Jung-Hun Song

Sponsored Researcher (Postdoctoral Fellow, NRF Korea)
Department of Earth Science and Engineering
Imperial College London
London, SW7 2BP, United Kindom E-mail: j.song1@imperial.ac.uk

EDUCATION

Seoul National University

· **Ph.D. in Seismology** March 2016 – August 2021
Thesis Advisor: Professor Junkee Rhie
Committee: YoungHee Kim (Chair), Haemyeong Jung, Tae-seob Kang, Seongryong Kim
Thesis Title: Seismological Constraints on the Upper Mantle Structure in Northeast Asia and Implications for Mantle Dynamics and Intraplate Volcanism

· **Bachelor of Science in Earth and Environmental Sciences & Physics (Dual major)**
March 2012 – February 2016

Hansung Science High School
March 2010 – February 2012

PROFESSIONAL EXPERIENCE

Sponsored Researcher

· Department of Earth Science and Engineering, Imperial College London September 2025 – present
Advisor: Asst. Prof. Doyeon Kim

Senior Researcher

· The Research Institute of Basic Sciences, SNU January 2024 – present

Postdoctoral Researcher

· The Research Institute of Basic Sciences, SNU September 2021 – December 2023

Technical Research Personnel – substitution of military service

· *Postdoctoral Researcher* at Seismological Lab., SNU September 2021 – February 2022
· *Graduate Student* at Seismological Lab., SNU March 2019 – August 2021

PEER-REVIEWED PUBLICATIONS

· **Song, J. H.**, Kim. D., Collins, G. S., Tsai, V. C. & Lognonné, P. (2026). New Magnitude Scaling and Seismic Source Characterisation for Marsquakes and Meteoroid Impacts. *Journal of Geophysical Research: Planets*. https://doi.org/10.1029/2026JE009988

· **Song, J. H.**, Kim. D., Kolawole, F., Davis, J. M., Parry, R. & Maguire, R. (2026). Active crustal straining and fault reactivation at Valles Marineris. *Nature Communications*. https://doi.org/10.1038/s41467-026-78193-6

· Kim, D., **Song, J. H.**, & Schmerr, N. C. (2026). Locating moonquakes with single-station seismology. *Geophysical Research Letters*. https://doi.org/10.1029/2026GL122962

· **Song, J. H.**, Kim S., Tauzin, B. & Rhie, J. (2026). Continuous nonthermal slab gap formed by progressive tearing beneath Northeast Asia. *Nature Communications*. https://doi.org/s41467-026-75246-8

· Kim, D., **Song, J. H.**, Dobrosavljevic, V. V., & Lekić, V. (2025). Seismic and Mineralogical Evidence for an Iron-Rich Mega Ultralow-Velocity Zone Beneath Hawai'i. *Science Advances*.

