

Sunghee Estelle Park

Curriculum Vitae

9/11/2026

Assistant Professor
Weldon School of Biomedical Engineering
Purdue University
206 S Martin Jischke Dr. MJIS 2096
West Lafayette, IN 47907

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<https://engineering.purdue.edu/PARKLAB/>
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Education & Training

2017 – 2023	Ph.D. in Bioengineering (NSF CEMB Fellow) <u>Thesis title:</u> Engineering stem cells and organoids on a chip for the study of human health and disease (Advisor: Dr. Dan Dongeun Huh)	University of Pennsylvania
2015 – 2017	M.S. in Mechanical Engineering <u>Thesis title:</u> Microengineered neuron-glia coculture in collagen extracellular matrix as an in vitro myelination model of the peripheral nervous system (Advisor: Dr. Seok Sid Chung)	Korea University
2010 – 2015	B.S. in Mechanical Engineering	Korea University

Academic Appointments

Jan 2024 – present **Assistant Professor**
Weldon School of Biomedical Engineering, Purdue University

Positions at Other Institutions

Aug 2023 – Oct 2023	Postdoctoral Research Fellow Department of Bioengineering, University of Pennsylvania <u>Research topic:</u> A microengineered organoid-on-a-chip model of alveolar development in the human lungs (Advisor: Dr. Dan Dongeun Huh)
May 2010 – Jul 2017	Student Researcher Biomedical Research Division, Korea Institute of Science and Technology <u>Research topic:</u> Multimodal investigation of nigrostriatal degeneration and subthalamic neuronal dynamics in Parkinson's disease models (Advisor: Dr. Inchan Youn)

Honors & Awards

2025	ORAU Ralph E. Powe Junior Faculty Enhancement Award
2024	Solomon R. Pollack Award for Excellence in Graduate Bioengineering Research
2023	KSEA SEED 2023 Best Presentation Award
2023	Graduate Women in Science (GWIS) National Fellowship Program (Honorable mention)
2023	Graduate Awards Recipient (Outstanding research)
2022	IEEE EMBS MNM Speaker Recognition
2022	National Inventors Hall of Fame Collegiate Inventors Competition Finalist (Team leader)
2017 – 2022	Kwanjeong Educational Foundation (KEF) Scholarship

Membership in Professional Organizations

Member of Biomedical Engineering Society (BMES)
Member of Women's Global Health Institute (WGHI)
Member of Korean American Biomedical Engineering Society (KBMES)
Member of Korean-American Scientists and Engineers Association (KSEA)
Member of Institute of Electrical and Electronics Engineers (IEEE)

Refereed Journal Papers

Journal publications prior to appointment at Purdue (2015 – 2023):

