

2022 NEREC Summer Fellows Program

Nuclear Nonproliferation Education and Research Center (NEREC), KAIST, ROK

Purpose To train and nurture next-generation global leaders in nuclear nonproliferation and related nuclear policy

Eligibility Undergraduate or Graduate students who are interested in nuclear issues
(※Undergraduate student class standing: Junior and Senior)

Period July 10 – August 12, 2022 (5 weeks, **OFFLINE program**)

Location KAIST, Daejeon, South Korea

Program (Conducted in English)

- **Lectures** by world-renowned scholars on theories and policy issues of nuclear nonproliferation, nuclear technology and energy, related international relations and science & technology policy
- **Group research work** with international peer students with diverse background on selected topics of nuclear nonproliferation or related nuclear policy issues
- **Research poster presentation** at NEREC Conference on Nuclear Nonproliferation
- **Field study** in Seoul, Daejeon and Gyeongju to be introduced to major nuclear and policy institutes of Korea
 - Seoul: Visit to governmental organizations and think-tanks i.e. the National Assembly, the Ministry of Foreign Affairs, The Sejong Institute, Korea National Diplomatic Academy, and exploration of Korean history and culture such as visit to DMZ area
 - Daejeon: Visit to nuclear research institutes i.e. Korea Atomic Energy Research Institute and Korea Institute of Nuclear Nonproliferation and Control
 - Gyeongju: Visit to nuclear facilities including Wolsong Nuclear power plant and Korea and Korea Radioactive Waste Agency, and exploration of Korean history and culture such as Bulguksa Temple
- **Virtual meetings** with nuclear experts of China, Japan and other international organizations i.e. Carnegie-Tsinghua Center for Global Policy, Japan Atomic Energy Agency and the CTBTO

Benefits

NEREC covers lodging and meals for non-resident students for 5-week program, and all costs related to field trips, cultural events and conference participation. The benefits amount to approximately \$3,000.

(※The cost of self-quarantine for the students traveling from overseas will be covered by NEREC if such policy is still enforced in July)

Credits

All students receive Nuclear Nonproliferation Course Certificate upon successful completion. Students can get a letter from the Director of NEREC endorsing the award of equivalent course credits from his/her university.

(※Note that the letter is unofficial.)

Selection Process

Application Deadline	March 6	The application must be submitted via email.
Evaluation	March 7 to 27	Skype interview may be included.
Decision Notification	March 28	by email
Confirmation by Student	April 10	by email

*NEREC will conduct a reference check via email during the selection process

Application Process

The application documents are as below:

- 1) 2022 NEREC Summer Fellows Program Application Form: Resume with a headshot and personal statement, names/contact info for two references (including your academic advisor)
- 2) Academic transcripts of all degrees: A copy of an official one or computer printout is acceptable.
- 3) **COVID-19 Vaccination Certificate**
(※ Since this program is run as an offline program, it is required that all participants get fully vaccinated)

All the documents should be submitted via email by March 6.

- Email address: peacemaker.yh@kaist.ac.kr

Contact Information

For more information, please contact:

Yunhwa Choi (Ms.)

Program Manager

Nuclear Nonproliferation Education and Research Center (NEREC),

Korea Advanced Institute of Science and Technology (KAIST)

| Email: peacemaker.yh@kaist.ac.kr

| NEREC Webpage: <http://nrec.or.kr>

[Appendix] Introduction to NEREC and NEREC Summer Fellows Program and NEREC

KAIST NEREC Since 2014

Nuclear Nonproliferation Education and Research Center (NEREC)

Nuclear Nonproliferation Education and Research Center (NEREC) of Korea Advanced Institute of Science and Technology (KAIST), established in April 2014, is currently the sole university organization for nuclear non-proliferation research and training. The center has been run as a think tank undertaking education and research to foster global nuclear non-proliferation conducive to peaceful use of nuclear technology. The Center has three objectives: (1) to train and nurture non-proliferation human resources, (2) to conduct non-proliferation policy research combining technical expertise and policy insights, and (3) to engage in discussions on the peaceful use of nuclear technology and various aspects of nuclear non-proliferation.

- Website – <http://nerec.or.kr>
- YouTube Channel - <https://www.youtube.com/channel/UCKfSZGGzVIOOshBLP-PsncQ>
- Facebook - <https://www.facebook.com/kaistnerec/>
- Instagram - https://www.instagram.com/nerec_kaist/

Korea Advanced Institute of Science and Technology (KAIST)

KAIST is the first and top science & technology research university in Korea. Founded in 1971 to raise elites in science & technology, critical for Korea's economic takeoff, KAIST has been the gateway to advanced science & technology, innovation, and a driving engine for the development of Korea for past 4 decades. KAIST has always been touted as Korea's top-notch research university of science wunderkinds and world-famous faculty members. KAIST strives to address global challenges facing humanity through competitive research innovation and convergence. In order to meet the new demands of producing young talents who care for global citizenship and social responsibility, KAIST now offers cross-disciplinary academic and research. KAIST fosters the innovation and creativity of global "thought leaders" who no longer abide by the boundaries between disciplines and departments, but instead work under the greater umbrella of interdisciplinary academic convergence.