https://doi.org/10.1126/sciadv.adz1962

- Lee, W., Lee, H., Kim, H., **Song, J. H.**, Hong, J., Park, J., ... & Fischer, T. P. (2025). Water and gas geochemistry of springs in Ulleungdo volcano, South Korea: Implications for degassing of upper mantle-derived volatiles in Northeast Asia. *Journal of Hydrology*, 647, 132286. https://doi.org/10.1016/j.jhydrol.2024.132286
- Kim, H., Lee, H., **Song, J. H.**, Lee, W., Hong, J., Takanori, K., Takahata, N., Sano, Y., & Fischer, T. P. (2024) Latent magmatism beneath the Korean Peninsula by asthenosphere upwelling. *Commun. Earth Environ.*, 5, 427. https://doi.org/10.1038/s43247-024-01592-4
- Lee, S., **Song, J. H.**, Heo, D., Rhie, J., Kang, T. S., Choi, E., ... & Ree, J. H. (2023). Crustal and uppermost mantle structures imaged by teleseismic P-wave traveltime tomography beneath the Southeastern Korean Peninsula: implications for a hydrothermal system controlled by the thermally modified lithosphere. *Geophysical Journal International*, 235(2), 1639-1657. https://doi.org/10.1093/gji/ggad319
- **Song, J. H.**, Kim, S., Rhie, J., & Park, D. (2022). Moment Tensor Solutions for Earthquakes in the Southern Korean Peninsula Using Three-Dimensional Seismic Waveform Simulations. *Frontiers in Earth Science*, 1189. https://doi.org/10.3389/feart.2022.945022
- Lee, S., Saxena, A., **Song, J. H.**, Rhie, J., & Choi, E. (2022). Contributions from lithospheric and upper-mantle heterogeneities to upper crustal seismicity in the Korean Peninsula. *Geophysical Journal International*, 229(2), 1175-1192. https://doi.org/10.1093/gji/ggab527
- Lee, J., **Song, J. H.**, Kim, S., Rhie, J., & Song, S. G. (2022). Three-Dimensional Seismic-Wave Propagation Simulations in the Southern Korean Peninsula Using Pseudodynamic Rupture Models. *Bulletin of the Seismological Society of America*, 112(2), 939-960. https://doi.org/10.1785/0120210172
- Kim, D., Lee, H., Lee, W., Kim, J., Oh, J., **Song, J. H.**, Jung, H. & Stuart, F. M. (2021). Helium isotopes and olivine geochemistry of basalts and mantle xenoliths in Jeju Island, South Korea: Evaluation of role of SCLM on the Cenozoic intraplate volcanism in East Asia. *Lithos*, 390, 106123. https://doi.org/10.1016/j.lithos.2021.106123
- Lee, W., Lee, H., Kim, D., Kim, J., Oh, J., **Song, J. H.**, Kim, C. H., Park, C. H., & Stuart, F. M. (2021). Trace element and helium isotope geochemistry of the Cenozoic intraplate volcanism in the East Sea (Sea of Japan): Implications for lithosphere-asthenosphere interaction. *Lithos*, 388, 106075. https://doi.org/10.1016/j.lithos.2021.106075
- **Song, J. H.**, Kim, S., & Rhie, J. (2020). Heterogeneous modification and reactivation of a craton margin beneath the Korean Peninsula from teleseismic travel time tomography. *Gondwana Research*, 81, 475-489. https://doi.org/10.1016/j.gr.2019.11.016
- **Song, J. H.**, Kim, S., Rhie, J., Lee, S. H., Kim, Y., & Kang, T. S. (2018). Imaging of lithospheric structure beneath Jeju Volcanic Island by teleseismic traveltime tomography. *Journal of Geophysical Research: Solid Earth*, 123(8), 6784-6801. https://doi.org/10.1029/2018JB015979

TEACHING EXPERIENCE

Undergraduate Teaching Assistant, Seoul National University

- Class "Volcanoes and Earthquakes" — Fall 2016 / Fall 2017 / Fall 2018
- Class "Earth System Sciences Lab." — Fall 2018

HONORS AND AWARDS

- Commendation of Teaching Assistant in Class "Volcanoes and Earthquakes" — Spring 2018
- Seoul National University Alumni Scholarship — March 2017
- The Presidential Science Scholarship — March 2012–February 2016
- Gold medal award (rank 4) in the 5th International Earth Science Olympiad — September 2011–Bologna, Italy
- Gold medal award (rank 2) in the 7th Korea Earth Science Olympiad — September 2009–Korea

INVOLVED RESEARCH PROJECT

- *NRF RS-2025-02373070*: Water on Mars: Exploring the Planet's Subsurface Structure from Integrated Seismic

Analyses

(September 2025-August 2026)

- *NRF RS-2024-00462073*: H2O cycle between the surface of Earth and mantle: the effect of dehydration of phyllosilicate on the distribution of isotropic elements and changes in seismic velocity

(September 2024-present)

- *KMI 2022-00910*: Improvement of subsurface fault models with high seismicity in the Yeongnam and capital areas

(April 2022-present)

- *KMI 2019-00110*: Development of unified 3-D seismic velocity model (March 2019–March 2022)
  - Constructed the 3-D crust and upper mantle structure using ambient noise tomography, traveltime tomography, and full waveform inversion, and validated the 3-D seismic velocity model of the Korean Peninsula and Northeast Asia through simulating seismic waveforms for numerous local and regional earthquakes.
- *KMIPA 2017-4020*: Development of technique for predicting ground shaking in the Korean Peninsula from regional earthquakes (March 2017–February 2020)
  - Simulated the ground motions in the Korean Peninsula for large past earthquakes (e.g. 2016 Kumamoto, 2004 Kyushu, 1946 Nankai) and potential scenario earthquakes in Japan.
- *KETEP 20132510100060*: Research on Exploration Technologies and an On-site Verification to Enhance the Fracturing Efficiency of a Shale Gas Formation (March 2016–February 2017)
  - Developing detection technique of micro-earthquakes from hydraulic fracturing and investigating earthquake fault mechanism
- Undergraduate Research Program (URP), SNU (March 2012–February 2013)
  - The effect of temperature on the coral bleaching in the vicinity of Jeju Island

