25, 2016
- 2012 6. *The fabulous life of astrophysicists*
G. Rossi (2012), “The KIAS English Newsletter 2012”
- 2010 5. *Behind the scene of the “4th KIAS workshop on cosmology and structure formation”*
G. Rossi (2010), Article on the “4th KIAS international workshop” held at KIAS in November 2010, “The KIAS English Newsletter 2010”

4. *Book review – 50 wonders of Korea, Volume 2, Science and Technology*
G. Rossi (2010), for the “Korean Spirit & Culture promotion project”
- 2009 3. *Astrophysics on the runway*
G. Rossi (2009), Article about my personal experience in Korea, “The KIAS English Newsletter 2009”
2. *Everything you can imagine is real*
G. Rossi (2009), Article about my personal research activity, “KIAS Newsletter” N0. 41, 2009
1. *Astronomy compels the soul to look upwards and leads us from this world to another*
G. Rossi (2009), Review of the present status in cosmology, “KIAS Newsletter” N0. 41, 2009

Research in the Press & Media Coverage (only last 3 yrs)

- 2021 • **Scientific American Press Release, April 2021**, World’s Largest Map of Space Offers Clues on Dark Energy – SDSS-IV eBOSS Collaboration, See → <https://www.scientificamerican.com/article/worlds-largest-map-of-space-offers-clues-on-dark-energy/>.
- 2020 • **Sejong Online Press Release, November 2020**, About our paper on the possibility of detecting the BAO signal at high-redshift with the Roman Space Telescope, See → [add link](#).
- **NASA Press Release, November 2020**, About our paper on the possibility of detecting the BAO signal at high-redshift with the Roman Space Telescope (MNRAS, Volume 498, Issue 4, November 2020), See details at → www.nasa.gov/feature/goddard/2020/nasa-s-roman-space-telescope-to-uncover-echoes-of-the-universe-s-creation.
- **Multiple Press Releases – International, July 2020**, About the final SDSS-IV eBOSS DR16 results, See for example → <https://www.sdss.org/press-releases/no-need-to-mind-the-gap/>
<https://www.innovationnewsnetwork.com/astrophysicists-have-created-the-largest-3d-map-of-the-universe/6218/>.
- **Multiple Press Releases – Korea, July 2020**, About the final SDSS-IV eBOSS DR16 results, and our key contribution with the galaxy mock challenge, See for example → <http://www.sejongpr.ac.kr/sejongnewspaperview.do?boardType=6&pkid=22008>
<https://n.news.naver.com/article/584/0000009628>
<http://www.dailysmart.co.kr/news/articleView.html?idxno=30168>.
- **Multiple Press Releases, July 2020**, About the ‘Sejong Suite’, See e.g. → <http://www.sejongpr.ac.kr/sejongnewspaperview.do?boardType=6&pkid=22223>
<http://www.ilemonde.com/news/articleView.html?idxno=13124>.

- **Press Release, July 2020**, CEA Saclay, IRFU – About the first Lyman- α forest tomographic map created from SDSS-IV eBOSS DR16 data – See →
http://irfu.cea.fr/Phoce/Vie_des_labos/Ast/ast.php?t=fait_marquant&id_ast=4807
http://irfu.cea.fr/en/Phoce/Vie_des_labos/Ast/ast.php?t=fait_marquant&id_ast=4819.
- 2019 • **Sejong Science & Technology Vol. 22, 2019 – Printed Version**, October 2019, About the Public Special Lecture on Astronomy ‘*Taste of Science*’, on ‘*Black Holes and The Arrow of Time*’, with HE Italian Ambassador to Korea Federico Failla, HE Ecuadorian Ambassador to Korea Oscar Herrera Gilbert, HE Paraguayan Ambassador to Korea Raúl Silvero Silvagni among the invited guests, See →
<http://www.sejongpr.ac.kr/sejongwebzinenewspaperview.do?pkid=15911&type=2&searchLanguage=E>.
- **Sejong Newsletter Vol. 186, 2019 – Printed Version**, October 2019, About the SBS Sunday Special Documentary appearance on February 24, 2019, See → <http://www.sejongpr.ac.kr/sejongwebzinenewspaperview.do?pkid=16663>,
<http://www.sejongpr.ac.kr/sejongnewspaperview.do?boardType=6&pkid=14953>.
- **Multiple Korean Newspapers Press Releases, June 2019**, About the ‘*Taste of Science*’ event and my public talk on ‘*Black Holes and The Arrow of Time*’, with HE Italian Ambassador to Korea Federico Failla, HE Ecuadorian Ambassador to Korea Oscar Herrera Gilbert, HE Paraguayan Ambassador to Korea Raúl Silvero Silvagni among the invited guests, See i.e.: <https://news.mt.co.kr/mtview.php?no=2019060923437497243>,
<http://news.zum.com/articles/52989855>.
- **Sejong Online Press Release, July 2019**, About the excellent 2019 ranking of the Sejong Department of Physics & Astronomy, See →
<http://www.sejongpr.ac.kr/sejongwebzinenewspaperview.do?pkid=15297&type=2&searchLanguage=E>.
- **Italian Embassy Facebook Press Release, June 2019**, About the ‘*Taste of Science*’ event and my public talk on ‘*Black Holes and The Arrow of Time*’, with HE Italian Ambassador to Korea Federico Failla, HE Ecuadorian Ambassador to Korea Oscar Herrera Gilbert, HE Paraguayan Ambassador to Korea Raúl Silvero Silvagni among the invited guests, See →
<https://www.facebook.com/ItalianEmbassyinKorea/posts/2348493375172808>.
- **Sejong Online Press Release, June 2019**, About my public talk on ‘*Black Holes and The Arrow of Time*’ at the ‘*Taste of Science*’ event, with HE Italian Ambassador to Korea Federico Failla, HE Ecuadorian Ambassador to Korea Oscar Herrera Gilbert, HE Paraguayan Ambassador to Korea Raúl Silvero Silvagni among the invited guests, See →
<http://www.sejongpr.ac.kr/sejongnewspaperview.do?boardType=6&pkid=15584>.
- **Sejong Online Press Release, April 2019**, About the SBS Sunday Special Documentary appearance on February 24, 2019, See →
<http://www.sejongpr.ac.kr/sejongnewspaperview.do?boardType=6&pkid=14953>.

