

Seongryong Kim

Associate Professor, Department of Earth and Environmental Sciences, Korea University

145 Anam-ro, Seongbuk-gu, Seoul 02841, Republic of Korea

seongryongkim@korea.ac.kr, +82 (0)2 3290-3184, seismology.korea.ac.kr

RESEARCH INTERESTS

- Tectonic and geodynamic processes in back-arc regions and continental margins
- Occurrence and magma structures of intraplate volcanism
- Lithosphere, asthenosphere, and mantle transition zone structures beneath Northeast Asia
- Seismological technique development: Bayesian inversion, machine learning, and seismic interferometry
- Earthquake source properties and event detection
- Earthquake engineering seismology and environmental seismology in the Korean Peninsula

EMPLOYMENT

Sep. 2025 - present	Associate Professor Department of Earth and Environmental Sciences, Korea University, Seoul, Republic of Korea
Sep. 2020 - Aug. 2025	Assistant Professor Department of Earth and Environmental Sciences, Korea University, Seoul, Republic of Korea
Sep. 2018 - Aug. 2020	Assistant Professor Department of Geological Sciences, Chungnam National University, Daejeon, Republic of Korea
Oct. 2017 - Aug. 2018	Research Assistant Professor Research Institute of Basic Sciences, Seoul National University, Seoul, Republic of Korea
Feb. 2017 - Sep. 2017	Postdoctoral Fellow Research Institute of Basic Sciences, Seoul National University, Seoul, Republic of Korea
Oct. 2014 - Jan. 2017	Postdoctoral Fellow Research School of Earth Sciences, The Australian National University, Canberra, Australia <i>Advisor: Hrvoje Tkalčić</i>
Mar. 2014 - Sep. 2014	Postdoctoral Fellow Research Institute of Basic Sciences, Seoul National University, Seoul, Republic of Korea

EDUCATION

Mar. 2009 - Feb. 2014	Ph.D. in Geophysics (Seismology) School of Earth and Environmental Sciences, Seoul National University, Seoul, Republic of Korea <i>Thesis: Estimation of Regional Seismic Velocity Models and their Uncertainties using Various Methods. Advisor: Junkee Rhie</i>
Mar. 2007 - Feb. 2009	M.S. in Geophysics (Seismology) School of Earth and Environmental Sciences, Seoul National University, Seoul, Republic of Korea <i>Thesis: Crustal Velocity Structures of the East African Rift System. Advisor: Chang-Eob Baag</i>
Mar. 2000 - Feb. 2007	B.S. in Earth and Environmental Sciences School of Earth and Environmental Sciences, Seoul National University, Seoul, Republic of Korea

ADDITIONAL EXPERIENCE

2008, 2011	Visiting Research Student Pennsylvania State University, University Park, PA, USA <i>Host: Andrew A. Nyblade</i>
Feb. 2003 - Apr. 2005	Military Service Republic of Korea Navy

RESEARCH GRANTS

Grants held as PI. Multi-year projects are listed once with the total period and total amount; USD equivalents at KRW 1,350 per USD (September 2026).

