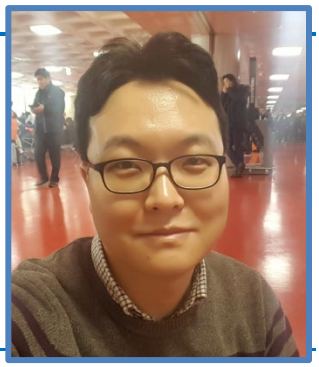
Curriculum Vitae

updated @12 January 2022

PERSONAL



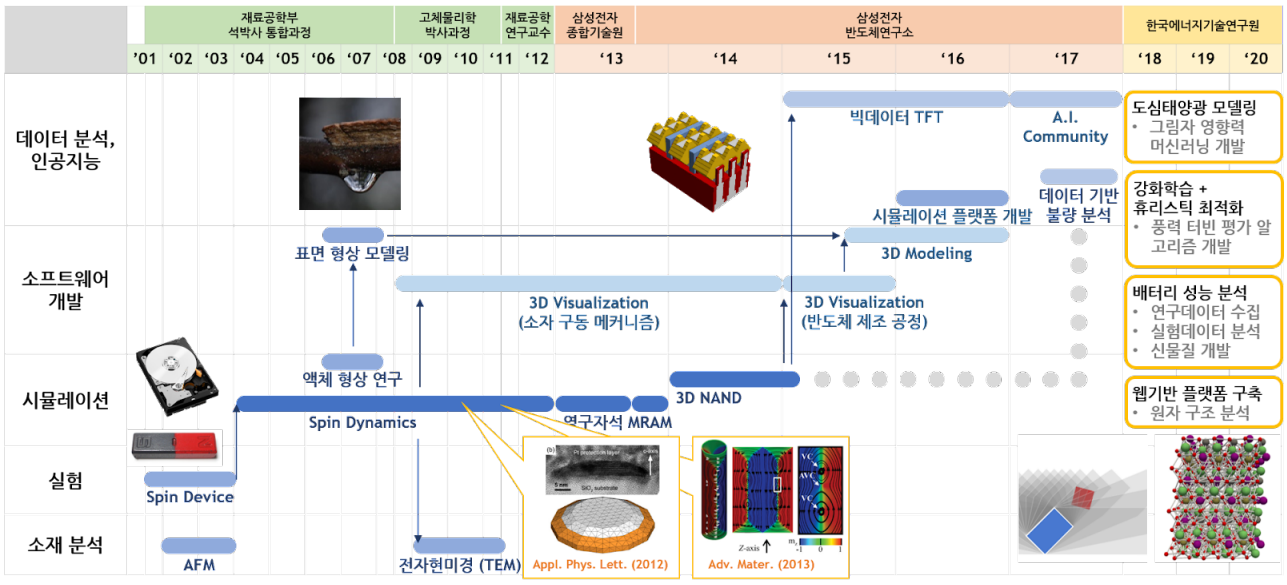
Name	Jehyun Lee (이제현, 李濟鉉)
Born	24. Feb. 1979, Seoul, Republic of Korea
e-mail	jehyun.lee@gmail.com
Github	https://github.com/jehyunlee/
Blog (Tech)	https://jehyunlee.github.io/
Blog (Book)	https://jehyunlee.tistory.com/

SUMMARY

- **Education - 2 Ph.D degrees**
  (1) Materials Sci. & Eng. (Seoul Nat'l Univ., 2008).
  (2) Solid State Physics (Vienna Univ. of Tech. 2011)

- **Productive**
  (1) 44 SCI papers and 42 International Conferences (2004~)
  (2) 9 Patents and 1 Software Copyright (2013~)
  (3) 22 Awards given by SCI Journal, Conference, Companies and Societies (2010~)
  (4) 24 Community Activities for Academic Societies and IT Communities (2004~)

1994.03	1997.03	2001.03	2008.09	2011.09	2013.01	2013.10	2017.03	2018.01
High School	Bachelor	Integrated Master & Ph.D	Ph.D	Research Prof.	Senior Researcher	Senior Engineer	Principle Engineer	Senior Researcher
		Materials and Devices researcher				Data Scientist		
• Chemistry	• Materials Sci. & Eng.	• Spin device fabrication • Magnetic materials simulation • Image Processing	• Electron microscopy	• Nanoparticle simulation	• Magenetic materials	• MRAM • 3D NAND • Platform TF • Big data TF	• Data-driven engineering • AI TF	• Renewable energy • Research platform • Energy material



INTERESTS THROUGH LIFE

Main interest of mine is "realism" in science and engineering. I believe that realism is neither a piece of specimen in laboratory, nor complicated equations on paper, nor numbers in database. Despite the beauty of the theories and simulation techniques the gap to the reality still requires interpretation of the domain experts. I have tried realistic simulations of magnetic recording materials by means of combination of micromagnetics and TEM investigations (Seoul National Univ. and Vienna Univ. of Technology, ~2011), excitation of magnetic nanoparticle by micromagnetic modeling with assistance of TEM holography (Seoul National University, ~2013), and 3-dimensional semiconductor process for 3D-NAND Flash device (Samsung Electronics, 2014). The restless study on image processing and 3-dimensional modeling lead me to a way of software engineer as well as a part leader in semiconductor industry, eventually to the Big Data and AI Society (Samsung Electronics, ~2017). With appreciation of recognition on my achievements, I have received 10 awards in last 3 years including one given by CEO (Oh Hyun Kwon). Please note that details of my works in Samsung is not permitted to describe in detail due to the security reasons.

Since 2018 I'm working as a data scientist in Korea Institute of Energy Research engaged in projects on Renewable energy evaluation, Research data platform development and Web-based materials research platform development, keep pursuing realism beyond numbers and charts.

APPOINTMENTS

Korea Institute of Energy Research, Daejeon, Korea **1/2018 – Present**
Senior Engineer (Platform Technology Laboratory)
Data Science: Renewable energy and Computational Materials Science

Samsung Electronics, Suwon/Hwaseong, Korea **1/2013 – 12/2017**
Senior Engineer (Semiconductor R&D Center) 10/2013 – 2/2017
Principal Engineer (Semiconductor R&D Center) 3/2017 – 12/2017
Development of Memory Devices: MRAM, 3D NAND
Process TCAD: Deposition/Etch/Epi. Growth/Sigma Etch
3D Visualization of Semiconductor Devices: DRAM/3D NAND/Logic/CIS
3D Modeling of Semiconductor Devices: DRAM/3D NAND/Logic

Research Staff Member (Samsung Advanced Institute of Technology) 1/2013 – 9/2013
Assigned in permanent magnet development project.
Samsung Electronics

Seoul National University, Seoul, Korea **9/2011 – 12/2012**
Research Assistant Professor
Under supervision of Prof. **Sang-Koog Kim**
Financially supported by Creative Research Initiative Program,
National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices.

Vienna University of Technology, Vienna, Austria **9/2008 – 8/2011**
Research Assistant
Under supervision of Prof. **Josef Fidler**
Financially supported by the European Framework Programme 7 project
TERAMAGSTOR.