- **SBS Sunday Special Documentary**, *February 2019*, Interview on Galileo Galilei for the SBS Sunday Special Documentary ‘*The Future and Forecast of a Science Communicator*’ – February 24, 2019 – 7 :40 am – 8 :40 am, <https://programs.sbs.co.kr/culture/sundaydocum/vod/52376/22000321030>.

Synergistic Activities

- **ECS Travel Support Responsibility (\$110k) – June 2022 DESI Collaboration Meeting**, *Selection, assignment, and management of \$110k for supporting 50 Early Career Scientists (ECS) towards their attendance to the June 2022 DESI Collaboration Meeting in the San Francisco Bay Area, CA, USA – full support of all local expenses and accommodation, June 21-24 2022.*
- **Session Organizer and Chair – Session America/Asia/Australia/ (Plenary VI) – DESI Winter 2021 Collaboration Meeting**, *Virtual, December 9, 2021.*
- **Session Organizer and Chair – Session Asia/Australia/Europe-I (novelty) – DESI Summer 2021 Collaboration Meeting**, *Virtual, June 18, 2021.*
- **Session Chair – Plenary Session IV – Cosmology – DESI Summer 2021 Collaboration Meeting**, *Virtual, June 17, 2021.*
- **Session Organizer and Chair – Session Asia/Australia/America-I (novelty) – DESI Summer 2021 Collaboration Meeting**, *Virtual, June 15, 2021.*
- **Session Chair – #266 Large Scale Structure, Cosmic Distance Scale – 235th AAS**, *Honolulu,, Hawaii, USA, January 6, 2020.*
- **KIAS International Committee Associate Member Delegate**, *Seoul, South Korea – September 2018 – International steering committee member for the School of Physics – associate member representative.*
- **Registered Expert Peer-Reviewer for Italian Scientific Evaluation (REPRISE) in fundamental research and scientific popularization**, *since June 2018, for the Italian Ministry of Education, University and Research (MIUR) - sectors: cosmology, scientific computing, ERC evaluations, astronomy & astrophysics, large databases.*
- **Organizer and Chair of the Parallel Session II ‘Clustering/Cosmology’ at the SDSS-IV 2018 International Collaboration Meeting**, *Sejong University, Seoul, June 19, 2018.*
- **Organizer and Chair of two simulations & galaxy clustering working groups parallel sessions at the eBOSS 2018 International Collaboration Meeting**, *MPE Garching, Germany, February 9, 2018.*
- **PLANCK – LFI CORE2 Team Member**, *Data access & involvement in the final stage of the project, since February 2017.*

- **DESI Speaker's Board Chair**, *elected by the DESI Institutional Board to serve on the DESI Speaker's Board, to select a diverse group of speakers who represent DESI to the scientific community*, Since February 2017.
- **SDSS-IV eBOSS – NERSC Usage Lead**, *Responsible for the eBOSS computational allocation at NERSC and system management*, Since September 2016.
- **Organizer and Chair of two simulations parallel sessions at the eBOSS/DESI 2016 International collaboration meeting**, *OSU, Columbus, OH, USA*, December 4-9, 2016.
- **Member of the 'Simulations Working Group' of the CMB stage-IV experiment COrE+**, *Sejong University representative – since June 2016*.
- **Member of the Technical & Scientific Committee (CTS) for the Italian Embassy in Korea**, *for the peer-review, evaluation and selection of proposals in Science & Technology (Italy-Korea bilateral cooperation)*, *Seoul, South Korea – since March 2016*.
- **Chair of the Lyman- α Forest parallel session at the DESI 2015 International collaboration meeting**, *Fermilab, Chicago, USA*.
- **SDSS-IV Lead Scientist for Sejong University – SDSS-IV collaboration**, *since November 2014*.
- **Member of the SDSS-III collaboration**, *since January 2009*.

