

CURRICULUM VITAE
JUNGKYU PARK, Ph.D.

Google Scholar link: https://scholar.google.com/citations?user=1zt7_wAAAAJ&hl=en

Work Address

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EDUCATION

- 2016 **Ph.D.** Mechanical Engineering, Case Western Reserve University, Cleveland, Ohio
 Thesis: “Thermal Transport in Novel Three-Dimensional Carbon Nanostructures”
- 2004 **B.S.** Mechanical Engineering, Hanyang University, Seoul, South Korea

WORK EXPERIENCE

- 08/2021 - present **Associate Professor**, Dept. of Mechanical Engineering, Kennesaw State University
- 08/2016 - 07/2021 **Assistant Professor**, Dept. of Mechanical Engineering, Kennesaw State University
- 04/2016 - 07/2016 **Research Associate**, Case Western Reserve University, Cleveland, Ohio
- 11/2004 - 07/2008 **Engineer**, Korea District Heating Engineering Co. Ltd., South Korea
 -Designed piping systems, arranged equipment, conducted stress analysis, documented
 design/construction guidelines, and estimated construction cost for power plants
- 12/2003 - 04/2004 **Engineer**, Iljin Electric Co., South Korea
- 02/2000 - 04/2002 **Sergeant**, 75th Infantry Division, the Republic of Korea Army, South Korea

TEACHING EXPERIENCE 08/2016 - present

Materials Science (ME3101), Heat Transfer (ME3440), Nanoscale Modeling (ME6710), Advanced Heat Transfer (ME6260), Product Realization (ME3201), Strength of Materials (ENGR3131)

AWARDS

- 2024 KSU Tenured Faculty Enhancement Leave Award
 - “Thermal Transport in Novel Three-dimensional Nanomaterials Under Deformation”

EXTERNAL GRANTS

- 2024 NSF, ERI Program
 - \$199,984, **funded, PI**
 - “ERI: Strain Effect on Thermal Transport in 3D Carbon Nanostructures”
- 2024 American Nuclear Society Student Section Strategic Fund
 - \$5,000, **funded, co-PI**
 - “Seminar Series on Nuclear Research”
- 2022 Department of Defense, Defense University Research Instrumentation Program
 - \$170,467, **funded, PI**
 - “Coupled Thermal and Mechanical Characterization System for Carbon Nanocomposites”
- 2021 Department of Energy Integrated University Program – Scholarship and Fellowship Support
 - Maximum \$1,000,000 for 10 years, **funded, PI**
 - “DOE Integrated University Program - Fellowship and Scholarship at KSU.”