Apr. 2026 - Dec. 2028	Methods for evaluating fault seismic sources from instrumental seismicity for probabilistic seismic hazard analysis Nuclear Safety and Security Commission (NSSC), PI, KRW 185 million (USD 137,000)
Mar. 2025 - Feb. 2027	Generative AI-based broadband seismic waveform simulation and quantitative ground-motion prediction for nuclear power plant sites Korea Hydro & Nuclear Power (KHNP) KCLOUD open-call project, PI, KRW 660 million (USD 489,000)
Dec. 2025 - Dec. 2026	Advancement of seismic monitoring and seismic hazard assessment techniques for major earthquake-prone regions of Korea, the United States, and Japan Korea Institute of Geoscience and Mineral Resources (KIGAM), PI (subcontract), KRW 70 million (USD 52,000)
Apr. 2023 - Dec. 2025	Characterization of seismogenic fault segments and the stress field in the southeastern Korean Peninsula based on microseismicity Nuclear Safety and Security Commission (NSSC), PI, KRW 460.5 million (USD 341,000)
Apr. 2022 - Dec. 2023	Site characterization and database construction for accelerometer stations in Korea Nuclear Safety and Security Commission (NSSC), PI, KRW 622.5 million (USD 461,000)
Apr. 2021 - Dec. 2023	Development of techniques for instrumental intensity estimation and intensity propagation simulation Korea Meteorological Administration (KMA), PI (subcontract), KRW 151 million (USD 112,000)
Apr. 2021 - Dec. 2022	Development of numerical simulation techniques for seismic wave propagation and ground-motion prediction from fault rupture Korea Meteorological Administration (KMA), PI, KRW 340.6 million (USD 252,000)
Mar. 2021 - Sep. 2024	Development of seismological techniques for imaging magma and crust/mantle structures beneath active volcanoes Korea Institute of Geoscience and Mineral Resources (KIGAM), PI (subcontract), KRW 185 million (USD 137,000)
Jul. 2020 - Jul. 2022	Towards Improved Understanding of Seismic Moment Tensors U.S. Air Force (BAA 19-11), PI (subcontract), USD 20,532
Apr. 2018 - Dec. 2020	Application of 1-D and 3-D Velocity Structures of the Korean Peninsula to Physics-Based Earthquake Modelling Korea Meteorological Administration (KMA), PI (subcontract), KRW 93 million (USD 69,000)
Apr. 2017 - Dec. 2019	Development of Techniques for Quantitative Seismic Intensity Assessment of Earthquakes in the Korean Peninsula Korea Meteorological Administration (KMA), PI, KRW 1,325 million (USD 981,000)

AWARDS AND HONORS

2024	Minister of Environment Commendation for contributions to the advancement of meteorological services (World Meteorological Day 2024), Ministry of Environment, Republic of Korea
2019	Young Geologist Award The Geological Society of Korea
2007 - 2012	Seoul National University Development Fund Scholarship
2007 - 2012	Brain Korea 21 Fellowship Ministry of Education and Human Resources Development, Republic of Korea

PROFESSIONAL SERVICE

Committees and advisory appointments

Mar. 2023 - Feb. 2025	Member, Expert Committee on Earthquake and Volcano Disaster Prevention Policy , Ministry of the Interior and Safety
2020, 2025	Expert Committee Member , planning of Phases 2 and 3 of the Korean Peninsula Subsurface Fault and Velocity Structure Model program, Korea Meteorological Administration
Jul. - Oct. 2024	Planning Committee Member (earthquake) , follow-up R&D program on earthquake, tsunami and volcano monitoring, Korea Meteorological Administration
Aug. - Oct. 2022	Civilian Member, Public-Private Joint Government Organization Diagnosis Team (diagnosis of the Korea Meteorological Administration), Ministry of the Interior and Safety
Sep. 2020 - 2021	Advisory Member, Pohang Earthquake Truth Investigation Committee , Office for Government Policy Coordination
Jun. 2019 - Jan. 2020	Advisory Group Member , study on the implications of the Pohang case for geothermal power projects, Board of Audit and Inspection of Korea
2019 - 2020	Reviewer , national seismic hazard map revision (2019) and active fault map release draft (2020), Ministry of the Interior and Safety
2020	Member, Volcano and Earthquake Task Force , Northern Geo-resources R&D Strategy Roadmap, Korea Institute of Geoscience and Mineral Resources
2020 - 2021	Board Member , The Geological Society of Korea (40th Board of Directors)
2020 - 2021	Editorial Board Member , Journal of the Geological Society of Korea