INVITED TALKS & CONFERENCE PRESENTATIONS

Invited "Volcanic History of Mt. Halla, Jeju Island" Workshop

- Imaging of lithospheric structure beneath Jeju Volcanic Island by teleseismic traveltime tomography

(June 2019–Jeju World Natural Heritage Center, Korea)

Invited "Natural Science Research Institute of Korea National University of Education" Workshop

- Finding the Heart of Volcanoes via Seismic Tomography

(Jan 2023–Konjiam Resort, Gwangju, Korea)

Invited "Geophysics Lunch Bunch"

- Identifying Multiscale Heterogeneities and Their Origins at Thermochemical Boundaries and Phase Transitions in the Earth's Mantle through 3-D Seismic Imaging and Waveform Modeling

(May 2025–Brown University, USA)

Invited "Plates, Mantle and Core (PMaC)"

- Seismic and mineralogical evidence for an iron-rich mega–ultralow-velocity zone beneath Hawai'i

(March 2026–Imperial College London, UK)

American Geophysical Union (AGU) Oral Presentation

- Heterogeneous Modification and Ongoing Reactivation of Craton Margin Beneath Northeast Asia Continental Margin: Insight from Teleseismic Traveltime Tomography of the Korean Peninsula, T037-08 *in* T037 - *Intracontinental Deformation: From the Surface to the Upper Mantle I*

(December 2020–online)

- Spontaneous Shallow Upper Mantle Melt Focusing beneath Intraplate Volcanoes. DI14A-04 *in* DI14A -*Exploring Earth's Mantle Heterogeneities Through Imaging, Modeling, Geochemistry, and Experiments III eLightning*

(December 2023–San Francisco, CA)

European Geosciences Union (EGU) Oral Presentation

- Cold Mantle Transition Zone Gap Formed by Progressive Tearing of the Segmented Western Pacific Slab. In EGU General Assembly 2025. EGU25-14576 *in* GD1.2 Influence of mantle convection from surface to core

(May 2025-onsite)

- Intraplate Volcanism by Spontaneous Shallow Upper Mantle Melt Focusing. In EGU General Assembly 2024. EGU24-14365 *in* GD1.2 Structure, origin, and evolution of intraplate magmatism in space and time; insights from petrological, geochemical and geophysical studies

(April 2024-onsite)

- Seismic Evidence of Slab Segmentation and Melt Focusing Atop the 410-km Discontinuity in NE Asia, EGU23-10944 *in* GD4.2 Initiation and evolution of subduction: dynamics, volatiles and melts from the surface to the deep mantle

(April 2023-onsite)

- Heterogeneous modification and reactivation of craton margin in northeast Asia: insight from teleseismic traveltime tomography of the Korean Peninsula, EGU2020-12562 *in* GD4.2 40 Years with International Lithosphere Program (ILP), Geodynamics of continental crust and upper mantle, and the nature of mantle discontinuities

(April 2020–online)

Seismological Society of America (SSA) Oral Presentation

- New Magnitude Scaling and Seismic Source Characterisation. *in* Planetary and Gravitational Wave Seismology

(April 2026– Pasadena, CA)

Asia Oceania Geosciences Society (AOGS) Oral Presentation

- 3D Crustal Structures Beneath the Southern Korean Peninsula and Coastal Areas Using Seismic Full Waveform Inversion. In AOGS Annual Meeting 2024. SE08-A010 *in* SE08 Multiscale Seismic Imaging: Advancement in Methodology and Practical Applications

(June 2024-onsite)

Annual Meeting of the Geological Society of Korea Oral Presentation

- Signature of Dynamic interaction between a segmented stagnant slab and the mantle transition zone in NE Asia (in Korean)

(October 2021–Jeju, Korea)

- Seismic evidence of focused partial melting at shallow upper mantle beneath Cenozoic intraplate volcanism in NE Asia and implications for the mechanism of intraplate volcanism. (in Korean)