1. Han, S. M., Chu, J. -U., Park, S. H., Kim, J. S., Chun, H. J., Choi, K., & Youn, I*. (2011). Finite Element Analysis of Mechanical Stability of Ceramic Acetabular Components and Evaluation of ROM in Articulating Hip Joints. *Journal of Biomechanical Science and Engineering*, 6(3), 173. doi:[10.1299/jbse.6.173](https://doi.org/10.1299/jbse.6.173)
2. Han, S., Chu, J. -U., Song, K. -I., Park, S., Choi, J. B., Park, J. W., . . . Youn, I*. (2012). Alternative mechanical evaluation method for ceramic hip joint implants utilizing finite element analysis under in vivo-like conditions. *Journal of Biomechanical Science and Engineering*, 7(4), 336-348. doi:[10.1299/jbse.7.336](https://doi.org/10.1299/jbse.7.336)
3. Park, S. E., Song, K. I., Suh, J. K. F., Hwang, D., & Youn, I*. (2015). A time-course study of behavioral and electrophysiological characteristics in a mouse model of different stages of Parkinson's disease using 6-hydroxydopamine. *Behavioural Brain Research*, 284, 153-157. doi:[10.1016/j.bbr.2015.02.019](https://doi.org/10.1016/j.bbr.2015.02.019)
4. Park, S. E., Park, D., Song, K. I., Seong, J. K., Chung, S., & Youn, I*. (2017). Differential heart rate variability and physiological responses associated with accumulated short- and long-term stress in rodents. *Physiology and Behavior*, 171, 21-31. doi:[10.1016/j.physbeh.2016.12.036](https://doi.org/10.1016/j.physbeh.2016.12.036)
5. Song, K. I., Chu, J. U., Park, S. E., Hwang, D., & Youn, I*. (2017). Ankle-Angle Estimation from Blind Source Separated Afferent Activity in the Sciatic Nerve for Closed-Loop Functional Neuromuscular Stimulation System. *IEEE Transactions on Biomedical Engineering*, 64(4), 834-843. doi:[10.1109/TBME.2016.2580705](https://doi.org/10.1109/TBME.2016.2580705)
6. Park, S. E., Song, K. I., Kim, H., Chung, S., & Youn, I*. (2018). Graded 6-OHDA-induced dopamine depletion in the nigrostriatal pathway evokes progressive pathological neuronal activities in the subthalamic nucleus of a hemi-parkinsonian mouse. *Behavioural Brain Research*, 344, 42-47. doi:[10.1016/j.bbr.2018.02.014](https://doi.org/10.1016/j.bbr.2018.02.014)
7. Park, D., Lee, M., Park, S. E., Seong, J. K., & Youn, I*. (2018). Determination of optimal heart rate variability features based on SVM-recursive feature elimination for cumulative stress monitoring using ECG sensor. *Sensors Switzerland*, 18(7). doi:[10.3390/s18072387](https://doi.org/10.3390/s18072387)
8. Song, K. I., Park, S. E., Lee, S., Kim, H., Lee, S. H., & Youn, I*. (2018). Compact Optical Nerve Cuff Electrode for Simultaneous Neural Activity Monitoring and Optogenetic Stimulation of Peripheral Nerves. *Scientific Reports*, 8(1). doi:[10.1038/s41598-018-33695-2](https://doi.org/10.1038/s41598-018-33695-2)
9. Song, K. I., Park, S. E., Hwang, D., & Youn, I*. (2019). Compact Neural Interface Using a Single Multichannel Cuff Electrode for a Functional Neuromuscular Stimulation System. *Annals of Biomedical Engineering*, 47(3), 754-766. doi:[10.1007/s10439-018-02181-1](https://doi.org/10.1007/s10439-018-02181-1)
10. Paik, S. H., Erdogan, S., Phillips V, Z., Kim, Y., Song, K. I., Park, S. E., . . . Kim, B. M.* (2019). Hemodynamic correlation imaging of the mouse brain for application in unilateral neurodegenerative diseases. *Biomedical Optics Express*, 10(4), 1736-1749. doi:[10.1364/BOE.10.001736](https://doi.org/10.1364/BOE.10.001736)
11. Park, S. E., Georgescu, A., & Huh, D.* (2019). Organoids-on-a-chip. *Science*, 364(6444), 960-965. doi:[10.1126/science.aaw7894](https://doi.org/10.1126/science.aaw7894)
12. Park, S. E.†, Georgescu, A.†, Oh, J. M., Kwon, K. W., & Huh, D.* (2019). Polydopamine-Based Interfacial Engineering of Extracellular Matrix Hydrogels for the Construction and Long-Term Maintenance of Living Three-Dimensional Tissues. *ACS Applied Materials and Interfaces*, 11(27), 23919-23925. doi:[10.1021/acsami.9b07912](https://doi.org/10.1021/acsami.9b07912)
13. Paek, J.†, Park, S. E.†, Lu, Q., Park, K. T., Cho, M., Oh, J. M., . . . Huh, D.* (2019). Microphysiological Engineering of Self-Assembled and Perfusable Microvascular Beds for the Production of Vascularized Three-Dimensional Human Microtissues. *ACS Nano*, 13(7), 7627-7643. doi:[10.1021/acs.nano.9b00686](https://doi.org/10.1021/acs.nano.9b00686)
14. Park, S. E., Ahn, J., Jeong, H. E., Youn, I., Huh, D., & Chung, S.* (2021). A three-dimensional in vitro model of the peripheral nervous system. *Npg Asia Materials*, 13(1). doi:[10.1038/s41427-020-00273-w](https://doi.org/10.1038/s41427-020-00273-w)
15. Kang, S., Park, S. E., & Huh, D. D.* (2021). Organ-on-a-chip technology for nanoparticle research. *Nano Convergence*, 8(1). doi:[10.1186/s40580-021-00270-x](https://doi.org/10.1186/s40580-021-00270-x)
16. Park, S. E., Kang, S., Paek, J., Georgescu, A., Chang, J., Yi, A. Y., . . . Huh, D. D.* (2022). Geometric engineering of organoid culture for enhanced organogenesis in a dish. *Nature Methods*, 19(11), 1449-1460. doi:[10.1038/s41592-022-01643-8](https://doi.org/10.1038/s41592-022-01643-8)