EDUCATION

Ph.D. course at Vienna University of Technology, Vienna, Austria **9/2008 – 6/2011**
Institute of solid state physics
Studying at Advanced Magnetism Group. (Prof. **Josef Fidler**)
Research Theme: Study on magnetic recording media using TEM and micromagnetics
Thesis title: "Inhomogeneous magnetization processes in advanced recording media"

Integrated Master and Ph.D. course at Seoul National University, Seoul, Republic of Korea **9/2001 – 8/2008**
School of Materials Science & Engineering, Department of engineering
Studying at Lab. of Materials Deformation and Processing. (Prof. **Kyu Hwan Oh**)
Research Theme: Micromagnetic Simulations of magnetic recording media

Thesis title: "A study on the effect of the convex grain surface on the magnetic behavior from the viewpoint of magnetic recording"

Bachelor course at Seoul National University, Seoul, Republic of Korea **3/1997 – 8/2001**
School of Materials Science & Engineering, Department of engineering
Thesis title: "Mechanical Behaviors of DLC/W multilayer"

Incheon Science High School, Incheon, Republic of Korea **3/1994 – 2/1997**

PUBLICATIONS ON SCI JOURNALS (44)

2021

1. Sung Jun Hong, Hoje Chun, **Jehyun Lee**, Byung-Hyun Kim, Min Ho Seo, Joonhee Kang and Byungchan Han
"First-Principles-Based Machine-Learning Molecular Dynamics for Crystalline Polymers with van der Waals interactions", The Journal of Physical Chemistry Letters 12 (2021) 6000.

2. Hyeon-Kyu Park, Jae-Hyeok Lee, **Jehyun Lee**, and Sang-Koog Kim
"Optimizing machine learning models for granular NdFeB magnets by very fast simulated annealing", Scientific Reports 11 (2021) 3792.

2016

3. Sang-Koog Kim, Myoung-Woo Yoo, **Jehyun Lee**, Jae-Hyeok Lee, and Min-Kwan Kim
"Resonant vortex-core reversal in magnetic nano-spheres as robust mechanism of efficient energy absorption and emission", Scientific Reports 6 (2016) 31513.

2015

4. Bosung Kim, Myoung-Woo Yoo, **Jehyun Lee**, and Sang-Koog Kim
"Temperature effect on vortex-core reversals in magnetic nanodots", J. Appl. Phys. 117 (2015) 173910.
5. Sang-Koog Kim, Myoung-Woo Yoo, **Jehyun Lee**, Ha-Youn Lee, Jae-Hyeok Lee, Yuri Gaididei, Volodymyr P. Kravchuk & Denis D. Sheka
"Resonantly excited precession motion of three-dimensional vortex core in magnetic nanospheres", Scientific Reports 5 (2015) 11370.

2014

6. Min-Kwan Kim, Prasanta Dhak, Ha-Youn Lee, Jae-Hyeok Lee, Myoung-Woo Yoo, **Jehyun Lee**, Kyoungsuk Jin, Arim Chu, Ki Tae Nam, Hyun Soon Park, Shinji Aizawa, Toshiaki Tanigaki,Daisuke Shindo, Miyoung Kim and Sang-Koog Kim
"Self-assembled magnetic nanospheres with three-dimensional magnetic vortex", Appl. Phys. Lett. 105 (2014) 232402.
7. Robert Streubel, **Jehyun Lee**, Denys Makarov, Mi-Young Im, Daniil Karnaushenko, Luyang Han, Rudolf Schafer, Peter Fischer, Sang-Koog Kim, Oliver G. Schmidt
"Magnetic Microstructure of Rolled-Up Single-Layer Ferromagnetic Nanomembranes", Adv. Mater. 26 (2014) 316.
8. **Jehyun Lee**, Denys Makarov, Christoph Brombacher, Barbara Dymerska, Dieter Suess, Manfred Albrecht, Josef Fidler
"Scaling dependence and tailoring of the pinning field in FePt-based exchange coupled composite media", Nanotechnology 25 (2014) 045604.

2013

9. Robert Streubel, Denys Makarov, **Jehyun Lee**, Christian Müller, Michael Melzer, Rudolf Schäfer, Carlos Cesar Bof Bufon, Sang-Koog Kim, Oliver G. Schmidt
"Rolled-up Permalloy Nanomembranes with Multiple Windings", SPIN 3 (2013) 1340001.
10. V Neu, C Schulze, M Faustini, **J Lee**, D Makarov, D Suess, S-K Kim, D Grosso, L Schultz and M Albrecht
"Probing the energy barriers and magnetization reversal processes of nanoperforated membrane based percolated media", Nanotechnology 24 (2013) 145702.
11. Young-Sang Yu, Dong-Soo Han, Myoung-Woo Yoo, Ki-Suk Lee, Youn-Seok Choi, Hyunsung Jung, **Jehyun Lee**, Mi-Young Im, Peter Fischer & Sang-Koog Kim
"Resonant amplification of vortex-core oscillations by coherent magnetic-field pulses", Scientific Reports 3 (2013) 1301.
12. **Jehyun Lee**, Barbara Dymerska, Josef Fidler, Vasilis Alexandrakis, Thanassis Speliotis, Dimitris Niarchos, Peter Pongratz, Dieter Suess
"Fabrication and high-resolution electron microscopy study of FePt L10/A1 graded exchange spring media", Phys. Status Solidi (A) 210 (2013) 1305.

13. YM Kang, **J Lee**, YJ Kang, JB Park, SI Kim, SM Lee, K Ahn
"Understanding on coercivity behavior of M-type strontium hexaferrite through thin-film experiment and micromagnetic modeling", Appl. Phys. Lett. 103 (2013) 122407.

2012

14. G. Fiedler, J. Filder, **J. Lee**, T. Schrefl, R. L. Stamps, H. B. Braun and D. Suess,
"Direct calculation of the attempt frequency of magnetic structures using the finite element method", J. Appl. Phys. 111 (2012) 093917.

15. Myoung-Woo Yoo, **Jehyun Lee** and Sang-Koog Kim,
"Radial-spin-wave-mode-assisted vortex-core magnetization", Appl. Phys. Lett. 100 (2012) 172413.

16. B Dymerska, **J Lee**, J Fidler, D Suess,
"Micromagnetic study of exchange spring media with a rough interface on an example of FePt films", J. Phys D: Appl. Phys. 45 (2012) 495001.

2011

17. C. Brombacher, M. Grobis**, J. Lee**, J. Fidler, T. Eriksson, T. Werner, O. Hellwig, and M. Albrecht,
"$L1_0$ FePtCu bit patterned media", Nanotechnology 23 (2011) 025301.

18. D. Suess, L. Breth, **J. Lee**, M. Fuger, C. Vogler, F. Bruckner, B. Bergmair, T. Huber and J. Fidler,
"Calculation of coercivity of magnetic nanostructures at finite temperatures", Appl. Phys. Lett. 99 (2011) 062505.

19. **Jehyun Lee**, Christoph Brombacher, Josef Fidler, Barbara Dymerska, Dieter Suess, and Manfred Albrecht,
"Contribution of the easy axis orientation, anisotropy distribution and dot size on the switching field distribution of bit patterned media", Appl. Phys. Lett. 99 (2011) 062505.