Service to University

- 2021 • **Ph.D. Candidate Evaluation**, *Admission to Sejong Graduate School 2022: Evaluation and selection of one international PhD candidate – Seoul, South Korea, December 28, 2021*.
- **Physics & Astronomy Festival and Lab Tour**, *Virtual 'Sejong CosmoLab' tour in 'Gathertown' and research sponsor for perspective graduate students – see <https://gather.town/app/FyPuaJykLmavIK4W/young%20sil> – Seoul, Korea, November 11-17, 2021*.
- **Ph.D. Candidate Interview**, *Admission to Sejong Graduate School 2022: Interview and selection of PhD candidates – Seoul, Korea, Oct 27, 2021*.
- **Ph.D. Thesis Committee Chair**, *Chair of Ph.D. Thesis Committee for Seokjun Chang (Sejong University) – Thesis: 'Radiative Transfer in Highly Thick Media through Rayleigh and Raman Scattering with Atomic Hydrogen' – Seoul, South Korea, June 11, 2021*.
- 2020 • **Recommendation Letter**, *Referee sponsor for Hye-Jin Park, for obtaining a Ph.D. fellowship abroad, November 2020*.
- **Recommendation Letter**, *Referee sponsor for Seulgi Kim, for obtaining a Ph.D. fellowship abroad, November 2020*.

- **Promotional Video for Sejong University**, Video for sponsoring the Department of Astronomy at Sejong University, and the Sejong Cosmology Lab, August 2020.
- **Ph.D. Thesis Supervisor**, Supervisor of Ph.D. Thesis for Peter Doohyun Choi (Sejong University) – Thesis: ‘Higher Order Clustering and Mock Challenges with SDSS-IV eBOSS Galaxies and Quasars’ – Seoul, Korea, July 3, 2020.
- 2019 • **Master diploma examiner**, Master student: Nam Seunghyun – Seoul, South Korea, April 2019.
- 2018 • **Master Thesis Supervisor**, Supervisor of Master Thesis for Youngbae Lee (Sejong University) – Thesis: ‘One-Dimensional Flux Power Spectrum and Cosmology with the SDSS-IV eBOSS Lyman- α Forest’ – Seoul, South Korea, December 7, 2018.
- **PhD Thesis Committee Member**, Member of PhD Thesis Committee for Jeong-Eun Heo (Sejong University) – Thesis: ‘Atomic Raman Spectroscopy of Wind Accretion in Symbiotic Stars’ – Seoul, South Korea, November 30, 2018.
- **Faculty Search Committee Member**, Search and evaluation of a new faculty member at Sejong University (stages 1 and 3) – Seoul, Korea, October 2018.
- 2017 • **Collaborative MoA between Sejong University and Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste**, Seoul, South Korea, October 2017 – Sejong University is the first university in Korea to sign an agreement with a premier Italian world-leading research institute. This agreement came as a result of the ‘1st Korea-Italy Symposium on CMB Science and Cosmology’ and upon my interactions with Prof. Carlo Baccigalupi and with the SISSA Director.
- **Master diploma examiner**, Master students: Chaelin Hong, Wansu Cho – Seoul, South Korea, November 2017.
- **Sejong University enters the top 10 League in Korea, and the department of Physics & Astronomy receives a brilliant report card (eighth in Korea and 201-250 in the world) – from the ‘2017 QS World University Evaluation’**, Seoul, South Korea, June 5, 2017 – Major role played by the SDSS-IV Associate Membership – ‘As an associate member of the Sloan Digital Sky Survey (SDSS) in 2014, Sejong University has access to the best international data source available in the international astronomical world. In this process, Graziano Rossi, a member of the SDSS, played a key role as a professor of Physics and Astronomy. This was a great opportunity for international recognition of the university’.
- 2016 • **Master Thesis Supervisor**, Supervisor of Master Thesis for Doyle Kim (Sejong University) – Thesis: ‘Tracing the Cosmic Web with Luminous Red Galaxies’ – Seoul, South Korea, December 14, 2016.
- 2015 • **Organization of the KDESCi Meeting at Sejong University**, Seoul, South Korea, May 12, 2015 – Hosting, logistics, program.