Technical advisory

2019 - 2025	Korea Institute of Nuclear Safety (KINS) : seismic monitoring equipment, ground-motion prediction equations, station site conditions, and seismic safety guidelines for induced-seismicity facilities
2020 - 2026	KEPCO Engineering & Construction : peer reviews and advisory on seismic hazard and site investigation
2019 - 2021	Korea Hydro & Nuclear Power : seismic source characterization for probabilistic seismic hazard analysis and seismic safety
2019 - 2026	Korea Institute of Geoscience and Mineral Resources : research program planning, deep geophysical monitoring, velocity structure, and seismic velocity monitoring
2020 - 2026	Korea Meteorological Administration : 2020 Haenam earthquake sequence, application of crustal velocity models in the earthquake analysis system (2020), and earthquake R&D planning
2024	Korea Research Institute of Standards and Science : seismometer testing standards

Research funding evaluation

- 2024 - 2026 **National Research Foundation of Korea:** review panels for the Mid-Career Researcher Program (2024), Science Research Center stage evaluation (2026), Young Researcher Program (2026), Leader Researcher Program (2026), Glocal program (2026), and domestic postdoctoral fellowships (2026)
- 2025 **Swiss National Science Foundation:** external reviewer of a research proposal

Journal reviewer

More than 40 manuscripts since 2014 for Earth and Planetary Science Letters; Geophysical Journal International; Geophysical Research Letters; Journal of Geophysical Research: Solid Earth; Bulletin of the Seismological Society of America; Tectonophysics; Tectonics; Physics of the Earth and Planetary Interiors; Pure and Applied Geophysics; Seismological Research Letters; Seismica; Journal of Volcanology and Geothermal Research; Journal of Asian Earth Sciences; Natural Hazards and Earth System Sciences; Nonlinear Processes in Geophysics; Scientific Reports; Geosciences Journal; IEEE Geoscience and Remote Sensing Letters; Indonesian Physical Review

INVITED TALKS AND LECTURES

Titles are given where recorded in the program, abstract, or slides.

- Sep. 2026 **Updating and validation of the integrated subsurface fault and velocity structure model**, International Earthquake Workshop on the 10th anniversary of the Gyeongju earthquake, Korea Meteorological Administration
- Jul. 2026 **Data-driven advancement of seismic hazard prediction for the Korean Peninsula**, invited seminar, Earthquake Research Center workshop, Korea Institute of Geoscience and Mineral Resources, Wonju
- Mar. 2026 **Quantitative understanding of the Earth in seismology**, Earth-Love Seminar, Seoul National University
- Sep. 2025 **Utilization of felt reports and calibration of seismic stations for intensity quantification**, 2025 International Earthquake Workshop, Korea Meteorological Administration
- Aug. 2025 **Fundamentals of seismology and strong ground motion**, lecture, 56th Technical Short Course on Engineering Seismology, Earthquake Engineering Society of Korea
- Jul. 2024 **Determining fault planes of intraplate earthquakes with seismological methods**, invited talk, geophysical exploration team workshop of the program on fault structural lines in the Korean Peninsula
- Nov. 2023 **Inland seismicity in the southern Korean Peninsula**, 2023 Pohang Earthquake International Forum
- Sep. 2023 **Faults, seismic wave propagation, and simulation**, education seminar for earthquake, tsunami and volcano monitoring staff, Korea Meteorological Administration
- Jun. 2023 **Seismology in Korea and recent improvement by AI techniques**, Mongolia and Korea Joint Workshop on the Present and Future of Geosciences, Mongolian University of Science and Technology, Ulaanbaatar
- May 2023 **Spatiotemporal correlation of groundwater levels from seismological analysis**, invited expert seminar, Jeju Province Development Corporation
- Dec. 2022 **Seismic monitoring and magma structure of the Jeju and Ulleung volcanoes**, workshop on Hallasan volcanic geological resources, World Heritage Office, Jeju Special Self-Governing Province
- Nov. 2022 **Groundwater monitoring using seismic waves**, invited lecture, Jeju Groundwater Research Center, Jeju Research Institute
- Nov. 2022 **Imaging of the upper mantle beneath northeast Asia: insights on lithosphere-asthenosphere interactions and the occurrence of intraplate volcanism**, Frontier Seminar, Yonsei University
- Sep. 2021 **Intensity information and ground-motion simulation technologies for the Korean Peninsula**, 2021 Earthquake Workshop on the 5th anniversary of the Gyeongju earthquake, Korea Meteorological Administration