20. **Jehyun Lee**, Vasilis Alexandrakis, Markus Fuger, Barbara Dymerska, Dieter Suess, Dimitris Niarchos and Josef Fidler,
"FePt $L1_0$/A1 graded media with a rough interphase boundary", Appl. Phys. Lett. 98 (2011) 222501.

21. V. Alexandrakis, Th. Speliotis, E. Manios, D. Niarchos, J. Fidler, and **Jehyun Lee**, G. Varvaro
"Hard/graded exchange spring composite media based on FePt", J. Appl. Phys. 109 (2011) 07B729.

2010

22. C. Schulze, M. Faustini, **J. Lee**, H. Schletter, P. Krone, M. Gass, K. Sader, A. L. Bleloch, M. Fuger, D. Suess, J. Fidler, M. U. Lutz, U. Wolff, V. Neu, M. Hietschold, D.Makarov and M. Albrecht
"Magnetic Films On Nanoperfoated Templates: A Route Towards Percolated Perpendicular Media", Nanotechnology 21 (2010) 495701.

23. J. Schratzberger, **J. Lee**, M. Fuger, J. Fidler, G. Fiedler, T. Schrefl, and D. Suess
"Validation of the transition state theory with Langevin-dynamics simulations", J. Appl. Phys. 108 (2010) 033915.

24. **Jehyun Lee**, Markus Fuger, Josef Fidler, Dieter Suess, Thomas Schrefl and Osamu Shimizu,
"Modeling of the write and read back performances of hexagonal Ba-ferrite particulate media for high density tape recording", J. Magn. Magn. Mater. 322 (2010) 3869.

25. D. Suess, D. Punz, **J. Lee**, M. Fuger, J. Fidler and T. Schrefl,
" Theory and Micromagnetics of Pinning Mechanism at Cylinderical Defects in Perpendicular Magnetic Films", J. Appl. Phys. 107 (2010) 113926.

26. **Jehyun Lee**, Thomas Uhrmann, Theodoros Dimopoulos, Hubert Brückl, and Josef Fidler,
"TEM Study on Diffusion Process of NiFe Schottky and MgO/NiFe Tunneling Diodes for Spin Injection in Silicon", IEEE Trans. Magn. 46 (2010) 2067.

27. Denys Makarov, **Jehyun Lee,** ***(D. Makarov and J. Lee are equally contributed)***
Christoph Brombacher, Christian Schbert, Markus Fuger, Josef Fidler and Manfred Albrecht,
"Perpendicular FePt-based exchange-coupled composite media", Appl. Phys. Lett., 96 (2010) 062501

28. V. Alexandrakis, D. Niarchos, K. Mergia, **Jehyun Lee**, J. Fidler, I. Panagiotopoulos, "Magnetic

Properties of Graded Al/L10 films obtained by heat-treatment of FePt/CoPt multilayers", J. Appl. Phys., 107 (2010) 013903.

2009

29. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Julian Dean, Josef Fidler, "Increases in effective head field gradients in exchange spring media", Appl. Phys. Lett., 95 (2009) 172509.

30. G. Winkler, D. Suess, **J. Lee**, J. Fidler, M. A. Bashir, J. Dean, A. Goncharov, G. Hrkac, S. Bance, and T. Schrefl, "Microwave-assisted three-dimensional multilayer magnetic recording", Appl. Phys. Lett., 94 (2009) 232501.

31. D. Suess, **J. Lee**, J. Fidler, H. S. Jung, E. M. T. Velu, W. Jiang, S. S. Malhotra, G. Bertero, and T. Schrefl, "Effect of Intergranular Exchange on Thermal Stability and Coercive Field of Perpendicular, Single Phase, Exchange Spring, and Coupled Granular Continuous", IEEE Trans. Magn., 45 (2009) 88.

32. Ji Woo Kim, Oliver Friedrichs, Jae-Pyoung Ahn, Do-Hyun Kim, Seul-Cham Kim, Arndt Remhof, Hee-Suk Chung, **Jehyun Lee**, Jae-Hyeok Shim, Young Whan, "Transmission electron microscopy study on the microstructural change of 2LiBH4/Al with hydrogen sorption cycling", Scripta Materialia, 60 (2009) 1089.

33. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Eu Sun Yu, You Sub Lee, Kyu Hwan Oh and Josef Fidler, "Contribution of Convex Surfaces to Magnetostatic Interaction in Granular Medium", IEEE Trans. Magn., 45 (2009) 2655.

34. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Kyu Hwan Oh and Josef Fidler, "Grain geometry induced reversal behavior alteration", J. Phys. D: Appl. Phys., 42 (2009) 045005.

35. D. Suess, **J. Lee**, J. Fidler, T. Schrefl, "Exchange-coupled perpendicular media", J. Magn. Magn. Mater., 321 (2009) 545.

2008

36. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Kyu Hwan Oh and Josef Fidler, "Contribution of the shrunk interface and the convex surface of grains on magnetic behavior in granular film", J. Appl. Phys., (2007).

2007

37. **J. Lee**, D. Suess, T. Schrefl, K. Oh, J. Fidler, "Magnetic Characteristics of Ferromagnetic Nanotube", J. Magn. Magn. Mater., 310 (2007) 2445.

38. **J. Lee**, D. Suess, T. Schrefl, K. Oh, J. Fidler, "Micromagnetic study of recording on ion-irradiated granular-patterned media", J. Magn. Magn. Mater., 319 (2007) 5.

39. D. Suess, S. Eder, **J. Lee**, R. Dittrich, J. Fidler, J. W. Harrell, T. Schrefl, G. Hrkac, M. Schabes, N. Supper, A. Berger, "Reliability of Sharrocks equation for exchange spring bilayers", Phys. Rev. B., 75 (2007) 174430.

2006

40. **J. Lee**, D. Suess, T. Schrefl, K. Oh, J. Fidler, "Contribution of Local Incoherency on Gilbert-Damping", IEEE Trans. Magn., 42 (2006) 3210.

2005

41. Jang, S.H., Kim, Y.W., **Lee, J.H.,** Kim, K.Y., "Si -based magnetic tunnel transistor with single CoFe base layer ", J. Appl. Phys., 98 (2005) 094502.

2004

42. **J. Lee**, K. Oh, H. Kim, K. Kim, "Magnetization reversal process of the nanosized elliptical permalloy magnetic dots with various aspect ratios", J. Magn. Magn. Mater., 272-276 (2004) 736.

43. S. Jang, T. Kang, **J. Lee**, K. Kim, "Si-based magnetic tunnel transistor with high transfer ratio", J. Magn. Magn. Mater., 272-276 (2004) 1930.

44. D. Kim, J. Kim, B. Park, J. Lee, J. Kim, **J. Lee**, J. Chang, H. Kim, I. Kim, Y. Park, "SrFeO3

nanoparticles-dispersed SrMoO4 insulating thin films deposited from Sr2FeMoO6 target in oxygen atmosphere", Appl. Phys. Lett., 84 (2004) 5037.

INVITED TALKS (8)

2013

1. **Jehyun Lee**, "Rolled-up Permalloy Nanomembranes with Multiple Windings," 13. March, Institute for Integrative Nanosciences, **IFW Dresden**, Dresden, Germany.