INTERNAL GRANTS

- 2025 KSU Initiatives Seed Grant
 - \$10,000, **funded, co-PI**

- “Carbon Nanotube Based Neutron and Gamma Radiation Dosimetry for Nuclear Reactors”
- 2025 KSU, 2025 Summer Undergraduate Research Advisor
- \$4,000, ***funded***, **PI**
- 2024 KSU, SPCEET Faculty Scholarship grant
- \$9,680, ***funded***, **PI**
- “Thermal Transport in 3D Nanostructures under Deformation”
- 2024 KSU, 2024 Summer Undergraduate Research Advisor
- \$4,000, ***funded***, **PI**
- 2024 KSU, 2024 First Year Scholar Research Advisor
- \$1,000, ***funded***, **PI**
- 2023 KSU, SPCEET Faculty Scholarship grant
- \$7,800, ***funded***, **PI**
- “In Situ Thermal Conductivity Measurement during Nanoscale Tensile Test”
- 2023 KSU, 2023 Summer Undergraduate Research Advisor
- \$4,000, ***funded***, **PI**
- 2023 KSU, 2023 First Year Scholar Research Advisor
- \$2,000, ***funded***, **PI**
- 2022 KSU, SPCEET Faculty Scholarship grant
- \$8,800, ***funded***, **PI**
- “Strain Effect on the Thermal Transport of Carbon Nanocomposites”
- 2022 KSU, 2022 Summer Undergraduate Research Advisor
- \$6,000, ***funded***, **PI**
- 2022 KSU, 2022 First Year Scholar Research Advisor
- \$5,000, ***funded***, **PI**
- 2021 KSU, OVPR Pilot/Seed Grant
- \$13,300, ***funded***, **PI**
- “Strain Effect on the Thermal Transport of Carbon Nanocomposites”
- 2021 KSU, Creative Activities and Research Experiences for Teams Awards
- \$8,000, ***funded***, co-PI
- 2019 KSU, 2019 Summer Research Fellow
- \$15,000, ***funded***, **PI**
- 2019 KSU, OVPR Pilot/Seed Grant
- \$15,000, ***funded***, **PI**
- “Reusable 3D Carbon Seawater Filter.”
- 2019 KSU, OVPR Pilot/Seed Grant
- \$11,526, ***funded***, co- PI
- “Graphene-OGFC Composite to Heal the Micro-cracks in Interstate Highways”
- 2019 KSU, Creative Activities and Research Experiences for Teams Awards
- \$8,000, ***funded***, **PI**
- 2019 KSU, The Research Office of SPCEET Seed Fund
- \$5,000, ***funded***, **PI**
- 2018 KSU, OVPR Pilot/Seed Grant
- \$14,964, ***funded***, **PI**
- “Development of Strong 3D Carbon Nanomaterials with High Thermal Performance”

2017 KSU, The Research Office of SPCEET Seed Grant
- \$18,599, *funded*, PI

PUBLICATIONS

Articles in peer-reviewed journals (* indicates corresponding author)

1. **Jungkyu Park***, C. Powers, “Strain Effect on the Thermal Conductivity of Eco-flex”, **2026**, (*in preparation*)
2. M. Al Hayek, C. Powers, **Jungkyu Park***, “Tensile Behavior of Carbon Nanotube Sponges: An Experimental Study.”, **2026**, (*in preparation*)
3. M. Al Hayek, A. Patel, J. Ellison, **Jungkyu Park***, "Strain-Engineered Thermal Transport at One-to Two-Dimensional Junctions in 3D Nanostructures." *C – Journal of Carbon Research*, 12(1), 1, **2025**, <https://doi.org/10.3390/c12010001>
4. **Jungkyu Park***, F. Dorsey, A. Patel, D. Jeong, “Thermal Transport in Shear-wrinkled Hexagonal Boron Nitride”, *Case Studies in Thermal Engineering*, **2025**, <https://doi.org/10.1016/j.csite.2025.106199>
5. **Jungkyu Park***, “Phonon Scattering from a Deformed Carbon Nanotube and Graphene Junction”, *C – Journal of Carbon Research*, C 9(1), 21. **2023**, <https://doi.org/10.3390/c9010021>
6. E. Wu, C. Schneider, R. Walz, **Jungkyu Park***, “Adsorption of Hydrogen Isotopes on Graphene”, *Nuclear Engineering and Technology*, 54(11), 4022-4029, **2022**, <https://doi.org/10.1016/j.net.2022.06.014>
7. K. Mitchell, **Jungkyu Park***, A. Resnick, H. Horner, E. Farfan, “Phonon Scattering and Thermal Conductivity of Actinide Oxides with Defects”, *Applied Sciences*, 10(5), 1860, **2020**, <https://doi.org/10.3390/app10051860>
8. **Jungkyu Park***, P. Pena, A. Tekes, “Thermal transport behavior of carbon nanotube–graphene junction under deformation”, *International Journal of Nanoscience*, p.1950013, **2020**, <https://doi.org/10.1142/S0219581X19500133>
9. A. Resnick, K. Mitchell, **Jungkyu Park***, E. Farfan, T. Yee, “Thermal transport study in actinide oxides with point defects”, *Nuclear Engineering and Technology*, 51(5), 1398-1405, **2019**, <https://doi.org/10.1016/j.net.2019.03.011>
10. **Jungkyu Park***, E.B. Farfán, K. Mitchell, A. Resnick, C. Enriquez, T. Yee. “Sensitivity of thermal transport in thorium dioxide to defects”, *Journal of Nuclear Materials*, 504, 198-205, **2018**, <https://doi.org/10.1016/j.jnucmat.2018.03.043>
11. **Jungkyu Park***, E.B. Farfán, and C. Enriquez. “Thermal Transport in Thorium Dioxide”, *Nuclear Engineering and Technology*, 50, 731-737, **2018**, <https://doi.org/10.1016/j.net.2018.02.002>
12. **Jungkyu Park**, J. Lee, and V. Prakash*. “Phonon scattering at SWCNT-SWCNT Junctions in branched carbon nanotube networks”, *Journal of Nanoparticle Research*, 17(1), 1-13, **2015**, <https://doi.org/10.1007/s11051-015-2873-0>
13. **Jungkyu Park** and V. Prakash*. “Phonon scattering and thermal conductivity of pillared graphene structures with carbon nanotube-graphene intramolecular junctions”, *Journal of Applied Physics* 116.1, 014303, **2014**, <https://doi.org/10.1063/1.4885055>
14. **Jungkyu Park** and V. Prakash*. “Thermal resistance across interfaces comprising dimensionally mismatched carbon nanotube-graphene junctions in 3D carbon nanomaterials”, *Journal of Nanomaterials*, vol, 2014