(June 2021–Gyeongju, Korea)

- Imaging of Upper Mantle Structure Beneath the Korean Peninsula by Teleseismic Traveltime Tomography and Tectonic Implication on the Evolution of a Cratonic Margin Lithosphere *in* Tectonic evolution of Asia from Precambrian to present (in English)

(October 2019–Jeju, Korea)

AGU Poster Presentation

- Crustal Structure Beyond InSight: Transdimensional Joint Inversion of Receiver Functions and Surface Waves of Mars, DI23C-0013

(December 2025-New Orleans, LA)

- Cold Mantle Transition Zone Gap by Segmentation of the Western Pacific Stagnant Slab, DI21B-3149

(December 2024-Washington, DC)

- Tear Originated Structural Gap of the Northwestern Pacific Stagnant Slab, DI11B-0008

(December 2023-San Francisco, CA)

- Spontaneous Shallow Upper Mantle Melt Focusing beneath Intraplate Volcanoes, DI14A-04

(December 2023-San Francisco, CA)

- Localized upper mantle low-viscosity pockets beneath intraplate volcanoes, DI22B-0011

(December 2022-Chicago, IL)

- Signature of slab fragmentation and dynamic interaction between slabs and the mantle transition zone in northeast Asia, DI45D-0048 (December 2021–Virtual)
- Upper mantle velocity structure beneath the Korean Peninsula by teleseismic traveltime tomography: evidence for heterogeneous modification and reactivation of a cratonic lithosphere margin, T13E-0236

(December 2019–San Francisco, CA)

- Upper mantle structure beneath the Korean Peninsula by teleseismic traveltime tomography, T33C-0411

(December 2018–Washington, DC)

- Teleseismic traveltime tomography of Jeju Island, South Korea, S21C-0728

(December 2017–New Orleans, LA)

EGU Poster Presentation

- Teleseismic traveltime tomography of the southern Korean Peninsula: Implications for the lithospheric evolution in the eastern continental margin of the Eurasian plate, EGU2019-7526

(April 2019 –Austria, Vienna)

・Source analysis of November 15, 2017 Pohang earthquake sequences: The first Non-Double Couple event reported in South Korea, EGU2018-12279 (April 2018– Vienna, Austria)

SSA Annual Meeting Poster Presentation

・Tectonic Imprints of Multiscale Craton Margin Deformation on the Continental Lithosphere of the Korean Peninsula from Regional Seismicity, Seismic Traveltime and Waveform Tomography. *in* Earth's Structure from the Crust to the Core No. 106 (April 2025– Baltimore, MD)

・Evidence of Active Deep Crustal Deformation Beneath Valles Marineris, Mars. *in* Planetary and Gravitational Wave Seismology No. 140 (April 2026– Pasadena, CA)

SSA Seismic Tomography Poster Presentation

・Seismic Evidence of Slab Segmentation and Melt Focusing Atop the 410-Km Discontinuity in NE Asia (October 2022–Toronto, Canada)

The Impact of UK Planetary Geoscience, The Geological Society

・New Magnitude Scaling and Source Characterization of Marsquakes (November 2025–London, UK)

Asia Oceania Geosciences Society Poster Presentation

・Imaging of Lithosphere Structure Beneath Intraplate Volcanoes in Jeju Island, South Korea Using Teleseismic Traveltime Tomography, SE03-A033 (June 2018–Honolulu, Hawaii)

Earth Love Seminar at Seoul National University

・Imaging of Lithosphere Structure Beneath Intraplate Volcanoes in Jeju Island, South Korea Using Teleseismic Traveltime Tomography (June 2019–SNU)

Research Workshop at Korea Institute of Geoscience and Mineral Resources (KIGAM)

・Seismic and volcanic activities around the Korean Peninsula and East Asia, and their relationship with geology (March 2024)

・Moment tensor inversion for earthquakes in the Yellow Sea based on 3D waveform simulations (December 2023)

・Upper mantle structure of the Korean Peninsula and East Asia (August 2021)

Research Workshop at Korea University

・3D seismic waveform simulation using the Spectral Element Method (July 2022)

Research Presentation at Pukyong National University

・Seismological constraints on Earth's deep interiors (August 2022)

Research Presentation at Korea National University of Education

・Tectonic evolution of the southern Korean Peninsula: insights from seismic tomography (November 2022)