2012

2. **Jehyun Lee**, "Micromagnetic simulations based on directly observed microstructures," 14. August, **Samsung Advanced Institute of Technology**, Yongin-si, Gyeonggi-do, Korea.

3. **Jehyun Lee**, Youn-Seok Choi, Myoung-Woo and Sang-Koog Kim, "(tutorial) Micromagnetic Simulations of Collective Spin Excitations in Geometrically Confined Nanomagnets: Fundamentals of Micromagnetics," 24. May, **Korean Magnetics Society Summer Conference**, Hotel Interciti, Daejeon, Korea.

2011

4. **Jehyun Lee** and Sang-Koog Kim, "Micromagnetic simulations based on directly observed microstructures," 5. December, **Korean Magnetics Society Winter Conference**, Hotel Ramada, Jeju, Korea.

5. **Jehyun Lee**, "Introduction of the FEMME: Finite Element MicroMagnEtics," 31. August, Department of Materials Science and Engineering, **Seoul National University**, Seoul, Korea.

6. **Jehyun Lee**, "Introduction of finite element micromagnetics on 3-dimensional arbitrary geometries," 10. June, Institute for Integrative Nanosciences, **IFW Dresden**, Dresden, Germany.

7. **Jehyun Lee**, "Microstructure and the micromagnetism of advanced magnetic recording media,"3. May, Department of Materials Science and Engineering, **Seoul National University**, Seoul, Korea

2008

8. **Jehyun Lee**, "Image Analysis," 20. February, **Austria Institute of Technology**, Vienna, Austria.

PRESENTATIONS IN INTERNATIONAL CONFERENCES (42)

2020

1. **Jehyun Lee**, Chang Ki Kim, Chang-Yeol Yun, Dae Hyun Song, Yong-Heack Kang, Hyun-Goo Kim, "Machine-Learning Model for Urban Rooftop Irradiation Loss by Building Shadow", 8-13 Nov. 2020, The 30th International Photovoltaic Science and Engineering Conference (PVSEC-30) & Global Photovoltaic Conference 2020 (GPVC2020), ICC JEJU, Jeju, Korea.
2. Hyun-Goo Kim, **Jehyun Lee**, Chang Ki Kim, Chang-Yeol Yun, and Bo-Young Kim, "BIPV Potential Estimation for Urban City Based on the Solar Energy Map of Daejeon", 8-13 Nov. 2020, The 30th International Photovoltaic Science and Engineering Conference (PVSEC-30) & Global Photovoltaic Conference 2020 (GPVC2020), ICC JEJU, Jeju, Korea.

2019

3. **Jehyun Lee**, Junho Won, Chang Ki Kim, Chang-Yeol Yun, Dae Hyun Song, Yong-Heack Kang, Hyun-Goo Kim, "Machine-Learning Model for Building-Integrated Photovoltaic(BIPV) System in Urban Area", 13-19 Nov. 2019, 9th Asia-Pacific Forum on Renewable Energy (APORE), Maison Glad Hotel, Jeju, Korea.

2018

4. Kanghoon Yim, Chan-Woo Lee, **Jehyun Lee**, Incheol Jeong, Yong Youn, Seungwu Han, "Development of First-principles Platform Technology for Energy Research", Oct. 28–Nov. 2, 2018, The 9th International Conference on Multiscale Materials Modeling (MMM 2018), Osaka International Convention Center, Osaka, Japan.

2012

5. **Jehyun Lee**, Denys Makarov, Robert Streubel, Carlos Cesar Bof Bufon, Celine Vervacke, Dieter Suess, Josef Fidler, Oliver G Schmidt and Sang-koog Kim,

"Vortex and antivortex formation in magnetic rolled-up nanotubes", Jul. 8–13, 2012, International Conference on Magnetism 2012, BEXCO, Busan, Korea.

6. Myoung-woo Yoo, **Jehyun Lee** and Sang-koog Kim,
"Switching dynamics of vortex cores in nanodots by azimuthal-spinwave-mode excitation", Jul. 8–13, 2012, International Conference on Magnetism 2012, BEXCO, Busan, Korea.

2011

7. D. Suess, T. Schrefl, F. Bruckner, C. Vogler, B. Bergmair, T. Huber, **J. Lee** and J. Fidler, "Principle calculayion of coercivity of magnetic nanostructures at finite temperatures", Oct. 30–Nov.3, 2011, MMM Conference 2011, JW Marriott Desert Ridge Resort & Spa, Phoenix, USA.

8. B. Dymerska, **J. Lee**, V. Alexandrakis, D. Niarchos, D. Suess and J. Fidler,
"TEM studies and micromagnetic simulations of the FePt L10/A1 phase graded media", Oct. 30–Nov.3, 2011, MMM Conference 2011, JW Marriott Desert Ridge Resort & Spa, Phoenix, USA.

9. **J. Lee**, D. Makarov, D. Suess, J. Fidler, O. G. Schmidt and S. Kim,
"Magnetic Switching Behaviors of Ferromagnetic Rolled-up Nanotubes", Oct. 30–Nov.3, 2011, MMM Conference 2011, JW Marriott Desert Ridge Resort & Spa, Phoenix, USA.

10. M. Yoo, **J. Lee** and S. Kim, "Radial-spin-wave-mode-assisted vortex-core magnetization reversals", Apr. Oct. 30–Nov.3, 2011, MMM Conference 2011, JW Marriott Desert Ridge Resort & Spa, Phoenix, USA.

11. **J. Lee**, M. Fuger, D. Suess and J. Fidler, "Performance of Single Pole Tip head on h-BaFe particulate tape recording media", Apr. 25–29, 2011, Intermag Conference 2011, Taipei International Convention Center, Taipei, Taiwan.

12. **J. Lee**, V. Alexandrakis, M. Fuger, D. Suess, D. Niarchos and J. Fidler, "Micromagnetic simulations on FePt $L1_0$/A1 phase graded media", Apr. 25–29, 2011, Intermag Conference 2011, Taipei International Convention Center, Taipei, Taiwan.

13. M. Albrecht, C. Schulze, C. Brombacher, **J. Lee**, J. Fidler, M. Faustini, D. Grosso, D. Makarov and M. Grobis, "Magnetic films on templates: A route towards percolated media", Apr. 25–29, 2011, Intermag Conference 2011, Taipei International Convention Center, Taipei, Taiwan.

2010

14. **J. Lee**, D. Makarov, C. Brombacher, B. Dymerska, M. Fuger, D. Suess, M. Albrecht and J. Fidler, "TEM Studies on RTA treated FePt-based Exchange Coupled Composite Media", Nov. 14–18, 2010, MMM Conference 2010, Hyatt Regency Atlanta, Atlanta, USA.

15. C. Vogler, F. Bruckner, M. Fuger, **J. Lee**, J. Fidler and D. Suess, "3D-MRAM Device based on Resonant AC-Spin Polarized Currents", Nov. 14–18, 2010, MMM Conference 2010, Hyatt Regency Atlanta, Atlanta, USA.

16. M. Fuger, **J. Lee**, J. Fidler, D. Suess and T. Schrefl, "Modeling of the influence of the passivation shell on the magnetization process of advanced MP tape recording films", Nov. 14–18, 2010, MMM Conference 2010, Hyatt Regency Atlanta, Atlanta, USA.