17. Cable, J., Lutolf, M. P., Fu, J., Park, S. E., Apostolou, A., Chen, S., . . . Urenda, J. P. (2022). Organoids as tools for fundamental discovery and translation. *Keystone Symposia report. Annals of the New York Academy of Sciences*, 1518(1), 196-208. doi:[10.1111/nyas.14874](https://doi.org/10.1111/nyas.14874)

Journal publications since appointment at Purdue University (2024 – present):

18. Zhu, J., Sukkar, N., & Park, S. E.* (2025). Organoid-based study of liver-driven systemic complement activation and its impact on local RPE immunity. *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE* Vol. 66 (pp. 3 pages).
19. Paek, J., Teegala, L. R., Alisafaei, J., Alim, A., Song, J., Park, S. E., ... Huh, D. D.* (2026). Mechanical force-induced tissue remodelling in a clinically relevant microphysiological model of asthmatic human lungs. *Nature Biomedical Engineering*, doi:[10.1038/s41551-026-01669-9](https://doi.org/10.1038/s41551-026-01669-9).
20. Zhu, J., Dressman, A., Gall, K., & Park, S. E.* (2026). Engineering liver organoids-on-a-chip. *Frontiers in Lab on a Chip Technologies*, 4, 1719128. doi:[10.3389/frlct.2025.1719128](https://doi.org/10.3389/frlct.2025.1719128)
21. Zhu, J., Dressman, A., Gall, K., & Park, S. E.* (2026). Metabolic stress-induced complement activation drives RPE barrier dysfunction and inflammation in a human liver-RPE chip. *In revision*
22. Park, S. E., Kang, S., Truitt, R., Yang, W., Stambolian, D., Huh, D. D.* (2026). A bioengineered microphysiological model of the human retina-blood interface. *In revision*
23. Zeng, J., DeBosch, B. & Park, S. E.* (2026). Liver-on-a-chip platforms for modeling drug response and predictive screening. *CMGH Accepted*.
24. Sim, J., Lee, H., Stambolian, D. & Park, S. E.* (2026). Organoids-on-a-chip for translational applications. *AR BME. Accepted*
25. Sim, J., Suter, L., Hoppenrath, E., Karakasheva, T., Hamilton, K. & Park, S. E.* (2026). Spatiotemporal control of organoid assembly for tissue patterning. *Under review*.
26. Dai, Y., Long, T., Lim, K., Li, F., Oh, Y., Jedicka, J., Wang, Z., Yu, T., Zhu, J., Kim, J., Park, S. E., Kollbaum, P. & Lee, C. H.* (2026). Clinical evaluation of intraocular pressure dynamics during scleral contact lens wear. *Under review*.

Books and Chapters in Books

1. Park, S., & Schaer, T. P. (2019). Pre-Clinical Animal Models. *Pre-Clinical Animal Models. Academic Entrepreneurship for Medical and Health Scientists*.

Refereed Conferences, Symposium Papers

Conference papers prior to appointment at Purdue (2015 – 2023):

1. Song, K. I., Park, S. E., Kim, M. S., Joo, C., Kim, Y. J., Suh, J. K. F., . . . Youn, I.* (2015). An implantable wireless optogenetic stimulation system for peripheral nerve control. In *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society EMBS* Vol. 2015-November (pp. 1033-1036). doi:[10.1109/EMBC.2015.7318541](https://doi.org/10.1109/EMBC.2015.7318541)
2. Park, S. E., Song, K. I., Suh, J. K. F., & Youn, I.* (2015). Characteristics of the neuronal firing patterns in the subthalamic nucleus with graded dopaminergic cell loss in the nigrostriatal pathway. In *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society EMBS* Vol. 2015-November (pp. 2510-2513). doi:[10.1109/EMBC.2015.7318902](https://doi.org/10.1109/EMBC.2015.7318902)
3. Song, K. I., Lee, S., Park, S. E., Hwang, D., Kim, H., & Youn, I.* (2017). Localization of ultrasound waveform for low intensity ultrasound-induced neuromodulation in a mouse model. In *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society EMBS* (pp. 1122-1125). doi:[10.1109/EMBC.2017.8037026](https://doi.org/10.1109/EMBC.2017.8037026)
4. Paik, S. H., Erdogan, S., Zephaniah Phillips, V., Kim, Y. K., Song, K. I., Park, S. E., . . . Kim, B. M.* (2018). Seed-based hemodynamic connectivity mapping to analyze the effect of hemi-Parkinson's disease using NIR imaging. In *Optics Infobase Conference Papers* Vol. Part F92-CLEO_AT 2018. doi:[10.1364/CLEO_AT.2018.JTu2A.105](https://doi.org/10.1364/CLEO_AT.2018.JTu2A.105)