Nov. 2020	Uncertainty estimation of the Pohang earthquake moment tensor solution, 2020 International Forum on the Pohang Earthquake
Aug. 2020	Characteristics of earthquakes and ground motion in the Korean Peninsula and their tectonic implications , invited seminar, Korea Institute of Nuclear Safety
Jul. 2020	Earthquake fundamentals; seismic wave characteristics; seismic observation and analysis , lectures, Earthquake Practical Training Course, Human Resources Development Institute, Korea Meteorological Administration
Dec. 2019	Imaging of Proterozoic continental lithosphere beneath northeast Asia , invited seminar, Korea University
Nov. 2018	Imaging of the lithosphere beneath the Korean Peninsula and the East Sea and its geodynamic interpretation , invited talk, Petroleum and Marine Research Division, Korea Institute of Geoscience and Mineral Resources
Oct. 2018	Imaging of Proterozoic continental lithosphere beneath northeast Asia: insights on its interactions with the upper mantle , invited seminar, Chonnam National University
Sep. 2018	Research on instrumental intensity in Korea , International Seminar on Earthquake Policy Development, Ministry of the Interior and Safety and Korea Meteorological Administration, Seoul
Nov. 2017	Imaging of Proterozoic continental lithosphere beneath northeast Asia: insights on its interactions with the upper mantle , invited talk, workshop, Korea Institute of Geoscience and Mineral Resources
Sep. 2017	Bayesian imaging of 3-D seismic velocity structures beneath northeast Asia , invited seminar, Institute of Natural Sciences, Chungnam National University
Sep. 2017	Determination of seismic intensity in the Korean Peninsula and future tasks, 2017 Earthquake Workshop (one year after the 9.12 Gyeongju earthquake), Korea Meteorological Administration, Gyeongsangbuk-do and The Geological Society of Korea, Gyeongju
May 2017	Trans-dimensional and hierarchical Bayesian inversion for 3-D imaging of seismic velocity structures beneath northeast Asia , luncheon seminar, School of Earth and Environmental Sciences, Seoul National University
Mar. 2017	Trans-dimensional Bayesian ambient noise tomography in NE Asia: intraplate volcanism controlled by back-arc and continental lithosphere , invited talk, Zhejiang University, China
Mar. 2016	Invited seminar , Chonbuk National University, Jeonju

TEACHING

2020 - present	Korea University Undergraduate: Geophysics; Seismology; Data in Geosciences Graduate: Artificial Intelligence for Geosciences; Advanced Geophysics; Geophysics Seminars
2018 - 2020	Chungnam National University Undergraduate: Introduction to Seismology; Mathematics for Geosciences; Natural Hazards; Earth and Environmental Science Analysis Graduate: Theoretical Seismology; Advanced Seismology and Practices; Global Seismology; Earth Science Seminar

SUPERVISION OF STUDENTS AND RESEARCHERS

Ph.D. graduates

Jongwon Han (Korea University, 2025); Jung-Hun Song (Seoul National University, 2021, co-advised); Sang-Jun Lee (Seoul National University, 2020, co-advised)

M.S. graduates

Sigit Ariwibowo (Korea University, 2025); Jaeyeon Kim (Korea University, 2024); Sujin Lee (Korea University, 2023); Hayoung Park (Korea University, 2023); Jiyeon Lee (Korea University, 2022); Minkyong Kim (Korea University, 2022); Yeonjoo Lim (Korea University, 2022); Kyeongjun Jo (Korea University, 2022); Jaeseok Lee (Seoul National University, 2022, co-advised); Young-Jun Jeon (Chungnam National University, 2021)