17. F. Bruckner, C. Vogler, M. Fuger, **J. Lee**, J. Fidler and D. Suess, "Simultaneously solving magnetostatic Maxwell equations and LLG for exended micromagnetic simulations", Nov. 14–18, 2010, MMM Conference 2010, Hyatt Regency Atlanta, Atlanta, USA.

18. M. Fuger, **J. Lee**, J. Fidler, D. Suess, "Micromagnetic study of the recording performance of advanced h-BaFe based tape recording materials", Aug. 23–28, 2010, Joint European Magnetic Symposia (JEMS) 2010, Jagiellonian University, Krakaw, Poland.

19. **J. Lee**, D. Makarov, B. Dymerska, C. Brombacher, J. Fidler, M. Fuger, D. Suess and M. Albrecht, "TEM study of interface properties of FePtCu-based exchange coupled composite media", Aug. 23–28, 2010, Joint European Magnetic Symposia (JEMS) 2010, Jagiellonian University, Krakaw, Poland.

20. Josef Fidler, **Jehyun Lee**, Markus Fuger, Dieter Suess, and Thomas Schrefl, "Material and Nanosensor design by finite element Micromagnetic Modeling", Jun. 7–8, 2010, ROMSC 2010, "Alexandru Ioan Cuza", University of Iasi, Iasi, Romania.

21. D. Makarov, C. Brombacher, **J. Lee**, J. Fidler and M. Albrecht, "Scaling dependence of the switching field of the hard layer in perpendicular FePt-based exchange coupled composite media", Sep. 13–

17, 2010, Nano 2010, University La Sapienza, Rome, Italy.

22. Josef Fidler, **Jehyun Lee**, Markus Fuger, Dieter Suess, and Thomas Schrefl, "Particular and granular magnetic nanostructures for advanced magnetic recording schemes", Sep. 13–17, 2010, Nano 2010, University La Sapienza, Rome, Italy.

23. **Jehyun Lee**, Josef Fidler, Thomas Uhrmann, Theodore Dimopoulos, and Hubert Brückl, "TEM study on the diffusion process of Si/NiFe Schottky barrier and Si/MgO/NiFe tunneling diode", Jan. 18-22, 2010, Joint MMM/Intermag Conference 2010, Marriott Wardman Park, Washington D.C., USA.

24. M. Fuger, **J. Lee**, J. Fidler, D. Suess and T. Schrefl, "Micromagnetic study of particulate media reversal for tape recording", Jan. 18-22, 2010, Joint MMM/Intermag Conference 2010, Marriott Wardman Park, Washington D.C., USA.

25. G. Fiedler, M. Janisch, **J. Lee**, M. Fuger, J. Fidler and T. Schrefl, "Direct calculation of the attempt frequency of magnetic nanostructures using FEM", Jan. 18-22, 2010, Joint MMM/Intermag Conference 2010, Marriott Wardman Park, Washington D.C., USA.

2009

26. Thomas Schrefl, David Hahn, M.A. Bashir, Alexander Goncharov, Gino Hrkac, Julian Dean, **Jehyun Lee**, and Dieter Suess, "Numerical methods help to optimize hard disks", The 20th Magnetic Recording Conference (TMRC), Oct. 5–7, 2009, University of Alabama, Tuscaloosa, AL, USA.

27. **J. Lee**, J. Fidler, V. Alexandrakis, and D. Niarchos, "High Resolution TEM study of exchnage coupled FePt/CoPt thin films", Microscopy Conference 2009, Aug. 30 – Sep. 4, 2009, Congress Graz, Graz, Austria.

28. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Josef Fidler, "Head Field Gradient Effect on Magnetic Recording", Intermag Conference 2009, May 4-8, 2009, Convention Center, Sacramento, USA.

2008

29. **Jehyun Lee**, Dieter Suess, Josef Fidler, Thomas Schrefl, Eu Sun Yu, You Sub Lee, Kyu Hwan Oh, "Contribution of the Convex Surfaces on Magnetostatic Interaction in Granular Medium", Asian Magnetism Conference 2008, December 9-13, 2008, Paradise Hotel, Busan, Korea.

30. **Jehyun Lee**, Josef Fidler, Dieter Suess, Thomas Schrefl, Sanghwan Park, Kyu Hwan Oh, "Micromagnetic analysis of the switching field of CoCrPt-SiO_2 and CoPt-TiO_2 bilayers", 53rd MMM Conference 2008, November 10-14, 2008, Hilton Austin Convention Center, Austin, Texas, USA.

31. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Kyu Hwan Oh, Josef Fidler,"Nucleation field reduction due to convex surface in magnetic recording media", Joint European Magnetic Symposia 2008, September 14-19, 2008, Trinity College, Dublin, Ireland.

32. Josef Fidler, **Jehyun Lee**, Dieter Suess and Thomas Schrefl, "Tuning of coercive field of nanostructured hard magnetic films", Workshop on Rare Earth Permanent Magnets, September 8-10, 2008, Movenpick Hotel, Kronoss, Greece.

33. Josef Fidler, Dieter Suess, **Jehyun Lee** and Thomas Schrefl, "Exchange-coupled magnets: Challenges", Workshop on Research Trends in Novel Magnets for Electromagnetic Applications, September 3-5, Hotel Santorini Palace, Santorini, Greece.

2007

34. **Jehyun Lee**, Dieter Suess, Rok Dittrich, Thomas Schrefl, Kyu Hwan Oh and Josef Fidler, "Contribution of the convex grain surface on magnetic behavior", 52nd MMM Conference 2007, November 5-9, 2007, Marriott Waterside Hotel, Tampa, USA

35. **Jehyun Lee**, M. Kim, D. Suess, T. Schrefl, K. Oh, J. Fidler, "Magnetic Characteristics of Co nano particle", Joint MMM/Intermag Conference 2007, January 7-11, 2007, Marriott Waterside Hotel & Marina, Baltimore, USA.

2006

36. Thomas Schrefl, Dieter Suess, **Jehyun Lee**, Rok Dittrich, Florian Dorfbauer, Josef Fidler, Manfred Schabes, "Nanomagnetic simulations of recording media", APS March meeting, March 13-17, 2006, The Baltimore Convention Center, Baltimore, USA.

37. **J.Lee**, D.Suess, T.Schrefl, K.Oh and J. Fidler, "Contribution of non-uniform magnetic states on

Gilbert-damping in perpendicular media", Joint MMM/Intermag Conference, May 8-12, 2006, Town & Country Hotel, San Diego, USA.

38. **J.Lee**, D.Suess, T.Schrefl, K.Oh and J. Fidler, "Magnetic recording on patterned mediaprepared by ion beam irradiations", Joint MMM/Intermag Conference, May 8-12, 2006, Town & Country Hotel, San Diego, USA.

39. **Jehyun Lee**, Dieter Suess, Thomas Schrefl, Kyu Hwan Oh, Josef Fidler, "Magnetic Characteristics of Ferromagentic Nanotube", ICM2006, August 20-25, 2006, Kokusaikaikan, Kyoto, Japan.

2005

40. Josef Fidler, Dieter Suess, Karina Porath, **Jehyun Lee**, Thomas Schrefl, "Optimization of advanced perpendicular media by micromagnetic modeling", The 16th Annual Magnetic Recording Conference, August 15-17, 2005, Stanford University, CA, USA.