Director of NEREC

Dr. Man-Sung Yim is Professor of the Department of Nuclear and Quantum Engineering, Associate Vice President of the International Office, Head of Office of Global Initiatives, and Director of Nuclear Nonproliferation Education and Research Center (NEREC) at Korea Advanced Institute of Science and Technology (KAIST). Formerly, he worked at Korea Atomic Energy Research Institute, and taught at North Carolina State University (NCSU) and MIT. He was also a joint faculty between Oak Ridge National Lab (Global Nuclear Security Technology Division) and NCSU, Sam Nunn International Security Fellow at Georgia Tech, a member of North Carolina Science Advisory Board on Air Toxics Emissions, and a member of Nuclear Nonproliferation External Steering Committee of Idaho National Laboratory. Upon return to South Korea in 2011, Prof. Yim founded NEREC (Nuclear Nonproliferation Education and Research Center) to raise the level of national capacity in nuclear nonproliferation and started NEREC International Summer Fellows program to train future leaders of nuclear nonproliferation. He is currently a member of Korean National Academy of Engineering, the Scientific Program Committee of Comprehensive Test Ban Treaty Organization (CTBTO), and serves as Associate Editor (Asia) of *Nuclear Technology* for American Nuclear Society, an editor of *Journal for Peace and Nuclear Disarmament*, and a member of Editorial Advisory Board of *Progress in Nuclear Energy* and *International Journal of Nuclear Security*. Dr. Yim's research work aims at safe and responsible use of nuclear energy covering activities in nuclear nonproliferation/security, nuclear waste management, nuclear fuel cycle, nuclear safety, and nuclear energy policy. He has written a textbook on nuclear waste management with Springer Nature. Dr. Yim is a graduate of Seoul National University (BS/MS), University of Cincinnati (PhD), and Harvard University (SM/ScD).

NEREC Faculty

Dr. Hojin Ryu is an Associate Professor of the Department of Nuclear and Quantum Engineering and Deputy Director of Nuclear Nonproliferation Education and Research Center at Korea Advanced Institute of Science and Technology (KAIST). Dr. Ryu is Head of Nuclear Fuel Materials Laboratory of KAIST. Prior to his joining KAIST as a faculty member of the Department of Nuclear and Quantum Engineering in 2013, Dr. Ryu had worked as a senior and principal researcher at the Korea Atomic Energy Research Institute (KAERI) for 13 years. He participated in the research projects on advanced materials and processing technologies for nuclear fuel, the nuclear fuel cycle, and radioactive waste management. While at KAERI, he was a visiting scholar at Argonne National Laboratory (ANL, IL, USA, 2005-2007), and International Atomic Energy Agency (IAEA, Vienna, Austria, 2009-2011).

Dr. So Young Kim is the associate professor and the former head of the Graduate School of Science & Technology Policy at KAIST. Prof. Kim worked as a data archivist for the Social Science Computing Center at the University of Chicago and taught as an assistant professor at Florida Atlantic University before joining KAIST. As a public intellectual, Prof. Kim has served numerous governmental committees including the Spent Nuclear Fuel Policy Committee Chairperson (Ministry of Industry, Trade and Economy), Advisory Committee for Fiscal Policy (Ministry of Economy and Finance), National S&T Vision Committee, National R&D Program Evaluation Committee, Advisory Committee for the Science & Engineering Workforce Five-Year Plan, (all under the Ministry of Science and ICT), and the Committee for Gender Equality in University Faculty Recruitment (Ministry of Gender Equality and Family). She graduated from Seoul National University with English Education for the BA and Political Science for the MA. She then earned her Ph.D. and M.S. from Northwestern University with Fulbright Scholarship specializing in International Political Economy and Mathematical Methods in Social Sciences.

Dr. Sungyeol Choi is Associate Professor of the Department of Nuclear Engineering at Seoul National University. Previously he was Assistant Professor of the Department of Nuclear and Quantum Engineering and Deputy Director of Nuclear Nonproliferation Education and Research Center at Korea Advanced Institute of Science and Technology (KAIST). He was a senior researcher at Division of Nuclear Fuel Cycle Technology Development, Korea Atomic Energy Research Institute. From 2010 to 2012, he was a research fellow at Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University. He earned Ph.D. in Nuclear Engineering in 2012 and B.S. in Nuclear Engineering (summa cum laude) in 2008 from Seoul National University. In 2008, he authored Lessons Learned from the Development of the Korean Nuclear Power Programme for the IAEA. He has published several peer-reviewed articles related to molten-salt pyroprocessing, fast reactors, nuclear waste disposal, nuclear nonproliferation, and nuclear fuel cycle system analysis.