- **Founder of the ‘Sejong Cosmology Lab’** (see research website <http://www.sejongcosmogroup.com>), *January 2015, Seoul, South Korea.*
- 2011 – 2012 • **Astro Group meeting organizer, KIAS, Seoul, South Korea – Organization of the weekly meeting of the KIAS Astrophysics group.**
- 2007 – 2008 • **Vice President for Social Affairs – School of Art and Sciences, University of Pennsylvania, Philadelphia, PA, USA, 2007-2008.**
Full responsibility and administration of \$17,000 for the organization of social events within the University of Pennsylvania graduate student community.
- **Chair of the Social Affairs committee – School of Art and Sciences (SAS), University of Pennsylvania, Philadelphia, PA, USA, 2007/2008.**
- **Representative for Physics & Astronomy – School of Art and Sciences (SAS), University of Pennsylvania, Philadelphia, PA, USA, 2007/2008.**
- 2006 – 2007 • **Representative for Physics & Astronomy – Graduate Student Associations Council (GSAC), University of Pennsylvania, Philadelphia, PA, USA, 2006/2007.**
- **Diversity & International Student Committee Member, University of Pennsylvania, Philadelphia, PA, USA, 2006/2007.**

Organization of International Conferences/Meetings

- 2022 • **June DESI 2022 Collaboration Meeting**, Berkeley, CA, USA, June 21-24, 2022 – including ECS Integrated Meeting.
SOC Member – In charge of the Plenary Program + lead of ECS travel grants management & selection + lead organizer & chair of Asia-America friendly Plenary session. See <https://desi.lbl.gov/trac/wiki/Meetings/DESI2022-JUNE>
- 2021 • **Winter DESI 2021 Virtual Collaboration Meeting**, Virtual, online, December 6-10, 2021 (Main) + Pre-Meeting for ECS December 1-3, 2021.
LOC Member – In charge of the Plenary Program + lead organizer of the ‘Asia/Australia friendly’ Plenary on Cosmology, a novelty in a collaboration meeting. Chair of one plenary session. See <https://desi.lbl.gov/trac/wiki/Meetings/DESI2021-DECEMBER>
- **Summer DESI 2021 Virtual Collaboration Meeting**, Virtual, online, June 14-18, 2021 (Main) + ECS June 9-11, 2021.
LOC Member – In charge of the Plenary Program + lead organizer of the Parallel Asia-America friendly sessions, a novelty in a collaboration meeting. Chair of several sessions. See <https://desi.lbl.gov/trac/wiki/Meetings/DESI2021-JUNE>
- 2020 • **Winter DESI 2020 Virtual Collaboration Meeting**, Virtual, online, December 7-11, 2020.
LOC Member – In charge in particular of the plenary program and of the invitations of plenary speakers + chair of several sessions. See <https://desi.lbl.gov/trac/wiki/Meetings/DESI2020-DECEMBER>

- 2019 • **Rencontres du Vietnam 2019 – Cosmology**, ICISE, Quy Nhon, Vietnam, August 11-17, 2019.
Scientific Program Committee Member. Invitation of speakers & science program selection and preparation. See <http://vietnam.in2p3.fr/2019/Cosmology/>
- 2018 • **2018 International Collaboration Meeting of the Sloan Digital Sky Surveys (SDSS-IV)**, Seoul, South Korea, June 18-22, 2018.
Hosted at Sejong University – Convention Center. Chair of the LOC. Full responsibility of the local logistics and organization. See www.sdss4seoul.com
- 2016 • **The “1st Korea-Italy Symposium on CMB Science and Cosmology”**, Seoul, South Korea, May 30, 2016.
Full ideation, planning, organization, logistics, and financial investments. Also sponsored by the Italian Embassy in Seoul. See <http://www.sejongastrometings.com>
- 2014 • **The 6th KIAS Workshop on “Cosmology and Structure Formation”**, Seoul, South Korea, November 3–7, 2014.
Member of the Local Organizing Committee. Suggested and contacted plenary speakers.
- 2012 • **The 5th KIAS Workshop on “Cosmology and Structure Formation”**, Seoul, South Korea, October 30 – November 4, 2012.
Member of the Local Organizing Committee. Suggested and contacted plenary speakers; coordination of the conference program.
- 2010 • **The 4th KIAS Workshop on “Cosmology and Structure Formation”**, Seoul, South Korea, November 4–6, 2010.
Co-Chair of the Local Organizing Committee. Suggested and contacted plenary speakers, made conference poster; coordination of the program and of the local logistics.
- 2008 • **The 3rd KIAS Workshop on “Cosmology and Structure Formation”**, Seoul, South Korea, October 27–28, 2008.
Member of the Local Organizing Committee.

Visiting Positions

- 2022 • **Max Planck Institute for Astrophysics (MPA)**, Garching, Germany, July 20 – August 24, 2022, Invited by Profs. S. White and V. Springel.
- 2018 • **Tsinghua Center for Astrophysics (THCA)**, Beijing, China, November 20-24, 2018, Invited by Prof. Cheng Li, colloquium and research collaborations.
- 2017 • **Tokyo Institute of Technology (TIT)**, Tokyo, Japan, April 27–30, 2017, Invited by Prof. Masahide Tamaguchi, seminar/colloquium and research collaboration.
- 2016 • **University of Queensland**, Brisbane, Queensland, Australia, July 25–August 11, 2016, CAASTRO Visitor – Collab. research with Tamara Davis.
- **Los Alamos National Laboratory (LANL)**, Los Alamos, NM, USA, April 5–9, 2016, Invited visit and seminar/colloquium.
- **Paris Center for Cosmological Physics (PCCP)**, Paris, France, February 5–8, 2016, for collaborative work.

