

Curriculum Vitae
Moo-Hyun Cho

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Birth Date: October 1, 1954 (married with 2 daughters)
Nationality: Republic of Korea
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■ **Education:**

Ph.D. (Oct. 1988): Nuclear Eng. & Eng. Physics Dept, Univ. of Wisconsin-Madison, U.S.A.
MS (Feb. 1979): Nuclear Engineering, Graduate School, Seoul National University, Seoul, Korea
BS (Feb. 1977): Nuclear Engineering, Seoul National University, Seoul, Korea

■ **Experiences & Achievements:**

<< Expecting retirement on Feb.28, 2020; no longer accepting graduate students nor postdocs! >>

Mar. 2018 – (present) **Director** of POSTECH-NINT (National Institute for Nanomaterials Technology)
Sep. 2015 - Aug. 2017 Exec. Vice President & **Provost**, POSTECH (<http://www.postech.ac.kr/eng>)
Sep. 2011 - Aug. 2015 **Director** of PAL (Pohang Accelerator Lab), POSTECH (<http://pal.postech.ac.kr/r/paleng/>)
Jan. 2011 - present Adjunct professor of the Division of Advanced Nuclear Engineering
Aug. 2010 – Aug. 2012 Member of Science Advisory Committee, National Fusion Research Institute, S. Korea (<https://www.nfri.re.kr/eng/index>)
Jan. 2010 - Aug. 2011 **Dean** of Research Affair, POSTECH, Pohang, S. Korea
May 2010 - May 2012 Member of S&T Policy Advisory Committee of MEST, S. Korea (Space & Big-Science Fields)
May 2010 - May 2012 Member of Working Committee for National Thermonuclear Fusion Research, S. Korea
Feb. 2008 - Dec. 2009 **Division Director** of Nuclear Fusion Program, National Research Foundation (2 yr. full-time appointment)
July 2009 - Jun. 2011 Member of advisory group of KRCF (Korea Research Council of Fundamental Sci. & Tech. especially for the National Plasma Fusion and plasma technology R&D)
Jan. 2009 - Dec. 2010 **Vice president** of the Korean Physical Society (KPS)

- Apr. 2007 - Apr. 2010 Member of ITER TAG (Technical Advisory Group)
- Dec. 1995 - Aug. 2007 *KSTAR Project* ; construction of the Superconducting Coil Power Supply System and the Microwave Heating & Current Drive Systems
- Jan. 2005 - Dec. 2006 **Chief Editor** of “Physics & High Technology” published monthly by KPS (Korean Physics Society), S. Korea
- Jun. 2002 - May. 2004 **Chairman** of Division of Plasma Physics, KPS, S. Korea
- Mar. 2000 - Feb. 2001 APS (RF Group) Visiting Scientist, Argonne National Lab, U.S.A.
- Mar. 1997 - Apr. 2003 *Environmental Projects*; Special pulsed plasma system development (Technology successfully transferred to POSCOict)
- Sept. 1989 - Sept. 1998 *Pohang Light Source (PLS) Project; 2-GeV e-Linac construction.* (Contributed to build the high power pulse modulator systems for the 80-MW class klystrons)
- Jan. 1997 - present Adjunct professor at the School of Environmental Sci. & Eng., POSTECH
- Mar. 2002 - present Tenured professor, Physics Department, POSTECH
- Sept. 1993 - Mar. 2002 Associate Professor, Physics Department, POSTECH
- Aug. 1989 - Sept. 1993 Assistant Professor, Physics Department, POSTECH
- Oct. 1988 - Aug. 1989 Post Doc., Univ. of Wisconsin-Madison, U.S.A.
- Jan. 1983 - Oct. 1988 Research Assistant, Univ. of Wisconsin-Madison, U.S.A.; worked on experimental study of the dynamic plasma sheath phenomena
- Jun. 1979 - Jun. 1982: Full time Physics Instructor at the 3rd Military Academy, S. Korea

■ Fields of Research Interest:

Experimental study of plasma physics and plasma processing technology
 Industrial applications of plasma & accelerator technologies for environmental engineering
 Big science project planning and management

■ Professional Society:

Korean Physical Society (Fellowship member)
 Korean Nuclear Society (Lifetime membership)
 Korea Accelerator & Plasma Research Association (Member of board of directors)
 American Physical Society (Division of Plasma Physics)
 IEEE (Plasma Science)

■ Award & Citation:

- **Minister of Education**, Science and Technology citation for the work achievement during the KSTAR construction project (Sep. 9, 2009)
- **Korea Presidential citation** for the work achievement during the PLS construction (Dec. 4, 1994)
- Citation of **Pohang City Mayor** for the community service for public science education (Jun. 1, 2005)
- Group Bronze Award for the Nationwide competition of Voluntary Service for the Popularization

of Science (participated with “Fun Physics Mobile Laboratory” for students in remote countryside) organized by **Joong-Ang Daily Newspaper** (Dec. 2006)

■ Graduate Students Thesis Guide since 1989:

24 Ph.D. and 24 Master degree students, and currently guiding 3 graduate students. (As of Dec 2018).

■ Journal publications and conference participations:

- Professor Moohyun Cho authored over 150 reviewed journal publications for the work he carried out with graduate students and researchers. He also participated numerous international conferences and expert workshops related with particle accelerators and plasma fusion research.