Dr. Sang-Hyun Lee is President of the Sejong Institute, and President of Korea Nuclear Policy Society. He recently served as Director General of Policy Planning at the Ministry of Foreign Affairs, ROK. His research areas include international politics and security, ROK-US relations, inter-Korean relations and security in the East Asia. He received his B.A. from Seoul National University and Ph.D. in Political Science from University of Illinois (Urbana-Champaign).

Dr. Bong Geun Jun is Professor and Director-general of the Department of National Security and Unification Studies at the Korea National Diplomatic Academy. Previously, he was a policy advisor to the Minister of Unification, visiting scholar at Keio University, secretary to the president for international affairs at the Presidential Office, and a professional staffer at the Asia Foundation's Center for U.S.-Korea Policy. His research areas include the North Korean nuclear issue, inter-Korean relations, non-proliferation, nuclear security, and nuclear energy policies. He received his B.A. and M.A. from Seoul National University and his Ph.D. in political science from the University of Oregon.

Dr. Kwang Seok Lee has over 25 years of experiences in policy issues surrounding the use of nuclear technology. He recently served as Director of Policy Analysis at Korea Atomic Energy Research Institute. He graduates from Seoul National University (BS) and Virginia Tech (PhD).

NEREC Summer Fellows Program

207 excellent alumni from 43 countries representing 84 top-notch universities since 2014

The NEREC Summer Fellows Program, an intensive short-term education and training course of nuclear nonproliferation for undergraduate/graduate students, aims to train and nurture next generation international leaders in nuclear nonproliferation. For five weeks, Fellow students from various majors such as nuclear engineering, international relations, economics and others from major universities at home and abroad will participate in various educational and research activities including lectures, group research projects, and field trips to government agencies, think-tanks and nuclear facilities in Korea and abroad (including virtual meetings and workshops). The program will provide opportunities not only for interacting with other fellow colleagues, but also for meeting (including on-line) face-to-face with experts and leaders in the field, which will contribute to build networks for further collaboration and achievement. Together, we will build a better world for the global community.

Preliminary Schedule for 2022 NEREC Summer Fellows Program

Time	Mon	Tue	Wed	Thu	Fri
W1	Jul 11	Jul 12	Jul 13	Jul 14	Jul 15
9-12	Lecture	Lecture	Lecture	Lecture	Lecture
14-18	Research	Research	Research	Research	Research
W2	Jul 18	Jul 19	Jul 20	Jul 21	Jul 22
9-12	Lecture	Lecture	Lecture	Lecture	Lecture
14-18	Research	Research	Research	Research	Research
W3	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29
9-12	Lecture	Lecture	Lecture	Lecture	Lecture
14-18	Research	Research	Research	Research	Research
W4	Aug 4	Aug 5	Aug 6	Aug 7	Aug 8
	Research	2022 NEREC Conference		Field Study (Daejeon)	
W5	Aug 8	Aug 9	Aug 10	Aug 11	Aug 12
	Field Study (Gyeongju & Seoul), Virtual Meetings, and Closing Ceremony (Aug 12)				

* The schedule is subject to change.

2021 Program > List of Lecturers (※Alphabetical order of last name)

- 1) Sungyeol Choi, Associate Professor, Department of Nuclear Engineering, Seoul National University
- 2) Justin Hastings, Associate Professor of Political Science, University of Sidney
- 3) So Young Kim, Associate Professor, Graduate School of Science and Technology Policy, KAIST
- 4) Sung-han Kim, Professor, Graduate School of International Studies; President, Ilmin International Relations Institute, Korea University
- 5) Chung Min Lee, Senior Fellow, Asia Program, Carnegie Endowment for International Peace
- 6) Sang-hyun Lee, President, The Sejong Institute; President of Korean Nuclear Policy Society
- 7) Steven Miller, Director, International Security Program, Kennedy School of Government, Harvard University
- 8) Vipin Narang, Professor of Political Science, MIT
- 9) Ankit Panda, Stanton Senior Fellow, Nuclear Policy Program, Carnegie Endowment on International Peace
- 10) Hyeon Seok Park, Research Fellow, Governance Research Group, National Assembly Futures Institute
- 11) Scott Sagan, The Caroline S. G. Munro Professor of Political Science, Stanford University
- 12) Seong-Ho Sheen, Professor, Graduate School of International Studies, Seoul National University
- 13) Man-Sung Yim, Professor, Department of Nuclear and Quantum Engineering; Associate Vice President of International Office; Director, NEREC, KAIST