Current Ph.D. students

Inho Kim (since 2019); Dong Hun Lee (since 2019); Young-Jun Jeon (since 2021); Minkyong Kim (since 2022); Kyeongjun Jo (since 2022); Sujin Lee (since 2023); Jaeyeon Kim (since 2024)

Current M.S. students

Bosung Suh (since 2021); Seung Jun Oh (since 2024)

Co-advised Ph.D. students at other institutions

Jaeseoung Han, Min Hyug Koh, and Cheng Song (Seoul National University); Nita Sebastian (The Australian National University)

Postdoctoral researchers and research professors

Hyun Jae Yoo (Research Professor, since 2025); Dabeen Heo (Postdoctoral Researcher, since 2025); Lav Joshi (Research Professor, 2022-2024); Michael Witek (Research Professor, 2022-2023); Satbyul Kim (Research Professor, 2022-2023); Sang-Jun Lee (Research Professor, 2020-2021)

PUBLICATIONS

Peer-reviewed journal articles. * corresponding author; # students advised or co-advised; author's name in bold.

Under Review

1. Kim, J.#, and **S. Kim*** (2026), Upper crustal complexities and their influences on intraplate seismicity in the southern Korean Peninsula from ambient noise eikonal tomography, submitted.

2026

2. Kim, H.-S., M. Kim, D.-H. Sohn, S.-M. Yoo, S. Kim, **S. Kim**, and B.-D. So (2026), Control of back-arc mantle rheology on far-field postseismic deformation of the Korean Peninsula after the 2011 M_w 9.0 Tohoku-Oki earthquake, *Earth and Planetary Science Letters*, 695, 120241, doi:10.1016/j.epsl.2026.120241. [Open access]
3. Park, S., D. Heo, T.-S. Kang, J. Rhie, **S. Kim**, S.-J. Lee, J. Dettmer, and D. W. Eaton (2026), Improved local magnitude estimation of induced earthquakes in the Kiskatinaw Seismic Monitoring and Mitigation Area, British Columbia, Canada, *Seismological Research Letters*, doi:10.1785/0220260162 (published online 25 August 2026).
4. Song, J.-H., **S. Kim***, B. Tauzin, and J. Rhie (2026), Continuous nonthermal slab gap formed by progressive tearing beneath Northeast Asia, *Nature Communications*, 17, 8249, doi:10.1038/s41467-026-75246-8. [Open access]
5. Baag, S.-Y., J. Rhie, **S. Kim**, T.-S. Kang, and C. S. Cho (2026), Seismic rupture parameters based on the source directivity analysis of the broadband teleseismic P-waves for deep earthquakes in the NW Japan subduction zone, *Geosciences Journal*, 30(3), 451-469, doi:10.1007/s12303-026-00093-0. [Open access]
6. Jeon, Y.#, **S. Kim***, L. Joshi, and H.-S. Kim (2026), Probabilistic estimation of shear-wave velocity profiles and site classes from surface wave surveys for accelerometer stations in the southern Korean Peninsula, *Bulletin of Earthquake Engineering*, 24(4), 1853-1881, doi:10.1007/s10518-026-02364-5. [Open access]

2025

7. Han, J.#, and **S. Kim*** (2025), The 2024 M_L 4.8 Buan earthquake sequence and aligned multiple clusters in the southwestern Korean Peninsula, *Geosciences Journal*, 29, 727-741, doi:10.1007/s12303-025-00048-x. [Open access]
8. Lim, Y.#, and **S. Kim*** (2025), Crustal structures beneath Mt. Baekdu (Changbai) volcano from receiver function and surface wave dispersion data, *Geosciences Journal*, 29, 579-595, doi:10.1007/s12303-025-00046-z. [Open access]
9. Han, J.#, **S. Kim***, and D.-H. Sheen (2025), RpNet: Robust P-wave first-motion polarity determination using deep learning, *Seismological Research Letters*, 96(4), 2405-2417, doi:10.1785/0220240384.
10. Cho, H.#, S.-J. Lee, **S. Kim**, J. Rhie, and T.-S. Kang (2025), Imaging the 3D basin structure of the Santa Clara Valley by ambient noise tomography, *Geosciences Journal*, 29, 87-101, doi:10.1007/s12303-025-00005-8. [Open access]

2024

11. Phạm, T.-S., H. Tkalčić, J. Hu, and **S. Kim** (2024), Towards a new standard for seismic moment tensor inversion containing 3-D earth structure uncertainty, *Geophysical Journal International*, 238(3), 1840-1853, doi:10.1093/gji/ggae256.