SCIENCE & TECHNICAL SKILLS

Scripting & Programming Languages	Linux, Matlab, OpenMP, Bash, SAC, Python, Fortran, C++, Parallel programming, GPU acceleration
Software	Seismology: SPECFEM3D_Cartesian, SPECFEM3D_Globe, AxiSEM, Flexwin Geodynamics: ASPECT, Mineral physics: Perple_X
Field work	Deployment and maintenance of portable seismic arrays (broadband seismometers, geophones) in Jeju Volcanic Island (Sep. 2016–Oct. 2019), in Ulleung Volcanic Island (Apr. 2022–May 2022) Geological field trip in Jeju Volcanic Island (June, 2019)

LEADERSHIP & OUTREACH

Peer reviewer of manuscript submitted to Nature Communications (1 manuscript as of Oct. 2026), Journal of Geophysical Research: Solid Earth (4 manuscripts as of Oct. 2026), Journal of Geophysical Research: Planets (1 manuscript as of Oct. 2026), Lithos (1 manuscript as of Jan. 2026), Geophysical Research Letter (1 manuscript as of Dec. 2022), Geosciences Journal (1 manuscript as of May. 2024), Scientific Report (1 manuscript as of Dec. 2024), Gondwana Research (1 manuscript as of Feb. 2025)

Early Career Convener and Chair in AGU Session, DI11A - Exploring Complex Mantle Dynamics with Observations, Laboratory Experiments, and Computer Models

December 2023

Coordinator of Earth Love Seminar, School of Earth and Environmental Sciences, Seoul National University

Spring 2019

Student/Early Career Convener, American Geophysical Union

· DI008 - Constraining the Thermal Structure in the Upper Mantle with Interdisciplinary Perspectives and Multiple Datasets

December 2022

Student Government President of School of Earth and Environmental Sciences, Seoul National University

March 2018–February 2019

Natural Science Summer Camp August 2018

· Education service for 50 high school students to understand essential of earth science and seismology

· Advising undergraduate students of School of Earth and Environmental Sciences, Seoul National University

Member

· America Geophysical Union 2016–Present

· European Geosciences Union 2018–Present

· Seismological Society of America 2022–Present

Educational Outreach Program at Kangnam Welfare Center September 2010–December 2011

· Education service for elemental and middle school students to understand math and science