- 2015 • **Institute of Theoretical Astrophysics, University of Oslo, Oslo, Norway**, January 2015, Collaborative work with David Mota.
- 2014 • **CERN, Geneva, Switzerland**, February 2014, Collaborative work with Julien Lesgourgues.
- 2013 • **Institute of Cosmology and Gravitation (ICG), Portsmouth, UK**, November 2013, Invited by Prof. Bob Nichol.
- **INAF Osservatorio Astronomico di Milano, Merate, Italy**, July 2013, Collaborative work with Carmelita Carbone.
- **Osservatorio Astronomico di Trieste (OAT), Trieste, Italy**, February 2013, Collaborative work with Matteo Viel.
- 2012 • **KIAS, Seoul, South Korea**, October 28–November 9, 2012.
- **POSTECH, Pohang, South Korea**, June 11–22, 2012.
- **National Astronomical Observatories of Chinese Academy of Sciences (NAOC), Beijing, China**, March 25–31, 2012.
- **University of Texas at Austin, Austin, Texas, USA**, January 7–13, 2012, invited by Prof. E. Komatsu.
- 2011 • **Tata Institute of Fundamental Research, Homi Bhabha Road, Mumbai, India**, December 20, 2011.
- **Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences, Warsaw, Poland**, July 12–20, 2011.
- **POSTECH, Pohang, South Korea**, June 6–18, 2011.
- **Max Planck Institute for Extraterrestrial Physics (MPE), Garching, Germany**, April 14–16, 2011.
- **INAF Osservatorio Astronomico di Milano, Merate, Italy**, January 27–29, 2011, invited by Prof. L. Guzzo.
- **CERN, Geneva, Switzerland**, January 10–27, 2011, invited by Prof. A. Riotto.
- 2010 • **Harish-Chandra Research Institute (HRI), Allahabad, India**, December 13–20, 2010.
- **Institute for the Physics and Mathematics of the Universe (IPMU), Tokyo, Japan**, September 23 – October 1, 2010.
- **National Astronomical Observatories of Chinese Academy of Sciences (NAOC), Beijing, China**, June 13–26, 2010.
- **Canadian Institute for Theoretical Astrophysics (CITA), Toronto, Canada**, May 10–31, 2010.
- 2009 • **Anglo Australian Observatory (AAO), Sydney, Australia**, November 22–24, 2009, invited by Prof. M. Colless.
- **Mount Stromlo Observatory, Canberra, Australia**, November 15–17, 2009.

- **Institute for the Physics and Mathematics of the Universe (IPMU)**, *Tokyo, Japan*, April 4–11, 2009, 2010.
- **Shanghai Observatory (SHAO)**, *Shanghai, China*, March 15–18, 2009, invited by Prof. P. Zhang.
- **KITCP**, *Beijing, China*, February 22 – March 15, 2009, invited by Prof. R. Brandenberger.

Seminars and Conference Talks (Last 5 years)

- 2022 148. **‘Cosmic Topology, Persistent Homology, and Massive Neutrinos’**, *Pasadena, CA, USA (virtual)*, June 15, 2022, 240th AAS Meeting – Session #312 ‘Cosmology II’ – Contribution 312.08.
147. **‘DESI C3 Lensing Infrastructure: CoLoRe Mocks’**, *Seoul, Korea (virtual)*, May 18, 2022, DESI C3 Lensing Call.
Invited by Anna Porredon & Chris Blake
146. **‘Dark Sector and Cosmological Neutrinos: The Sejong Hydrodynamical Simulation Suite’**, *New York City, NY, USA*, April 12, 2022, APS April Meeting 2022 – Quarks to Cosmos (Q2C) – Session: Y14 ‘Cosmological Inference From Early and Late Universe’.
145. **‘Sejong Cosmology Group: DESI Science’**, *Seoul, Korea (virtual)*, March 15, 2022, DESI C3 General Call.
Invited by Johannes Lange and Simone Ferraro
144. **‘Modeling Massive Neutrinos, Dark Radiation, and WDM: The Sejong Suite’**, *La Thuile, Italy*, January 24, 2022, 56th Rencontres de Moriond – Cosmology 2022.
- 2021 143. **‘3PCF of the SDSS-IV eBOSS DR16 Quasar Sample’**, *Seoul, Korea/Remotely*, October 6, 2021, eBOSS Final Virtual Meeting 2021.
142. **‘Dark Sector Cosmology and Particle Physics Synergies’**, *Kunsan University, Kunsan, Korea, but Virtual*, August 6, 2021, Workshop on Cosmology and Quantum Space Time (CQeST 2021).
Plenary, Invited by Prof. Stefano Scopel – Session ‘Cosmology and Dark Matter’
141. **‘Massive Neutrinos and Dark Sector Cosmology from the High-Redshift Cosmic Web’**, *Virtual*, July 12, 2021, 2021 Meeting of the Division of Particles and Fields of the American Physical Society (DPF21).
Parallel, Session ‘Cosmology & Dark Energy’ – ID:114
- 2020 140. **‘Cosmology Meets Particle Physics: Neutrinos and Dark Sector’**, *Pohang, Korea (virtual)*, November 16, 2020, Astroparticle: the Next Frontier of Fundamental Physics – APCTP – Plenary, Invited.
139. **‘eBOSS Final Results: Model Testing and Mock Challenges’**, *Seoul, Korea (virtual)*, November 4, 2020, The 9th KIAS Workshop on Cosmology and Structure Formation – ‘LSS’ Session – Invited.