12. Cho, K., J. Ha, J. Lim, J. Han#, **S. Kim**, and D. Lee (2024), PPSD GAN: PPSD-informed generative model for ambient seismic noise synthesizing, *IEEE Geoscience and Remote Sensing Letters*, 21, 300415, doi:10.1109/LGRS.2024.3433377.
13. Han, J.#, J. Han#, D. Heo, **S. Kim***, S. Lee#, M. H. Koh#, J. Kim#, K. B. Kwon, B. S. Ahn, Y. Jeon#, K. Jo#, Y. Lim#, S.-J. Lee, T.-S. Kang, J. Rhie, and U. S. Ahn (2024), Data and early results from temporary seismic arrays for monitoring and investigating magmatic processes beneath Mt. Halla and Ulleung Island volcanoes, South Korea, *Geosciences Journal*, 28, 761-780, doi:10.1007/s12303-024-0027-z.
14. Han, J.#, K. J. Seo, **S. Kim***, D.-H. Sheen, D. Lee, and A.-H. Byun (2024), Research catalog of inland seismicity in the southern Korean Peninsula from 2012 to 2021 using deep learning techniques, *Seismological Research Letters*, 95, 952-968, doi:10.1785/0220230246.

2023

15. Hong, Y., A.-H. Byun, **S. Kim**, and D.-H. Sheen (2023), Customization of a deep neural network using local data for seismic phase picking, *Frontiers in Earth Science*, 11, 1306488, doi:10.3389/feart.2023.1306488.
16. Alemayehu, S., A. Aoudia, A. Ayele, S. Pachhai, H. R. Thapa, C. J. Ebinger, R. Kherchouche, M. Guidarelli, and **S. Kim** (2023), Structure of the crust-uppermost mantle beneath the Ethiopian volcanic province using ambient seismic noise and teleseismic P wave coda autocorrelation, *Tectonophysics*, 869, 230092, doi:10.1016/j.tecto.2023.230092.
17. Sebastian, N.#, H. Tkaličić, C. Sippl, **S. Kim**, A. M. Reading, Y. Chen, and F. R. Fontaine (2023), The crust-mantle transition beneath Northeast China from P-wave receiver functions, *Frontiers in Earth Science*, 11, 1144819, doi:10.3389/feart.2023.1144819.
18. Han, J.#, **S. Kim***, D.-H. Sheen, D. Lee, S.-J. Lee, S.-H. Yoo, and D. Park (2023), Seismic event and phase detection using deep learning for 2016 Gyeongju earthquake sequence, *Geosciences Journal*, 27, 285-295, doi:10.1007/s12303-023-0004-y.

2022

19. Kwak, D., S. Kim, D.-H. Sheen, and **S. Kim** (2022), Seismological characteristics of the recent Suncheon microearthquake sequence, *Geosciences Journal*, 26(5), 609-620, doi:10.1007/s12303-022-0010-5.
20. Song, J.-H., **S. Kim***, J. Rhie, and D. Park (2022), Determination of moment tensor solutions for the earthquakes in the southern Korean Peninsula using three-dimensional seismic waveform simulations, *Frontiers in Earth Science*, 10, 945022, doi:10.3389/feart.2022.945022.
21. Lee, J.#, J.-H. Song, **S. Kim***, J. Rhie, and S. G. Song (2022), Three-dimensional seismic wave propagations in the southern Korean Peninsula using pseudo-dynamic rupture models, *Bulletin of the Seismological Society of America*, 112(2), 939-960, doi:10.1785/0120210172.
22. Jeon, Y.#, S.-J. Lee, **S. Kim***, and S.-S. Kim (2022), Estimation of shallow S-wave structure from Quasi Transfer Spectrum and Bayesian inversion using microarray data at a deep drilling site in Chungnam National University, Korea, *Geosciences Journal*, 26(3), 367-383, doi:10.1007/s12303-021-0034-2.