2004

41. **J. Lee**, S. Jang, Y. Kim, K. Oh, D. Kim and K. Kim, "Effect of the thickness of base layer on properties of Si-based magnetic tunnel transistor", 9th Joint MMM-Intermag Conference, January 5-9, 2004, Anaheim, CA, USA.

2003

42. 이제현, K. Oh, H. Kim and K. Kim, "Magnetization reversal process of the nanosized elliptical permalloy magnetic dots with various aspect ratios". International Conference on Magnetism 2003, July 27-August1, 2003, Roma, Italy.

SOFTWARE COPYRIGHT (1)

2018

1. **한국에너지기술연구원**, "원자구조의 분자흡착구조 선별 모델링 자동화 프로그램". 제 C-2018-039985 호

PATENTS (9)

2021

1. **이제현**, 오명찬, 김창기, 김현구, "머신 러닝 모델을 이용하여 일사 손실률을 예측하기 위한 장치 및 그 방법". 출원번호 1020210037896

2018

2. **이제현**, 장성환, 정성윤, 정재훈, "셀프 구조 분석을 이용한 구조 잡음 감소 방법 및 장치". 출원번호 1020160165559, 공개번호 1020180065135
3. 심성보, 고정훈, **이제현**, 정재훈, "패턴 측정 방법 및 그를 포함하는 반도체 소자의 제조 방법". 출원번호 1020160122397, 공개번호 1020180033367

2017

4. 박민철, **이제현**, 고정훈, 김영구, 이근호, "두께 측정 방법, 영상 처리 방법 및 이를 수행하는 전자 시스템". 출원번호 1020150144096, 공개번호 102017044424

2016

5. 박민철, 김대신, 김샛별, 김세진, 샤즈리앙, **이제현**, "고해상도 전자 현미경 이미지로부터 결정을 분석하는 방법 및 그 시스템". 등록번호 1023015360000, 공개번호 1020160109303

2015

6. 조근우, **이제현**, 문경석, 강영재, 강영민, 안경한, 이상목, "자성 분말, 그 제조 방법, 및 이를 포함하는 자석". 출원번호 1020130126509, 공개번호 1020150126509
7. 강영민, 안경한, 나나 사폴레토바, 이상목, 강영재, 문경석, **이제현**, 조근우, "자성 분말, 그 제조 방법, 및 이를 포함하는 자석". 출원번호 1020130126510, 공개번호 1020150048256

2013

8. Sang-Koog Kim, **Jehyun Lee** and Hayoun Lee, "Method of selective activation for magnetic nanoparticle and selectively activated magnetic nanoparticle". EP2893920A1, EP2893920A4, US20150213931, WO2014038829A1
9. 문경석, 강영민, 강영재, 안경한, 이상목, **이제현**, 조근우, "소결자석 제조 방법". 출원번호 1020130161813, 공개번호 1020150073759

TEACHING ASSISTANTS (2)

2007

1. **Teaching Assistant**
   Numerical Image Analysis (Prof. Kyu Hwan Oh), Seoul National University.
   Fall Semester

2004

1. **Teaching Assistant**
   Electric Circuits (Prof. Kyu Hwan Oh), Seoul National University.
   Fall Semester

RESEARCH VISITS

Korea Institute of Science and Technology, Seoul, Republic of Korea **7/1999 – 8/1999**
Research Assistant as a Bachelor candidate
Under supervision of Dr. **Kwang Ryeol Lee**, Thin Film Research Center

Korea Institute of Science and Technology, Seoul, Republic of Korea **8/2001 – 8/2004**
Research Assistant as a Graduate school student
Under supervision of Dr. **Kwang Youn Kim**, Nano Device Research Center

Vienna University of Technology, Vienna, Austria **2/2005 – 2/2006, 2/2007**
Guest Researcher
Under supervision of Prof. **Josef Fidler,** Prof. **Thomas Schrefl** and Dr. **Dieter Suess**
Financially supported by the BK21 project of the Ministry of Education and Human Resource Foundation, Republic of Korea.

Vienna University of Technology, Vienna, Austria **12/2007 – 8/2008**
Guest Researcher
Under supervision of Prof. **Josef Fidler,** Prof. **Thomas Schrefl** and Dr. **Dieter Suess**
Financially supported by the project of the FWF (Austrian Science Fund), Austria and the KOSEF (Korean Science Foundation), Republic of Korea.

TASK FORCE TEAM ACTIVITIES

AI Community **1/2017 – 12/2017**
Supervisor: **Seok-Woo Nam** (Executive Vice President)
Facilitator: Wonseok Yang, Principle Engineer
Semiconductor R&D Center, Samsung Electronics

Big Data TF **3/2015 – 12/2016**
Supervisor: **Seok-Woo Nam** (Executive Vice President)
Facilitator: Wonseok Yang, Principle Engineer
Semiconductor R&D Center, Samsung Electronics

Innovation (Solgae) TF **3/2015 – 9/2015**
CAE Team (Team Leader: **Young-Gwan Park**, Vice President)
Semiconductor R&D Center, Samsung Electronics

AWARDS AND REMARKS (22)

1. **Collaboration Award (2021):**

협업상 (한국에너지기술연구원장 훈격)
이제현
Awarded by **President of Korea Energy of Energy Research (Jong-nam Kim)**

2. **Invention Award (2021):**
   창안상 (한국에너지기술연구원장 훈격)
   연구 몰입도 향상 위원회 (이대근, 안승규, 송희은, 조임현, 황성목, 조원철, 김민진, 서민호, 박석인, 류승환, 서명원, 천동현, 윤민혜, 우중제, 이제현, 송욱진, 권상훈)
   Awarded by **President of Korea Energy of Energy Research (Jong-nam Kim)**

3. **KIER-Tube Video Knowledge Contents Competition 1st Prize (2021):**
   KIER-Tube 동영상 지식콘텐츠 공모전 대상 (한국에너지기술연구원장 훈격)
   이제현
   Awarded by **President of Korea Energy of Energy Research (Jong-nam Kim)**

4. **Best Presenter Award (2021):**
   우수발표논문상 (한국태양에너지학회장 훈격)
   이제현, 배수민, 오명찬, 김창기, 강용혁, 김현구, "도심태양광 발전량 평가를 위한 건축물 음영 분석"
   Awarded by **President of Korean Solar Energy Society (**Prof. **Gi-Hwa Kang)**

5. **High Quality Reviewer Awards 1st Prize (2020):**
   "나는 고퀄 리뷰어다" (한빛미디어)
   이제현, "밑바닥에서 시작하는 딥러닝 3"
   Awarded by **Hanbit Media (Tae-Heon Kim)**

6. **Energy Award 2nd Prize (2020):**
   에너지대상 최우수상 (한국에너지기술연구원장 훈격)
   김현구, 김창기, 오명찬, 김진영, 이제현, 김보영, 윤창열, 강용혁, "위성영상 기반 신재생에너지 발전 진단 및 변동성 예측"
   Awarded by **President of Korea Energy of Energy Research (Jong-nam Kim)**