- 138. **‘There is no Place like Home: The Sejong Suite’**, *Seoul, Korea (virtual)*, October 15, 2020, KAS Fall 2020 Meeting – ‘Cosmology’ Parallel Session.
- 137. **‘N-Body Mock Challenges for eBOSS DR16 Galaxy Clustering Measurements’**, *New York City, USA (virtual)*, June 23, 2020, SDSS Virtual Meeting – Flatiron Institute, NYC, USA – ‘Cosmology’ Parallel Session.
- 136. **‘N-Body Simulations and Model Testing’**, *Honolulu, Hawaii, USA*, January 8, 2020, 235th AAS Meeting – Special Session #413 ‘Cosmological Measurements from SDSS: Final Results from eBOSS’.
- 135. **‘The Sejong Simulation Suite: Presentation and First Results’**, *Honolulu, Hawaii, USA*, January 5, 2020, 235th AAS Meeting – Session #153 Cosmology.
- 2019 134. **‘The Invisible Universe: Massive Neutrinos, Dark Energy, and the SDSS’**, *Seoul, Korea*, December 13, 2019, University of Seoul – Colloquium.
Invited by Prof. Sungwook Hong
- 133. **‘eBOSS Galaxy Clustering Mock Challenge: Blind Releases’**, *Seoul, Korea/Remotely*, October 9, 2019, eBOSS GC WG LRG/ELG/QSO Long Call 2019.
- 132. **‘Massive Neutrinos and the Dark Sector: Simulations & Bounds from the High- z Cosmic Web’**, *Venice, Italy*, August 21, 2019, CosmoCruise 2019: From the Early to the Late Universe – COSTA Deliziosa, Costa Crociere Mediterranean Cruise.
- 131. **‘Neutrinos, Dark Sector Cosmology, and the Lyman- α Forest’**, *Quy Nhon, Vietnam*, August 13, 2019, ‘15th Rencontres du Vietnam – Cosmology 2019’ – ICISE.
Plenary, invited by Prof. Jacques Dumarchez
- 130. **‘Let There Be Light: Unveiling the Dark Universe’**, *Quy Nhon, Vietnam*, August 12, 2019, ‘15th Rencontres du Vietnam – Cosmology 2019’ – ICISE.
Plenary, Opening, invited by Prof. Jacques Dumarchez
- 129. **‘eBOSS Galaxy Clustering Mock Challenge: Blind Set 1’**, *Seoul, Korea/Remotely*, July 24, 2019, LRG Video Meeting 2019.
- 128. **‘eBOSS Mock Challenge’**, *Berkeley, USA*, July 11, 2019, DESI Collaboration Meeting 2019.
- 127. **‘Outer Rim Mock Challenge for eBOSS Galaxy Clustering Measurements’**, *Ensenada, Mexico*, June 27, 2019, SDSS-IV/V Collaboration Meeting 2019.
- 126. **‘OuterRim Mock Challenge – Galaxies – Data Description’**, *Seoul, Korea/Remotely*, April 4, 2019, eBOSS Mock Challenge Meeting.
- 125. **‘OuterRim Mock Challenge – Galaxies – First Release’**, *Seoul, Korea/Remotely*, March 13, 2019, eBOSS Galaxy Clustering WG Meeting.