15. **Jungkyu Park**, M.F.P. Bifano, and V. Prakash*. “Sensitivity of thermal conductivity of carbon nanotubes to defect concentrations and heat-treatment”, *Journal of Applied Physics* 113, 034312, **2013**
16. **Jungkyu Park** and V. Prakash*. “Thermal transport in 3D pillared SWCNT-graphene nanostructures”, *Journal of Materials Research* 28, 940, **2013**
17. M.F.P. Bifano, **Jungkyu Park**, P.B. Kaul, A.K. Roy, and V. Prakash. “Effects of heat treatment and contact resistance on the thermal conductivity of individual multiwalled carbon nanotubes using a Wollaston wire thermal probe”, *Journal of Applied Physics* 111, 054321, **2012**
18. V. Prakash, P.B. Kaul, **Jungkyu Park**, and M.F.P. Bifano. “A novel device for in situ nanomechanics of 1-D nanostructures”, *JOM* 63, 49, **2011**

Articles in peer-reviewed conference proceedings (* indicates corresponding author)

1. P. Bearden, F. Dorsey, C. Powers, and **Jungkyu Park***, “Mechanical Properties of 3D Carbon Nanomaterials”, *ASME IMECE*, **2026** (accepted)
2. J. Elison and **Jungkyu Park***, “Thermal Transport Across Intra-molecular Junctions Between Boron Nitride Nanotube and Sheets”, *ASME IMECE*, **2026** (accepted)
3. C. Powers, S. Bratescu, P. Bearden, F. Dorsey, J. Trinh, D. H. Kim, and **Jungkyu Park***, “In Situ Thermal Measurement of Polymers”, *ASME IMECE*, **2025**, <https://doi.org/10.1115/IMECE2024-145513>
4. N. Avasarala, L. Kim, F. Dorsey, and **Jungkyu Park***, “High Strain Rate Fracture of Shear Wrinkled Graphene”, *ASME IMECE*, **2025**, <https://doi.org/10.1115/IMECE2024-144411>
5. C. Bulang, J. Trinh, J. Scurry, S. J. Na, **Jungkyu Park**, D. H. Kim*, “Bi-Directional Locomotion of Asymmetric Curved Soft Millirobot Under Magnetic Fields in Different Frequencies”, *ASME IMECE*, **2025**, <https://doi.org/10.1115/IMECE2024-145080>
6. A. Flanagan and **Jungkyu Park***, “Impact on Wrinkled Graphene”, *ASME IMECE*, **2024**, <https://doi.org/10.1115/IMECE2023-112670>
7. S. Bratescu and **Jungkyu Park***, “Thermal Transport Study of KCl-UCI3 Using Molecular Dynamics Simulations”, *ASME IMECE*, **2024**, <https://doi.org/10.1115/IMECE2023-112656>
8. J. Scurry, J. Trinh, C. Bulang, **Jungkyu Park**, Dal Hyung Kim*, “Control of Corkscrew Swimming Locomotion of Soft-Millirobots in a Different Frequency”, *ASME IMECE*, **2024**, <https://doi.org/10.1115/IMECE2023-111822>
9. S. Polat, A. Stinebaugh, and **Jungkyu Park***, “Adsorption of Hydrogen Isotopes on Novel Nanomaterials”, *ASME IMECE*, **2022**, <https://doi.org/10.1115/IMECE2022-96589>
10. A. Satapathy, L. Battu, L. Watson, N. Rajabi, and **Jungkyu Park***, “Novel Thermal Coating for High-speed Airplanes”, *ASME IMECE*, **2022**, <https://doi.org/10.1115/IMECE2022-95482>
11. **Jungkyu Park***, N. Kinports, and J. Kudsy, “Thermal Transport in Carbon Nanocomposites under Mechanical Strain”, *ASME IMECE 2021*, November, **2021**, <https://doi.org/10.1115/IMECE2021-70556>
12. I. Durr, M. Prates, **Jungkyu Park***, “Phonon Scattering from Carbon Nanotube and Graphene Junction under Mechanical Deformation”, *ASME IMECE 2021*, November, **2021**, <https://doi.org/10.1115/IMECE2021-70349>