5. Paik, S. H., Erdogan, S., Phillips, V. Z., Kim, Y. K., Song, K. I., Park, S. E., . . . Kim, B. M.* (2018). Seed-based hemodynamic connectivity mapping to analyze the effect of hemi-Parkinson's disease using NIR Imaging. In *2018 Conference on Lasers and Electro Optics CLEO 2018 Proceedings*.
6. Park, S. E., Yang, W., Stambolian, D., Huh, D. D.* (2019). Microengineered model of the RPE-choroid complex for the study of AMD. In *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE* Vol. 60 (pp. 3 pages).
7. Park, S. E., Yang, W., Stambolian, D., Huh, D. D.* (2019). Inducible pluripotent stem cell (iPSC)-derived in vitro model for the study of cigarette smoking-induced complement activation in the human retinal pigment epithelium. In *BMES 2019 Annual Meeting*.
8. Park, S. E., Paek, J., Huh, D. D.* (2019). A microphysiological engineering strategy for the production of perfusable and vascularized human microtissues. In *BMES 2019 Annual Meeting*.
9. Park, S. E., Yang, W., Stambolian, D., Huh, D. D.* (2022). Microengineered model of the human blood-retina barrier for the study of age-related macular degeneration. In *Keystone Symposia on molecular and cellular biology, Engineering Multi-Cellular Living Systems*.
10. Park, S. E., D. D.* (2022). Geometric engineering of organoid culture for enhanced organogenesis in a dish. In *Keystone Symposia on molecular and cellular biology, Organoids as Tools for Fundamental Discovery and Translation*.
11. Park, S. E., D. D.* (2022). Geometric engineering of organoid culture for enhanced organogenesis in a dish. In *Penn Institute for Regenerative Medicine (IRM) Retreat*.
12. Park, S. E., Yang, W., Stambolian, D., Huh, D. D.* (2022). Microengineered model of the human blood-retina barrier for the study of age-related macular degeneration. In *IEEE EMBS Micro and Nanotechnology in Medicine Conference*.
13. Park, S. E., D. D.* (2022). Geometric engineering of organoid culture for enhanced organogenesis in a dish. In *IEEE EMBS Micro and Nanotechnology in Medicine Conference*.
14. Park, S. E., D. D.* (2023). A microengineered organoid-on-a-chip model of alveolar development in the human lung. In *KSEA 36th annual US-Korea Conference*.
15. Park, S. E., D. D.* (2023). Redesigning organoid culture for enhanced organogenesis in a dish. In *Biomedical Engineering Society (BMES) Annual Meeting*.

Conference papers since appointment at Purdue University (2024 – present):

16. Dressman, A., Youn, H. J., Sim, J., Park, S. E.* Using Organoids As a Model System to Study Intestinal Epithelial Growth and Morphology. In *BMES 2024 Annual Meeting*.
17. Youn, D., & Park, S. E.* (2024). In Vitro Culture of Human Taste Bud Cells to Measure Food-induced Taste Signals. In *2024 Purdue BME Symposium*.
18. Youn, D., & Park, S. E.* (2024). A microengineered intestinal organoids-on-a-chip for studying intestinal epithelial function and homeostasis in microgravity. In *2024 ASGSR*.
19. Zhu, J., & Park, S. E.* (2025). A microengineered liver/RPE chip system to model systematic complement-mediated RPE damage in AMD. In *ARVO 2025 Annual Meeting*.
20. Park, S. E.* (2025). Engineering human iPSC-derived tissues and organoids on chips. In *Aegean Conferences 8th International Conference on Tissue Engineering*.
21. Sim, J. -K., Suter, L., Dressman, A., & Park, S. E.* (2025). Engineering assembloid-on-a-chip to model tissue-tissue interactions and microenvironmental chemical gradients. In *2025 BMES Annual Meeting*.
22. Dressman, A., Zhu, J., Gall, K., & Park, S. E.* (2025). Modeling Metabolic Dysfunction-Associated Steatotic Liver Disease Using Liver Organoids. In *BMES 2025 Annual Meeting*.
23. Suter, L., Sim, J. -K., & Park, S. E.* (2025). Guided assembly of organoids into assembloids using a spatially confined chip-based culture system. In *BMES 2025 Annual Meeting*.
24. Park, S. E.* (2025). iPSC-derived tissues on chips for modeling human development and disease. In *TERMIS-AM Conference*.
25. Stefanidou, M. N., Zhu, J., Mogallapalli, S., Zhou, M., Zhang, C., DeBosch, B. & Park, S. E.* (2026). Generation and characterization of pediatric patient-derived organoids for modeling metabolic-dysfunction associated steatotic liver disease. In *2026 IMPRS Research Poster Symposium*.
26. Jiafei – ISSCR conference (2026).