Abstracts

International

- **Song, J. H.**, Kim, D., Collins, G., Tsai, V. C., and Kolawole, F. (2026). New Magnitude Scaling and Seismic Source Characterisation, In SSA 2026 annual meeting. [oral]
- **Song, J. H.**, Kim, D., Kolawole, F., Davis, M. J., Parry, R., Maguire, R. and Tsai, V. C. (2026). Seismic Evidence of Active Deep Crustal Deformation Beneath Valles Marineris, Mars. In SSA 2026 annual meeting. [poster]
- **Song, J. H.**, Kim, D., and Palin, R. (2025). Crustal Structure Beyond InSight: Transdimensional Joint Inversion of Receiver Functions and Surface Waves of Mars. In AGU Fall Meeting 2025. DI23C-0013 [poster]
- Lekic, V., Kim, D., **Song, J. H.**, and Dobrosavljevic V. V. (2025). Seismic and Mineralogical Evidence for Iron-Rich Hawai'ian Mega Ultralow-Velocity Zone. In AGU Fall Meeting 2025. DI24A-01
- **Song, J. H.**, Kim, D., Tsai, V. C., and Kolawole, F. (2025). New Magnitude Scaling and Source Characterization of Marsquakes. In The Impact of UK Planetary Geoscience, The Geological Society. [poster]
- **Song, J. H.**, Rhie, J., Kim, S., and Tauzin, B. (2025). Cold Mantle Transition Zone Gap Formed by Progressive Tearing of the Segmented Western Pacific Slab. In EGU General Assembly 2025. EGU 2025-14576 [oral]
- Kim, D., **Song, J. H.**, Dobrosavljevic, V., and Lekić, V. (2025). Sequencing Postcursors of P and S Core-diffracted Waves:Implications for the Hawaiian Mega-ULVZ Properties. In SSA 2025 annual meeting [oral]
- **Song, J. H.**, Rhie, J., and Kim, S. (2025). Tectonic Imprints of Multiscale Craton Margin Deformation on the Continental Lithosphere of the Korean Peninsula from Regional Seismicity, Seismic Traveltime and Waveform Tomography. In SSA 2025 annual meeting [poster]
- Lee, W., Kim, H., Yu, J., **Song, J. -H.**, Lee, H., Kim, W., Kim, J., Tsunogai, U., Takahata, N., Sano, Y. (2025). Geochemistry of volatiles emitted from Segments 2-5 of the Central Indian Ridge (9°44' to 15°33'S). In JPGU 2025.
- Rhie, J., **Song, J. H.**, and Kim, S. (2024). Structural Controls on Intraplate Deformation and Seismicity in the Southern Korean Peninsula Indicated by Seismic Waveform Inversion. In AGU Fall Meeting 2024. T53B-3213 [poster]
- **Song, J. H.**, Rhie, J., Kim, S., and Tauzin, B. (2024). Cold Mantle Transition Zone Gap by Segmentation of the Western Pacific Stagnant Slab. In AGU Fall Meeting 2024. DI21B-3149 [poster]
- Lekić, V., Kim, D., **Song, J. H.**, and Li, M. (2024). Anomalous Seismic Waveforms: Implications for Lowermost Mantle Heterogeneity. In AGU Fall Meeting 2024. DI23A-3157 [poster]
- Choi, M., Lee, H., Kim, H., Yu, J., **Song, J. H.**, Takahata, N, and Sano, Y. (2024). He and C isotope geochemistry of dissolved gases in groundwater of Jeju Volcanic Island, Republic of Korea. In Goldschmidt2024
- **Song, J. H.**, Rhie, J, and Kim, S. (2024). 3D Crustal Structures Beneath the Southern Korean Peninsula and Coastal Areas Using Seismic Full Waveform Inversion. In AOGS annual meeting 2024 [Onsite oral presentation]
- Jo, K., **Song, J. H.**, and Kim, S. (2024). The upper mantle anisotropy beneath the southern Korean Peninsula constrained by shear-wave splitting and numerical mantle convection simulation. In 2024 SSA annual meeting
- **Song, J. H.**, Kim, S., Rhie, J., and Kang, T.-S. (2024). Intraplate Volcanism by Spontaneous Shallow Upper Mantle Melt Focusing. In EGU General Assembly 2024. EGU24-14365 [Onsite oral presentation]
- Rhie, J., **Song, J. H.**, Kim, S., & Tauzin, B. (2023, December). Tear Originated Structural Gap of the Northwestern Pacific Stagnant Slab. In AGU Fall Meeting 2023. DI11B-0008 [poster]
- **Song, J. H.**, Kim, S., & Rhie, J. (2023, December). Spontaneous Shallow Upper Mantle Melt Focusing beneath Intraplate Volcanoes. In AGU Fall Meeting 2023. DI14A-04 [eLightning]
- Kim, M., **Song, J. H.**, & Kim, S. (2023, December). Multi-Scale Three-Dimensional Tomography from the Upper Mantle to Shallow Crust using Traveltime Data Enhanced by Deep Learning Approach in the Southern Korean Peninsula. In AGU Fall Meeting 2023. S23G-0454 [poster]
- Jo, K., S**ong, J. H.**, & Kim, S. (2022, December). Complex Upper Mantle Dynamics beneath the Southern Korean Peninsula from Azimuthal Seismic Anisotropy Analysis. In AGU Fall Meeting 2022. DI15B-0023 [poster]
- Kim, M., **Song, J. H.**, & Kim, S. (2022, December). Seismic Constraints on Modification of Continental Lithosphere beneath the Southern Korean Peninsula from Three-dimensional Pn and Sn Tomography. In AGU Fall Meeting 2022. S55C-0128 [poster]

· Lee, S., **Song, J. H.**, Heo, D., Rhie, J., Kang, T. S., Choi, E., Kim, Y., Kim, K. H., & Ree, J. H. (2022, December). Unusual high-heat flux on the surface in the southeastern Korean Peninsula and inferring its origin from P-wave travel-time tomography and a tectonic process associated with the back-arc opening of the East Sea (Sea of Japan) in the Cenozoic era. In AGU Fall Meeting 2022. T42C-0141 [poster]