7. **Collaboration Award Idea Contest (2020):**
   협업상 아이디어 공모전 (한국에너지기술연구원장 훈격)
   김덕환, 이제현
   Awarded by **President of Korea Energy of Energy Research (Jong-nam Kim)**

8. **Best Paper Award, by Minister of Land and Transport (2019):**
   태양에너지학회지 (국토교통부장관 훈격)
   이제현, 원준호, 김창기, 윤창열, 송대현, 강용혁, 김현구, "도심지 건물일체형 태양광발전시스템을 위한 기계학습 기반의 건축물 음영 평가 모델 개발"
   Awarded by **Minister of Land, Infrastructure and Transport (Hyun-mee Kim)**

9. **Best Presenter Award (2019):**
   우수발표논문상 (한국태양에너지학회장 훈격)
   이제현, 원준호, 김창기, 윤창열, 송대현, 강용혁, 김현구, "태양광 발전을 위한 도심지 음영 평가 모델 개발"
   Awarded by **President of Korean Solar Energy Society (**Prof. **Doosam Song)**

10. **Probity Award (2018):**
    청렴상 (한국에너지기술연구원장 훈격)
    Awarded by **President of Korea Energy of Energy Research (Byong-Sung Kwak)**

11. **SEC Annual award (2017):** ***For Security, Full Title cannot be described here***
    삼성전자 연례기술상 (반도체 연구소장 훈격)
    D.-S. Kim and **Jehyun Lee** et al., achievement on Deep Learning application on semiconductor development, **3rd** Prize
    Awarded by **President of Semiconductor R&D Center** (Executive VP, **Ho Kyu Kang**), Semiconductor R&D Center, Samsung Electronics.

12. **Future Creator award (2017):** ***For Security, Full Title cannot be described here***
    미래창조상 (반도체 연구소장 훈격)

D.-S. Kim and **Jehyun Lee** et al., achievement on Deep Learning application on semiconductor development, **3rd** Prize
Awarded by **President of Semiconductor R&D Center** (Executive VP, **Ho Kyu Kang**), Semiconductor R&D Center, Samsung Electronics.

13. **Future Creator award (2016):** ***For Security, Full Title cannot be described here***
    미래창조상 (반도체 연구소장 훈격)
    J-.H. Jeong and **Jehyun Lee** et al., achievement on 3D Modeling & Image analysis, **1st** Prize
    Awarded by **President of Semiconductor R&D Center** (Executive VP, **Eun Seung Jung**), Semiconductor R&D Center, Samsung Electronics.

14. **TCADer award (2016):** ***For Security, Full Title cannot be described here***
    CAE 기술상 (CAE 팀장 훈격)
    Nam-Hyun Kim and **J. Lee** et al., achievements on 3D Modeling
    Awarded by **CAE Team Leader** (VP, **Keun Ho Lee**),
    Semiconductor R&D Center, Samsung Electronics.

15. **Samsung Paper Award (2015):** ***For Security, Full Title cannot be described here***
    삼성논문상 본선진출 (반도체 연구소장 훈격)
    K. Kim and **Jehyun Lee** et al., study on 3D NAND process, **5th** Prize
    Awarded by **President of Semiconductor R&D Center** (Executive VP, **Eun Seung Jung**), Semiconductor R&D Center, Samsung Electronics.

16. **TRIZ competition (2015):** ***For Security, Full Title cannot be described here***
    반도체연구소 TRIZ 경진대회 (반도체 연구소장 훈격)
    Jehyun Lee, achievements on 3D visualization, **4th** Prize, **Certified as TRIZ Expert (Lv.2)**
    Awarded by **President of Semiconductor R&D Center** (Executive VP, **Eun Seung Jung**), Semiconductor R&D Center, Samsung Electronics.

17. **Unsung Hero in DS Division (2015):** ***For Security, Full Title cannot be described here***
    숨은 일꾼상 2 분기 단독 수상 (DS 부문장 권오현 부회장 훈격)
    Jehyun Lee, achievements on image analysis related work, **1st** Prize
    Awarded by **President of Device Solutions Division** (Vice Chairman & CEO, **Oh Hyun Kwon**), Samsung Electronics.

18. **Create Specialist (2015):** ***For Security, Full Title cannot be described here***
    창조전문가 상반기 최우수상 (메모리 사업부장 훈격)
    Sejun Park and **Jehyun Lee** et al., achievements on 3D NAND, **1st** Prize
    Awarded by **President of Memory Business** (President, **Young-Hyun Jun**), DS Division, Samsung Electronics.

19. **TCADer award (2015):** ***For Security, Full Title cannot be described here***
    CAE 기술상 (CAE 팀장 훈격)
    J. Lee et al., achievements on 3D NAND image analysis
    Awarded by **CAE Team Leader** (VP, **Young Kwan Park**),

20. **BRAVO Paper award (2014):** ***For Security, Full Title cannot be described here***
    BRAVO 논문상 (CAE 팀장 훈격)
    J. Lee et al., study on 3D NAND process, **3rd** Prize
    Awarded by **CAE Team Leader** (VP, **Young Kwan Park**), Semiconductor R&D Center, Samsung Electronics.

21. **Best poster award (2011)**
    J. Lee, V. Alexandrakis, M. Fuger, D. Suess, D. Niarchos and J. Fidler, "Micromagnetic simulations on FePt $L1_0$/A1 phase graded media", Apr. 25–29, 2011, Intermag Conference 2011, Taipei International Convention Center, Taipei, Taiwan.

22. **Chosen as a "Research Highlights" in Journal of Applied Physics (2010)**
    V. Alexandrakis, D. Niarchos, K. Mergia, **Jehyun Lee**, J. Fidler, I. Panagiotopoulos, "Magnetic Properties of Graded Al/L10 films obtained by heat-treatment of FePt/CoPt multilayers", J. Appl. Phys., 107 (2010) 013903.

COMMUNITY ACTIVITY (24)

2021

1. **Regular Reviewer, of IT books of Hanbit Media**
   나는 리뷰어다 (한빛미디어)
   (Feb) 진지한 파이썬 (쥘리앵 당주 著, 김영하 譯). URL: https://jehyunlee.tistory.com/15
   (Mar) GAN 첫걸음 (타리크 라시드 著, 고락윤 譯). URL: https://jehyunlee.tistory.com/17
   (Apr) 친절한 딥러닝 수학 (다테이시 겐고 著, 김형민 譯). URL: https://jehyunlee.tistory.com/18
   (May) 파이썬 비동기 라이브러리 Asyncio (케일럽 헤팅 著, 동동구 譯).
   URL: https://jehyunlee.tistory.com/20
   (Jun) 보고서 발표 실무 강의 (채종서 著, 2021) URL: https://jehyunlee.tistory.com/22
   (Jul) 유닉스의 탄생 (브라이언 커니핸 著, 하성창 譯, 2021) URL: https://jehyunlee.tistory.com/24
   (Aug) 파이토치 첫걸음 (최건호 著, 2019) URL: https://jehyunlee.tistory.com/26
   (Sep) fastai 와 파이토치가 만나 꽃피운 딥러닝 (제레미 하워드, 실뱅 거거 著, 박찬성, 김지은 譯, 2021)
   URL: https://jehyunlee.tistory.com/27
   (Oct) 머신러닝 파워드 애플리케이션 (에마뉘엘 아메장 著, 박해선 譯, 2021),
   URL: https://jehyunlee.tistory.com/29
   (Nov) 혼자 공부하는 SQL (우재남 著, 2021), URL: https://jehyunlee.tistory.com/30
   (Dec) 데이터 과학자 되는 법 (에밀리 로빈슨, 재클린 놀리스 著, 이창화 譯, 2021),
   URL: https://jehyunlee.tistory.com/31