Patents & Patent Applications

1. S.E. Park, W. Yang, D. Stambolian, D. Huh "Microengineered models of the human eye and methods of use," **2025**, US Patent 12,492,374. (Licensed under Vivodyne)
2. D. Huh, S.E. Park, "Engineering of organoid culture for enhanced organogenesis in a dish," **2024**, US Patent 18,255,398. (Licensed under Vivodyne)
3. D. Huh, S.E. Park, "Bioengineered models of lung development," **2025**, US Patent App. 18/911,632.
4. S.E. Park, J. Sim, "Microfluidic system for engineering assembloid cultures with tunable soluble microenvironments," **2025**, US Prov. Patent App. 63/887,020.

Invited Conference & Seminar Presentations

1/17/24	Purdue BME Distinguished Seminar Series
5/27/24	Korea University, Department of Mechanical Engineering Seminar
5/30/24	Yonsei University, Inaugural Workshop for Purdue and Yonsei Collaborative Research Consortium
9/20/24	Purdue Institute for Drug Discovery 9 th Annual Symposium
3/21/25	Indiana University School of Medicine, Center for Computational Biology and Bioinformatics Seminar
3/24/25	Purdue University, BMEGSA Professional Development Workshop
5/25/25	8 th International Conference on Tissue Engineering, Aegean Conferences
6/17/25	Korea University, Department of Biomedical Sciences Seminar
7/10/25	KIST-Purdue International Symposium on Innovations and Future Directions in Addiction Treatment, Korea Institute of Science and Technology
7/11/25	Hanyang University, Hanyang-Purdue Joint Symposium on Smart Healthcare Technology
10/30/25	Purdue Korean Association (PKA) Career Networking Night: Conversations with Faculty about Their Career Journeys
11/06/25	KIST-Purdue International Symposium
11/11/25	TERMIS-AM Conference
11/21/25	Purdue-Ajou Joint Symposium on Precision Therapeutics, Ajou University
11/26/25	Korea University, Department of Mechanical Engineering Seminar
3/2/26	Indiana University, CMCB Seminar
5/26/26	KIST-Purdue International Symposium
5/28/26	Ajou University International Symposium
5/29/26	2026 HYU-CNU-Purdue International Joint Symposium
7/8/26	24th International Nanotech Conference NANO KOREA 2026
7/14/26	Proteintech Organoid Chip Live Webinar
11/15/26	International Conference on Electronic Materials and Nanotechnology for Green Environment
11/24/26	Purdue University Analytical Chemistry Seminar
12/1/26	Purdue iGEM (International Genetically Engineered Machine)
2/10/27	Indiana University School of Medicine CBM Research Program Seminar
3/18/27	IU Simon Comprehensive Cancer Center Seminar Series
3/29/27	Purdue University Industrial and Molecular Pharmaceuticals and Pharmacy Practice Seminar

Teaching

Purdue University

BME203	Cell Biology for BMEs (Fall, 2026)
BME595	Stem Cell Technologies (Spring, 2026)
BME295	Cell Biology for BMEs (Fall, 2025)
BME595	Stem Cell Tissue Engineering (Spring, 2025)
BME690	Seminar in Biomedical Engineering (Spring, 2025)
BME595	Research Fundamentals II (Spring, 2024)

University of Pennsylvania (TA)

BE551 Biomicrofluidics (Fall, 2021)
BE551 Biomicrofluidics (Summer, 2020)
BE551 Biomicrofluidics (Fall, 2019)

Mentoring

Graduate students:

Jong-Keun Sim (PhD candidate in Biomedical Engineering, 08.2024-present)
Jiafei Zhu (PhD candidate in Biomedical Engineering, 08.2024-present)
Junhong Zeng (PhD student in Biomedical Engineering, 08.2025-present)
Kyanna Barros (PhD student in Biomedical Engineering, 08.2026-present)

Visiting scholars:

Daehwan Kim (Research Scientist at Korea Institute of Science and Technology, 08.2026-12.2026)