· **Song, J. H.**, Kim, S., & Rhie, J. (2022, December). Localized upper mantle low-viscosity pockets beneath intraplate volcanoes. In AGU Fall Meeting 2022. DI22B-0011 [poster]

· **Song, J. H.**, Kim, S., & Rhie, J. (2022, October). Seismic Evidence of Slab Segmentation and Melt Focusing Atop the 410-Km Discontinuity in NE Asia. In SSA Seismic Tomography: What Comes Next?. SSA. [poster]

· **Song, J. H.**, Kim, S., & Rhie, J. (2021, December). Signature of slab fragmentation and dynamic interaction between slabs and the mantle transition zone in northeast Asia. In AGU Fall Meeting 2021. AGU. DI45D-0048 [online poster]

· Lee, J., **Song, J. H.**, Kim, S., Rhie, J., & Song, S. G. (2021, December). Three-dimensional Seismic Wave Propagation Simulations in the southern Korean Peninsula using Pseudo-dynamic Rupture Models. In AGU Fall Meeting 2021. S11A-04 [oral]

· Jo, K., Kim, S., **Song, J. H.**, & Lee, S. J. (2021, December). Complex upper mantle anisotropy beneath the Korean Peninsula from shear wave splitting of core-refracted waves. In AGU Fall Meeting 2021. T45E-04 [online poster]

· Kim, M., **Song, J. H.**, Lee, S. J., & Kim, S. (2021, December). 3-D Velocity Structures of the Uppermost mantle beneath the Southern Korean Peninsula from Pn and Sn Tomography. In AGU Fall Meeting 2021. T45E-01 [online poster].

· Kim, H., Lee, H., Hong, J., **Song, J. H.**, Takahata, N., & Sano, Y. (2021, July). Latent magmatism in non-volcanic areas in South Korea. In Goldschmidt. [virtual]

· **Song, J. H.**, Kim, S., & Rhie, J. (2020, December). Heterogeneous Modification and Ongoing Reactivation of Craton Margin beneath Northeast Asia Continental Margin: Insight from Teleseismic Traveltime Tomography of the Korean Peninsula. In AGU Fall Meeting Abstracts. T037-08 [oral]

· Kim, M., **Song, J. H.**, & Kim, S. (2020, December). 3-D Uppermost Mantle Structures from Pn and Sn Tomography across the Southern Korean Peninsula. In AGU Fall Meeting Abstracts, S061-0005 [online poster]

· Lee, S., Saxena, A., **Song, J. H.**, Rhie, J., & Choi, E. (2020, December). Geodynamic modeling for stress and seismicity in the southern Korean Peninsula driven by lateral variations of lithospheric thickness and plate kinematics. In AGU Fall Meeting Abstracts, T034-0019 [online poster]

· **Song, J. H.**, Kim, S., & Rhie, J. (2020, April). Heterogeneous modification and reactivation of craton margin in northeast Asia: insight from teleseismic traveltime tomography of the Korean Peninsula. In EGU General Assembly Conference Abstracts. EGU2020-12562 [oral]

· **Song, J. H.**, Kim, S., & Rhie, J. (2019, December). Upper mantle velocity structure beneath the Korean Peninsula by teleseismic traveltime tomography: evidence for heterogeneous modification and reactivation of a cratonic lithosphere margin. In AGU Fall Meeting Abstracts. T13E-0236 [poster]

· **Song, J. H.**, Rhie, J., & Kim, S. (2019, April). Teleseismic traveltime tomography of the southern Korean Peninsula: Implications for the lithospheric evolution in the eastern continental margin of the Eurasian plate. In EGU General Assembly Conference Abstracts. EGU2019-7526 [poster]

· Lee, J., **Song, J. H.**, Rhie, J., & Song, S. G. (2019, December). Prediction of Ground Motions in the Southeastern Korean Peninsula for Scenario Earthquakes in Northern Kyushu. In AGU Fall Meeting Abstracts, S31C-0538 [poster]

· Kim, S., **Song, J. H.**, Tauzin, B., Rhie, J., & Tkalčić, H. (2018, December). Seismic Constraints on Erosion and Breakup of the Continental Lithosphere at the Eastern Margin of Eurasian Plate, and an Implication of Intraplate Volcanism. In AGU Fall Meeting Abstracts, T43F-0485 [poster]