- 124. **‘Neutrinos and High-Redshift Cosmic Web with the Lyman- α Forest’**, *Seoul, Korea*, January 25, 2019, 1st Korean Ly α Workshop – Sejong University. Plenary, invited by Prof. Heewon Lee
- 2018 123. **‘eBOSS Sims WG: Wrap-Up’**, *Paris, France*, December 12, 2018, Plenary talk at the final eBOSS 2018 collaboration meeting – LNPHE.
- 122. **‘eBOSS Sims WG: Status and DR16 Plans’**, *Paris, France*, December 10, 2018, Plenary talk at the final eBOSS 2018 collaboration meeting – LNPHE.
- 121. **‘Cosmological Neutrinos and the Dark Side of the Universe with Large-Volume Surveys’**, *Beijing, China*, November 22, 2018, Invited Colloquium by Prof. Cheng Li – Tsinghua Center for Astrophysics (THCA).
- 120. **‘Modelling eBOSS Galaxies and Quasars: Techniques, Tools, Products’**, *Seoul, Korea*, June 18, 2018, Plenary talk at the ‘SDSS-IV 2018 International Collaboration Meeting’ – Convention Center, Sejong University.
- 119. **‘Welcome Speech’**, *Seoul, Korea*, June 18, 2018, Plenary opening talk at the ‘SDSS-IV 2018 International Collaboration Meeting’ – Convention Center, Sejong University.
- 118. **‘Impact of Massive Neutrinos and Dark Radiation on the High-Redshift Cosmic Web’**, *Hongcheon, Korea*, May 11, 2018, Parallel talk at the ‘Spring 2018 Annual Meeting of the Korean Astronomical Society – Cosmology session’ – Daemyung Resort Vivaldi Park.
- 117. **‘Neutrinos, Dark Radiation, and the High-Redshift Cosmic Web’**, *La Thuile, Aosta Valley, Italy*, March 22, 2018, Plenary talk at the ‘53rd Rencontres de Moriond – Cosmology 2018’ – Hotel Planibel.
- 116. **‘Simulations WG: Summary and Forward Plans’**, *Munich, Germany*, February 9, 2018, eBOSS Collaboration Meeting – MPE Garching. Joint parallel session – simulations & clustering WGs
- 115. **‘Synergies between Simulations, Clustering, and Ly α Forest WGs’**, *Munich, Germany*, February 8, 2018, eBOSS Collaboration Meeting – MPE Garching. Joint parallel session – simulations & clustering WGs
- 114. **‘BAO and Primordial non-Gaussianity in the 3PCF of eBOSS Quasars/LRGs/ELGs’**, *Munich, Germany*, February 8, 2018, eBOSS Collaboration Meeting – MPE Garching. Galaxy Clustering parallel session
- 113. **‘Simulations WG Report and OuterRim Progress’**, *Munich, Germany*, February 8, 2018, eBOSS Collaboration Meeting – MPE Garching. Plenary

Conferences, Workshops, Symposia (Last 5 years)

- 2022 • **‘56th Rencontres de Moriond – Cosmology 2022’**, *La Thuile, Aosta Valley, Italy*, January 23 – 30, 2022, Hotel Planibel.
- 2021 • **Workshop on Cosmology and Quantum Space Time (CQUeST 2021)**, *Kunsan National University, Korea*, August 2-6, 2021, Virtual due to COVID situation.
- **‘The 17th Italian-Korean Symposium for Relativistic Astrophysics’**, *Kunsan National University, Korea*, August 2-6, 2021, Virtual due to COVID situation.
- 2020 • **‘Astroparticle: the Next Frontier of Fundamental Physics’**, *Pohang, Korea*, November 16–19, 2020, APCTP but Virtual – online.
- **‘The 9th KIAS Workshop on Cosmology and Structure Formation’**, *Seoul, Korea*, November 2–6, 2020, Virtual – online.
- 2019 • **‘CosmoCruise 2019: From the Early to the Late Universe’**, *Venice, Italy*, August 18–25, 2019, COSTA Deliziosa – Crociere Costa – Mediterraneo.
- **15th Rencontres du Vietnam – Cosmology**, *Quy Nhon, Vietnam*, August 11-17, 2019, ICISE conference center.
- **‘First Korean Lyman- α Workshop’**, *Seoul, Korea*, January 23-25, 2019, Sejong University.
- 2018 • **‘First Italian Research Day in the World Celebration’**, *Seoul, Korea*, April 12, 2018, Residence of the Italian Ambassador to Korea, Hannam-Dong.
- **‘53rd Rencontres de Moriond – Cosmology 2018’**, *La Thuile, Aosta Valley, Italy*, March 17 – 24, 2018, Hotel Planibel.
- 2017 • **VII Essential Cosmology for the Next Generation – Cosmology on the Beach 2017**, *Punta Mita, Pacific Coast, Mexico*, December 10-16, 2017, Hotel Iberostar.
- **13th Rencontres du Vietnam – Cosmology**, *Quy Nhon, Vietnam*, July 9-15, 2017, ICISE conference center.

Meetings (Last 5 years)

- 2022 • **DESI 2022 Summer Annual Collaboration Meeting**, *Berkeley, CA, USA*, June 21-25, 2022, Part of the organizing committee.
- **240th AAS Meeting**, *Pasadena, CA, USA (virtually)*, June 12-16, 2022, Pasadena Convention Center.
- **APS April Meeting 2022 – Quarks to Cosmos (Q2C)**, *New York City, NY, USA*, April 8-12, 2022, New York Marriott Marquis, New York, NY.
- 2021 • **DESI 2021 Winter Annual Collaboration Meeting**, *Virtual*, December 6-10, 2021, Held remotely online because of pandemic.