13. M. Prates, I. Durr, **Jungkyu Park***, G. Espitia, and B. Peterson, “High Strain Impact on Carbon Nanostructures using Molecular Dynamics Simulations”, *ASME IMECE 2021*, November, **2021**, <https://doi.org/10.1115/IMECE2021-70515>
14. B. Atchley, E. Wu, **Jungkyu Park***, and E. Farfan, “Tritium Absorption on Carbon Nanostructures”, *ASME IMECE 2021*, November, **2021**, <https://doi.org/10.1115/IMECE2021-70538>
15. **Jungkyu Park***, C. Schneider, R. Walz, and E. B. Farfán, “Thermal Conductivity of LiF-ThF₄ with Different Mole Fraction”, *ANS Annual Meeting 2021*, June, **2021**
16. **Jungkyu Park***, B. Atchley, E. Wu, Eduardo Farfán, “Tritium Absorption on Graphene”, *ANS Annual Meeting 2021*, June, **2021**
17. A. Resnick, **Jungkyu Park***, B. Haile, E. B. Farfán, “Three-dimensional printing of carbon nanostructures”, *ASME IMECE 2019*, November, **2019**
18. K. Mitchell, H. Honer, A. Resnick, **Jungkyu Park***, E. B. Farfán, T. Yee, A. Hummel, “Sensitivity of thermal transport in uranium dioxide to fission gas”, *ASME IMECE 2019*, November, **2019**
19. K. Mitchell, H. Honer, A. Resnick, **Jungkyu Park***, E. B. Farfán, T. Yee, A. Hummel, “Thermal transport in actinide oxide fuels with interstitial defects”, *ASME IMECE 2019*, November, **2019**
20. K. Mitchell, A. Resnick, **Jungkyu Park***, E. B. Farfán, T. Yee, A. Hummel, “Effect of Interstitial Point Defect on Thermal Transport in Uranium Dioxide and Plutonium Dioxide”, *ANS Annual Meeting 2019*, June, **2019**
21. A. Resnick, K. Mitchell, **Jungkyu Park***, H. Maier, E. Farfan, T. Yee, C. Velasquez, “Thermal transport in defective actinide oxides”, *ASME IMECE 2018*, November, **2018**
22. **Jungkyu Park***, P. Pena, “Strain effect on thermal transport in carbon nanotube-graphene junctions”, *ASME IMECE 2018*, November, **2018**
23. A. Tekes and **Jungkyu Park**, “Design and analysis of electrostatically actuated mechanical sensor for graphene”, *ASME IMECE 2018*, November, **2018**
24. **Jungkyu Park***, E. Farfan, K. Mitchell, A. Resnick, C. Enriquez, T. Yee, “Thermal conductivity of thorium dioxide with defects”, *ANS Annual Meeting*, June, **2018**
25. **Jungkyu Park***, E.B. Farfán, Christian Enriquez, Nicholas Kinder and Matthew Greeson. “Thermal transport in thorium dioxide”, *ASME IMECE 2017*, November, **2017**
26. **Jungkyu Park** and Eduardo B. Farfán*. “Thermal transport in thorium dioxide”, *2017 ANS Winter Conference and Nuclear Technology Expo.*, November, **2017**
27. **Jungkyu Park** and Vikas Prakash*. “Thermal transport in 3D tunable SWCNT-graphene networks”, *Carbon Rio 2013*, 2013
28. **Jungkyu Park** and Vikas Prakash*. “Thermal transport at carbon nanotube-graphene junction”, *ASME IMECE 2013*, November, 2013
29. **Jungkyu Park** and Vikas Prakash*. “Thermal transport in 3D pillared CNT-graphene nanostructures”, *ASME IMECE 2012*, November, 2012
30. M.F.P. Bifano, **Jungkyu Park**, and V. Prakash*. “Sensitivity of thermal conductivity of carbon nanotubes to defect concentrations and heat-treatment”, *ASME IMECE 2012*, November, 2012