2021

23. Sun, Y., S. Hier-Majumder, B. Tauzin, M. Walter, M. D. Ballmer, Y. Xu, and **S. Kim** (2021), Evidence of volatile-induced melting in the Northeast Asian upper mantle, *Journal of Geophysical Research: Solid Earth*, 126(10), e2021JB022167, doi:10.1029/2021JB022167.
24. **Kim, S.**, and S.-J. Lee (2021), Assessment of historical earthquake magnitudes and epicenters using ground motion simulations, *Journal of the Earthquake Engineering Society of Korea*, 25(2), 59-69, doi:10.5000/EESK.2021.25.2.059. (in Korean with English abstract)
25. Lee, S.-J., **S. Kim***, J. Rhie, T.-S. Kang, and Y. Kim (2021), Upper crustal shear wave velocity and radial anisotropy beneath Jeju Island volcanoes from ambient noise tomography, *Geophysical Journal International*, 225(2), 1332-1348, doi:10.1093/gji/ggab026. [Open access]

2020

26. Son, M., C. S. Cho, H. K. Lee, M. Han, J. S. Shin, K. Kim, and **S. Kim** (2020), Partitioned fault movement and aftershock triggering: Evidence for fault interactions during the 2017 M_w 5.4 Pohang earthquake, South Korea, *Journal of Geophysical Research: Solid Earth*, 125(11), e2020JB020005, doi:10.1029/2020JB020005.
27. Cheon, H., J. Rhie, and **S. Kim*** (2020), Groundwork on Did You Feel It (DYFI) in the Korean Peninsula toward a

new generation system of earthquake intensity estimations, *Journal of the Geological Society of Korea*, 56(4), 469-480, doi:10.14770/jgsk.2020.56.4.469. (in Korean with English abstract)

28. Song, J.-H.#, **S. Kim**, and J. Rhie (2020), Heterogeneous modification and reactivation of cratonic margin beneath the Korean Peninsula from teleseismic travel time tomography, *Gondwana Research*, 81, 475-489, doi:10.1016/j.gr.2019.11.016. [Open access]
29. Mustač, M., B. Hejrani, H. Tkalčić, **S. Kim**, S.-J. Lee, and C. S. Cho (2020), Large isotropic component in the source mechanism of the 2013 Democratic People's Republic of Korea nuclear test revealed via a hierarchical Bayesian inversion, *Bulletin of the Seismological Society of America*, 110(1), 166-177, doi:10.1785/0120190062.
30. Lee, S.-J.#, J. Rhie, **S. Kim**, T.-S. Kang, and C. S. Cho (2020), 1-D velocity model for the North Korean Peninsula from Rayleigh wave dispersion of ambient noise cross-correlations, *Journal of Seismology*, 24(1), 121-131, doi:10.1007/s10950-019-09891-6. [Open access]

2019

31. Baag, S.-Y., J. Rhie, S.-H. Yoo, **S. Kim**, S. Kim, and T.-S. Kang (2019), Determination of megathrust rupture processes using plate-interface-based fault models and 3D Green's functions: An application to the 2011 Tohoku-Oki earthquake, *Pure and Applied Geophysics*, 176(12), 5235-5252, doi:10.1007/s00024-019-02272-7.
32. **Kim, S.**, and J. Rhie (2019), Calculation of station-representative isotropic receiver functions, *Pure and Applied Geophysics*, 176(6), 2367-2382, doi:10.1007/s00024-019-02109-3.
33. Woo, J.-U., J. Rhie, **S. Kim**, T.-S. Kang, K.-H. Kim, and Y. Kim (2019), The 2016 Gyeongju earthquake sequence revisited: Aftershock interactions within a complex fault system, *Geophysical Journal International*, 217(1), 58-74, doi:10.1093/gji/ggz009.