- **SDSS-IV/V 2021 Collaboration Meeting**, *Baltimore, USA (eventually virtual)*, August 11-12 & 16-17, 2021, Johns Hopkins University, USA.
- **The Vera Rubin Observatory (LSST) Project Community Workshop 2021**, *Online (virtual)*, August 9-13, 2021.
- **2021 Meeting of the Division of Particles and Fields of the American Physical Society (DPF21)**, *Virtual*, July 12-14, 2021, Held remotely online because of pandemic.
- **DESI 2021 Summer Annual Collaboration Meeting**, *Virtual*, June 14-18, 2021, Held remotely online because of pandemic.
- 2020 • **DESI 2020 Winter Annual Collaboration Meeting**, *Virtual*, December 7-11, 2020, Held remotely online because of pandemic.
- **Fall 2020 Annual Meeting of the Korean Astronomical Society**, *Seoul, Korea*, October 14-16, 2020, Virtual, online.
- **The Vera Rubin Observatory (LSST) Project Community Workshop 2020**, *Online (virtual)*, August 10-14, 2020.
- **SDSS-IV/V 2020 Collaboration Meeting**, *New York, USA (virtual)*, June 22-26, 2020, Flatiron Institute, NYU.
- **235th AAS Meeting**, *Honolulu, Hawaii, USA*, January 4-8, 2020, Hawaii Convention Center.
- 2019 • **Fall 2019 Annual Meeting of the Korean Astronomical Society**, *Seoul, Korea*, October 16-18, 2019, KIAS.
- **eBOSS DR16 Clustering and Cosmology Papers Meeting**, *Paris, France*, September 16-18, 2019, CEA-Saclay ‘Orme des Merisiers’, Université Paris-Saclay.
- **LSST KASI 2019 Meeting**, *Daejeon, Korea*, August 29, 2019, KASI Headquarter.
- **DESI 2019 Collaboration Meeting**, *Berkeley, USA*, July 8-12, 2019, Lawrence Berkeley National Laboratory (LBNL).
- 2018 • **eBOSS Collaboration Meeting**, *Paris, France*, December 10-14, 2018, Laboratoire de Physique Nucléaire et des Hautes Énergies (LNPHE), Pierre et Marie Curie Campus of the Sorbonne University.
- **DESI 2018 Collaboration Meeting**, *Barcelona, Spain*, October 16-20, 2018, Hotel Eden Roc, Sant Feliu de Guixols.
- **SDSS-IV 2018 Collaboration Meeting**, *Seoul, Korea*, June 18-22, 2018, Convention Center, Sejong University.
- **DESI 2018 Collaboration Meeting**, *Tucson, AZ, USA*, May 23-25, 2018, Tucson Marriott University Park Hotel.
- **Spring 2018 Annual Meeting of the Korean Astronomical Society**, *Hongcheon, Korea*, May 10-11, 2018, Daemyung Resort Vivaldi Park.

- **eBOSS Collaboration Meeting**, *Munich, Germany*, February 7-10, 2018, MPE – Garching.
- 2017 • **DESI 2017 Collaboration Meeting**, *Stanford, CA, USA*, December 4-8, 2017, SLAC.
- **DESI 2017 Collaboration Meeting**, *Berkeley, CA, USA*, June 19-23, 2017, LBNL.

Languages

Italian	Native	
English	Native	
French	Advanced	
Korean	Intermediate	<i>Reading, writing, basic conversation. YBM Level 1 certificate</i>

Professional Memberships

- DESI – Continuing Participant, Member
- American Physical Society (APS) Regular Membership (December 2021–present)
- IAU Divisions: Membership – Division A (Fundamental Astronomy); Division B (Facilities, Technologies and Data Science); Division D (High Energy Phenomena and Fundamental Physics); Division H (Interstellar Matter and Local Universe); Division J (Galaxies and Cosmology)
- IAU Commissions: Membership – Commission B1 (Computational Astrophysics); Inter-Division B-H-J (Commission Intergalactic Medium); Cross-Division D-J (Commission Supermassive Black Holes, Feedback and Galaxy Evolution)
- LSST – PI Scientist within the Korea-KASI-LSST Participation group
- SDSS-IV – Lead Scientist for Sejong University and Advisory Council Member
- Korean Survey Science Group (KSSG) member
- KDES – Korea Dark Energy Science group member
- SDSS-III – BOSS Lyman- α Forest working group member
- SDSS-III within the French Participation Group (September 2012 – July 2014)
- SDSS-III as a Korean Scientist (January 2009 – August 2012)
- American Astronomical Society (AAS) International Affiliate Membership (January 2012–present)
- Korean Astronomical Society Full Membership

UPDATED

September 8, 2022 – Seoul, Korea