Undergraduate students:

Anna Dressman (Biomedical Engineering, 08.2024-present)
Leandra Suter (Biomedical Engineering, 05.2024-present)
Shruthika Sundar (Biomedical Engineering, 08.2024-present)
Samiksha Mogallapalli (Biomedical Engineering, 08.2025-present)
Anna Zhong (Biomedical Engineering, 08.2025-present)
Elizabeth Hoppenrath (Biomedical Engineering, 08.2025-present)

Qualifying exam and thesis committee member:

Nikita Krishnan (PhD, BME), Sergio Ruiz Vega (PhD, BME), Julio Anibal Rivera De Jesus (PhD, BME), Sukwoo Hong (PhD, BME), Favour Afolabi (PhD, BME), Shreya Ugale (PhD, Biological Sciences), Ryan Meister (PhD, BME), Feiyang Li (PhD, BME), Muhammad Khurram (PhD, BME), Mikayala Roach (PhD, BME), Nicole Mertens (PhD, BME), Jinheon Jeong (PhD, BME), Gianna Stinsa (MS, BME), Soyeon Kwon (PhD, BME), Aaron Coppeta (PhD, BME), James Altham (MS, BME), Evan Larson (PhD, BME), Muhammad Qadir (PhD, BME), Kenneth Cordoba (MS, BME)

Former advisees:

Graduate students

Dominic 'Hoi Joong' Youn (MS in ECE, 01.2024-12.2025)

Visiting scholars

Jisu Park (PhD student at KIST, 09.2025-12.2025)
Kylee Gall (IUSM student, IMPRS 2025)
Hyojin Lee, PhD (Principal Research Scientist at Korea Institute of Science and Technology, 09.2025-08.2026)
Nefeli Stefanidou (IUSM student, IMPRS 2026 Summer)

Undergraduates

Abigail Dressman (BME, 01.2024-12.2025)
Rishika Aggarwal (BME, 08.2024-12.2024)
Tom Huynh (BME, 01.2024-07.2024)
Nora Sukkar (Biomedical Engineering, 01.2024-05.2026)

Service to Purdue & Professional Organizations

Service to professional organizations

2024 KSEA 2024 Scientists and Engineers Early Career Development Workshop Mentor
2024 2024 BMES Abstract Reviewer / Session Chair
2024 Apple Scholars PhD Fellowship Review Panel
2024 – 2025 Graduate Women in Science (GWIS) National Fellowship Program Committee
2025 KSEA 2025 Scientists and Engineers Early Career Development (SEED) Organizing Committee
2025 – present Member of the Korea Technology Advisory Group

2025 Indiana CTSI 2025 Core Pilot Funding Program Reviewer
 2025 Apple Scholars PhD Fellowship Review Panel
 2025 2025 BMES Abstract Reviewer / Session Chair
 2025 – 2026 Graduate Women in Science (GWIS) National Fellowship Evaluation Committee
 2026 KSEA 2026 Scientists and Engineers Early Career Development (SEED) Organizing Committee

Service to the BME department (Purdue)

2023 – 2024 BME Graduate Admissions Committee
 2024 – 2025 BME Seminar Committee (co-chair)
 2024 – 2025 BME Graduate Admissions Committee
 2025 – 2026 BME Graduate Committee (Admissions & Awards Sub-committee Lead)
 2025 – 2026 BME Seminar Committee
 2026 – 2027 BME Graduate Committee (Admissions Sub-committee Lead)
 2026 – 2027 BME Seminar Committee

Service to the College of Engineering (Purdue)

2025 – 2026 Fellowship Review Committee

Service to international organizations

2025 – present Korea Technology Advisory Group

Journal reviewing

2024 Communications Engineering; Journal of Controlled Release
 2025 Nature Biomedical Engineering; Nature Communications Engineering
 2026 NPJ Precision Oncology

Grant application review

2025 Indiana CTSI Core Pilot Funding Program Reviewer
 2026 NIH Early Career Reviewer (ECR), BMDM study section
 2026 Indiana CTSI Core Pilot Funding Program Reviewer

Conference Reviewing/Refereeing

2024 Biomedical Engineering Society (BMES; Abstract reviewer & Session Chair)
 2025 Biomedical Engineering Society (BMES; Session Chair)

Other Engagement & Outreach Activities

April 2025 NPG Communications Engineering—Outstanding Reviewer of the Month
 2024-2025 NASA STAR: Spaceflight Technology, Applications, and Research Program