2. **Organizer, of AI Community in Korea Institute of Energy Research**
   AI 학습조직 위원장: 에너지+AI (한국에너지기술연구원)

3. **Beta Reader, "파이썬으로 캐글 뽀개기"**
   베타리더, "파이썬으로 캐글 뽀개기" (비제이퍼블릭, 2021)
   URL: https://bjpublic.tistory.com/417

4. **Beta Reader, "fastai 와 파이토치가 만나 꽃피운 딥러닝"**
   베타리더, "fastai 와 파이토치가 만나 꽃피운 딥러닝" (한빛미디어, 2021)
   URL: https://hanbit.co.kr/store/books/look.php?p_code=B7970422863

5. **Beta Reader, "한 줄씩 따라해보는 파이토치 딥러닝 프로젝트 모음집"**
   베타리더, "한 줄씩 따라해보는 파이토치 딥러닝 프로젝트 모음집" (비제이퍼블릭, 2021)
   URL: https://bjpublic.tistory.com/414

6. **Recommendation, "실무 프로젝트로 배우는 데이터분석 with R"**
   추천사, "실무 프로젝트로 배우는 데이터분석 with R" (위키북스 2021)
   URL: https://wikibook.co.kr/practical-r/

7. **Beta Reader, "데이터가 뛰어노는 AI 놀이터, 캐글"**
   베타리더, "데이터가 뛰어노는 AI 놀이터, 캐글" (한빛미디어, 2021)
   URL: https://www.hanbit.co.kr/media/books/book_view.html?p_code=B4998513859

8. **Recommendation, "The Secret Life of Programs"**
   추천사, "한 권으로 읽는 컴퓨터 구조와 프로그래밍" (책만 2021)
   URL: https://www.onlybook.co.kr/entry/secret-programs

9. **Beta Reader, "Practical Time Series Analysis"**
   베타리더, "실전 시계열 분석" (한빛미디어, 2021)
   URL: https://www.hanbit.co.kr/store/books/look.php?p_code=B9090689318

10. **Presentation, "Data Visualization for Human"**
    강연, "사람을 향한 데이터 시각화" (D&I Learning Day, 2021.03.29.)
    URL: https://youtu.be/SeEj_Glttys

11. **Presentation, "Common Mistakes of Machine Learning Modeling"**
    강연, "머신러닝 모델링의 흔한 실수들" (한국에너지기술연구원 AI 학습조직, 2021.02.24.)
    URL: https://youtu.be/BmpZ5Xi7ckg

2020

12. **Presentation, "Unrelated to Data: Our Life, Not SAT":**
    강연, "데이터와 무관합니다만 – 수능 말고 인생" (데이터, 인공지능 전문가 초청 온라인 컨퍼런스: 한성과학고, 2020.12.28.)
    URL: https://youtu.be/klQMq7B_nUw

13. **Presentation, "Image segmentation with a U-Net-like architecture":**
    강연, "Image segmentation with a U-Net-like architecture" (Keras Learning Day, 2020.12.23.)
    URL: https://youtu.be/3oFR7ajzAZs

14. **Presentation, "Life as a Data Scientist in Isekai":**
    강연, "이세계에서 시작하는 데분러 생활" (코드스테이츠, 2020.10.23.)
    URL: https://youtu.be/5E8YeHNpjbk

15. **Presentation, "Data Scientist":**
    강연, "데이터 과학자" (2020 대전 사이언스 페스티벌 X-STEM, 2020.10.09.)
    URL: https://youtu.be/2H0afV3a1vk

16. **Presentation, "Since PyCon, 세상 밖으로":**
    강연, "Since PyCon, 세상 밖으로" (PyCon Korea 2020, 2020.09.27.)
    URL: https://youtu.be/s8yBnEcOYN8

17. **Presentation, "Big Data in Reality":**
    강연, "Big Data in Reality" (2020 AI Festival, 2020.09.03.)
    URL: https://youtu.be/4uxCLBKwmOM?t=5051

18. **Presentation, "Python Visualization for Me":**
    강연, "나에게 필요한 Python Visualization" (2020 Daejeon Learning Day, 2020.09.02.)
    URL: https://youtu.be/88NEtJypTYI

19. **Beta Reader, "Hands on Machine Learning 2nd Ed. Korean Edition":**
    베타리더, "핸즈온 머신러닝" (한빛미디어, 2020)
    URL: https://www.hanbit.co.kr/store/books/look.php?p_code=B7033438574

2012

20. **Secretary**
    Spin Dynamics in Nanomagnets, satellite workshop of ICM2012,
    August 15-18, 2012, Hoam Faculty House, Seoul National University, Seoul, Korea.

2010

21. **Editor, Book of Proceedings**
    EU-Korea Conference on Science and Technology 2010,
    July 29-31, 2010, The Vienna Imperial Riding School, Vienna, Austria.

22. **Program Committee**
    EU-Korea Conference on Science and Technology 2010,
    July 29-31, 2010, The Vienna Imperial Riding School, Vienna, Austria.

2007

23. **Official home page design, official poster design and web programming**
    The 4th Conference of the Asian Consortium on Computational Materials Science,
    September 13-16, 2007, Korea Institute of Science and Technology, Seoul, Korea.

2006

24. **Conference Poster Design**
    The International Conference on Advanced Structural Steels,
    August 22-24, 2006, Gyeongju Hilton Hotel, Gyeongju, Korea.

COMPUTER SKILLS

Programming Languages: Python, C/C++

Graphics Programs:	Digital Micrograph, ImageJ, Photoshop
CAD and Visualizations:	Python, Cadence, AutoCAD, GiD, Salome, MicroAVS, Tecplot, Paraview

SOFTWARE CERTIFICATES

2017

1. **SW Certificate: Advanced** 알고리즘 등급시험
   Samsung Electronics
2. **SW Expert**
   Samsung Electronics

1999

3. **Engineer Information Processing** 정보처리기사
   Human Resources Development Services of Korea 한국산업인력공단

EXPERIMENTAL SKILLS

Specimen Preparation:	PECVD, DC/RF magnetron sputtering, Ion Milling, PIPS
Micro / Nano Fabrication:	Mask aligner(MA-6), Wire bonder (KIST)
	TEM specimen preparation (Vienna University of Technology)
Microscopy:	AFM (licence A: Korea Institute of Science and Technology)
	MFM (licence A: Korea Institute of Science and Technology)
	TEM JEOL CM20 (licence C: Seoul National University)
	TEM TECNAI F20 (full time user, Vienna University of Technology)

LANGUAGES

Native Language:	Korean	
Other Languages:	English*	German
Reading skills	fluent	basic
Writing skills	fluent	basic
Verbal skills	fluent	basic

*Samsung Electronics internal certifications on English proficiency @2016: TOEIC 940, OPIc AL