- Below is the selected partial list of scientific journal publications

1. “**Neutron capture yields and resonance parameters of dysprosium isotopes measured at Japan Proton Accelerator Research Complex,**” S.G. Shin, Y.U. Kye, W. Namkung, M.H. Cho, Y.-R. Kang, M.W. Lee, G.N. Kim, T.-I. Ro, J.E. Lee, T. Katabuchi and K. Terada Eur. Phys. J. A, 54:226 (2018 Dec)
2. “**Precision Control of the Electron Longitudinal Bunch Shape Using an Emittance-Exchange Beam Line,**” G. Ha, M. H. Cho, and W. Namkung, J. G. Power, D. S. Doran, E. E. Wisniewski, M. Conde, W. Gai, W. Liu, C. Whiteford, Q. Gao, K.-J. Kim, A. Zholents, and Y.-E Sun, C. Jing, P. Piot, Phys Rev Lett 118, 104801 (2017 March)
3. “**Measurement of isomeric yield ratios for the $^{110}\text{Pd}(\gamma,n)^{109\text{m.g}}\text{Pd}$ reaction,**” Nguyen Thi Hien, Guinyun Kim, Kwangsoo Kim, Muhammad Nadeem, Md. Shakilur Rahman, Nguyen Van Do, Pham Duc Khue, Kim Tien Thanh, Sung-Gyun Shin, Moo-Hyun Cho, J Radioanal Nucl Chem (2017) 311:p1559–1564
4. “**Sheath expansion of two-dimensional grid electrodes subjected to short pulses of negative high-voltage,**” Changho Yi, Huijea Lee, Byungjae Park, Won Namkung, and Moohyun Cho, Plasma Source Sci. Tech 24 (2015) 0150032 (6pp)
5. “**Commissioning of the PLS-II,**” S. Shin S. Kwon, D-T. Kim, S.H. Nam, M. Cho et. al, JINST (J. INSTRUMENTATION) 8, P01019 (2013) (12pp)
6. “**An overview of KSTAR results,**” Jong-Gu Kwak, Y.K. Oh, H.L. Yang, M. Kwon, G.S. Lee, J.G. Bak, E.N. Bang, M.H. Cho, et. al. and the **KSTAR Team**, Nucl. Fusion 53 (2013) 104005 (15pp)
6. “**Test result of 5 GHz, 500kW CW prototype klystron for KSTAR LHCD system,**” H. Do, S. Park, J.H. Jeong, Y.S. Bae, H.L. Yang, L. Delpech, R. Magne, G.T. Hoang, H. Park, M.H. Cho, W. Namkung, Fusion Engineering and Design 86 (2011) 992–995
7. “**Hydrogen recovery from the thermal plasma gasification of solid waste,**” Youngchul Byun, Moohyun Cho, Jae Woo Chung, Won Namkung, Hyeon Don Lee, Sung Duk Jang, Young-Suk Kim, Jin-Ho Lee, Carg-Ro Lee, Soon-Mo Hwang, J. Hazardous Materials, V.190(1-3), pp317-323 (June 2011) /ISSN 0304-3894
8. “**Development status of KSTAR 5GHz LHCD system,**” S. Park, H. Do, J.H. Jeong, W. Namkung, M.H. Cho, H. Park, Y.S. Bae, H.L. Yang, R. Ellis, J.R. Wilson, J. Hosea, Fusion Engineering and Design 85 (2010) 197–204
9. “**Nuclear Data Production Facility Based on the Electron Linac,**” G. N. Kim, R. Machrafi, H. Ahmed, D. Son, V. Skoy, Y. S. Lee, M. H. Cho, H. S. Kang, I. S. Ko, W. Namkung, J. Korean Phys. Soc., 43, 479 (2003)
10. “**Study of the effects of ECH power and pulse length on preionization in the KSTAR Tokamak,**” Y. S. Bae, W. Namkung, M. H. Cho, A. C. England, IEEE Trans. Plasma Sci., PS-31, 745-751 (2003)
11. “**Particle and Power Balances of Hot-Filament Discharge Plasmas in a Multi-dipole Devices,**” M.H. Cho, N. Hershkowitz, and T. Intrator, J. Appl. Phys. Vol.67(7), 3254 (1990)

12. "*Temporal Evolution of **Collisionless Sheaths***," M.H. Cho, N. Hershkowitz, and T. Intrator, J. Vacuum Sci. Technol. Vol.A6, 2978 (1988).
13. "*Experimental Observation of Slow Ion Acoustic Double Layers*," C. Chan, M.H. Cho, N. Hershkowitz, and T. Intrator, Phys. Rev. Lett. 57(24), 3050-3053 (1986).
14. "*Laboratory Evidence of Ion Acoustic Type **Double Layer***," C. Chan, M.H. Cho, N. Hershkowitz, and T. Intrator, Phys. Rev. Lett., 52(20), 1782 (1984).
- 15.



Prepared by Moohyun Cho on Feb 20, 2019