· **Song, J. H.**, Rhie, J., & Kim, S. (2018, December). Upper mantle structure beneath the Korean Peninsula by teleseismic traveltime tomography. In AGU Fall Meeting Abstracts, T33C-0411 [poster]

· **Song, J. H.**, Rhie, J., & Kim, S. (2018, June). Imaging of Lithosphere Structure Beneath Intraplate Volcanoes in Jeju Island, South Korea Using Teleseismic Traveltime Tomography. In AOGS Annual Meeting Abstracts, SE03-A033 [poster]

· **Song, J. H.**, Woo, J. U., Rhie, J., Kim, S., & Kang, T. S. (2018, April). Source analysis of November 15, 2017

Pohang earthquake sequences: The first non-double couple event reported in South Korea. In EGU General Assembly Conference Abstracts. EGU2018-12279 [poster]

- **Song, J. H.**, Rhie, J., Kim, S., & Lee, S. H. (2017, December). Teleseismic traveltime tomography of Jeju Island, South Korea. In AGU Fall Meeting Abstracts, S21C-0728 [poster]
- Rhie, J., Kim, S., Woo, J. U., & **Song, J. H.** (2016, December). Three-dimensional velocity model of crustal structure in the southern Korean Peninsula and its full-waveform validations. In AGU Fall Meeting Abstracts. S43B-2861 [poster]

Domestic

- **Song, J. H.**, Rhie, J., Kim, S. (2021, October). Signature of dynamic interaction between a segmented stagnant slab and the mantle transition zone in NE Asia. In Geological Society of Korea, Annual Meeting. [oral]
- H. Kim, H. Lee, J. Hong, **J. H. Song**, Takahata, N., Sano, Y. (2021, October). Latent magmatism beneath South Korea. In Geological Society of Korea, Annual Meeting. [oral]
- Kim, M., **Song, J. H.**, Lee, S. J., & Kim, S. (2021, October). 3-D velocity structure of the uppermost mantle beneath the southern Korean peninsula inferred from Pn, Sn travel time tomography. In Geological Society of Korea, Annual Meeting. [poster]
- **Song, J. H.**, Kim, S. Rhie, J. (2021, June). Seismic evidence of focused partial melting at shallow upper mantle beneath Cenozoic intraplate volcanism in NE Asia and implications for the mechanism of intraplate volcanism. In Joint Conference of the Geological Science & Technology of Korea. [oral]
- Kim, M., **Song, J. H.**, Lee, S. J., & Kim, S. (2021, June). 3-D velocity structure of the uppermost mantle beneath the southern Korean peninsula inferred from Pn, Sn travel time tomography. In Joint Conference of the Geological Science & Technology of Korea. [poster]
- Jo, K., **Song, J. H.**, Lee, S. J., & Kim, S. (2021, June). A study for anisotropy of the upper mantle beneath the southern Korean peninsula from shear wave splitting. In Joint Conference of the Geological Science & Technology of Korea. [poster]
- Lee, S., Saxena, A., **Song, J. H.**, Rhie, J., & Choi, E. (2020, October). Geodynamic modeling for stress in the southern Korean Peninsula driven by lateral variation of lithospheric thickness and plate kinematics and its implication for seismicity. In Geological Society of Korea, Annual Meeting. [oral]
- Kim, M., **Song, J. H.**, Lee, S. J., & Kim, S. (2020, October). 3-D velocity structure from Pn and Sn tomography for the uppermost mantle beneath the southern Korean Peninsula. In Geological Society of Korea, Annual Meeting. [poster]
- **Song, J. H.**, Kim, S., Rhie, J. (2019, October). Imaging of Upper Mantle Structure Beneath the Korean Peninsula by Teleseismic Traveltime Tomography and Tectonic Implication on the Evolution of a Cratonic Margin Lithosphere. In Geological Society of Korea, Annual Meeting. [English Session, oral]
- **Song, J. H.**, Kim, S., Rhie, J. (2019, October). Imaging of lithospheric structure beneath the Jeju Volcanic Island by Seismic Tomography. In Geological Society of Korea, Annual Meeting. [oral]
- **Song, J. H.**, Rhie, J., Kim, S., & Lee, S. H. (2017, October) Teleseismic Traveltime Tomography of Jeju Island, South Korea. In Geological Society of Korea, Annual Meeting. [poster]