2018

34. Song, J.-H.#, **S. Kim**, J. Rhie, S.-H. Lee, T.-S. Kang, and Y. Kim (2018), Imaging of lithospheric structure beneath Jeju volcanic island by teleseismic travel time tomography, *Journal of Geophysical Research: Solid Earth*, 123(8), 6784-6801, doi:10.1029/2018JB015979. [Open access]
35. Tauzin, B., **S. Kim**, and J. C. Afonso (2018), Multiple phase changes in the mantle transition zone beneath northeast Asia: Constraints from teleseismic reflected and converted body-waves, *Journal of Geophysical Research: Solid Earth*, 123(8), 6636-6657, doi:10.1029/2017JB015238. [Open access] [Selected for cover page]

2017

36. Tauzin, B., **S. Kim***, and B. L. N. Kennett (2017), Pervasive seismic low-velocity zones within stagnant plates in the mantle transition zone: Thermal or compositional origin?, *Earth and Planetary Science Letters*, 477, 1-13, doi:10.1016/j.epsl.2017.08.006. [Open access]
37. **Kim, S.**, H. Tkalčić, and J. Rhie (2017), Seismic constraints on magma evolution beneath Mount Baekdu (Changbai) volcano from transdimensional Bayesian inversion of ambient noise data, *Journal of Geophysical Research: Solid Earth*, 122(7), 5452-5473, doi:10.1002/2017JB014105. [Open access]

2016

38. **Kim, S.***, H. Tkalčić, J. Rhie, and Y. Chen (2016), Intraplate volcanism controlled by back-arc and continental structures in NE Asia inferred from transdimensional Bayesian ambient noise tomography, *Geophysical Research Letters*, 43(16), 8390-8398, doi:10.1002/2016GL069483. [Open access]
39. **Kim, S.***, J. Dettmer, J. Rhie, and H. Tkalčić (2016), Highly efficient Bayesian joint inversion for receiver-based data and its application to lithospheric structure beneath the southern Korean Peninsula, *Geophysical Journal International*, 206(1), 328-344, doi:10.1093/gji/ggw149.

Before 2016

40. Lee, S.-J.#, J. Rhie, **S. Kim**, T.-S. Kang, and G. B. Kim (2015), Ambient seismic noise tomography of the southern East Sea (Japan Sea) and the Korea Strait, *Geosciences Journal*, 19(4), 709-720, doi:10.1007/s12303-015-0012-7.
41. **Kim, S.**, A. A. Nyblade, J. Rhie, C.-E. Baag, and T.-S. Kang (2012), Crustal S-wave velocity structure of the Main Ethiopian Rift from ambient noise tomography, *Geophysical Journal International*, 191(2), 865-878, doi:10.1111/j.1365-246X.2012.05664.x.
42. **Kim, S.**, J. Rhie, and G. Kim (2011), Forward waveform modelling procedure for 1-D crustal velocity structure and its application to the southern Korean Peninsula, *Geophysical Journal International*, 185(1), 453-468,

[doi:10.1111/j.1365-246X.2011.04949.x](https://doi.org/10.1111/j.1365-246X.2011.04949.x).

43. Rhie, J., and **S. Kim*** (2010), Regional moment tensor determination in the southern Korean Peninsula, *Geosciences Journal*, 14(4), 329-333, [doi:10.1007/s12303-010-0038-9](https://doi.org/10.1007/s12303-010-0038-9).
44. **Kim, S.**, A. A. Nyblade, and C.-E. Baag (2009), Crustal velocity structure of the Rukwa Rift in the Western Branch of the East African Rift System, *South African Journal of Geology*, 112(3-4), 251-260, [doi:10.2113/gssajg.112.3-4.251](https://doi.org/10.2113/gssajg.112.3-4.251).