PRESENTATIONS

Invited talk

1. Jungkyu Park, “Thermal Transport in 3D Carbon Nanostructures under Mechanical Deformation”, *SENIC Ambassadors Webinar Series*, July 2020, Atlanta, GA.
2. Jungkyu Park, “Carbon Nanomaterials Simulation using Molecular Dynamics Simulations”, Led a research workshop at *Global Research Program at Sejong Academy of Science and Arts 2024*, January, 2024, Sejong-si, South Korea

Contributed conference talks

3. Jungkyu Park, “Thermal Transport Across 1D-2D Nanomaterials Junctions under Strain”, *2025 MRS Fall Meeting & Exhibit*, December, 2025, Boston, MA.
4. P. Bearden, Jungkyu Park, “Mechanical Properties of 3D Carbon Nanomaterials”, *ASME IMECE 2025*, November, 2025, Memphis, TN.
5. J. Elison, Jungkyu Park, “Thermal Transport Across Intra-molecular Junctions between Boron Nitride Nanotubes and Sheets”, *ASME IMECE 2025*, November, 2025, Memphis, TN.
6. J. Elison, M. AlHayek, A. Patel, Jungkyu Park, “Strain Effect on Thermal Transport in 3D Nanostructures”, *NSF Research Poster Competition at ASME IMECE 2025*, November, 2025, Memphis, TN.
7. C. Powers, Jungkyu Park, “In Situ Thermal Measurement of Polymers”, *ASME IMECE 2024*, November, 2024, Portland, OR.
8. F. Dorsey and Jungkyu Park, “High Strain Rate Fracture of Shear Wrinkled Graphene”, *ASME IMECE 2024*, November, 2024, Portland, OR.
9. A. Flanagan and Jungkyu Park, “Impact on Wrinkled Graphene”, *ASME IMECE 2023*, October 29 - November 2, 2023, New Orleans, LA.
10. S. Bratescu and Jungkyu Park, “Thermal Transport Study of KCl-UC13 Using Molecular Dynamics Simulations”, *ASME IMECE 2023*, October 29 - November 2, 2023, New Orleans, LA.
11. B. Atchley, E. Wu, Jungkyu Park, and Eduardo Farfan, “Tritium Absorption on Carbon Nanostructures”, *ASME IMECE 2021*, November, 2021, Virtual Conference.
12. Jungkyu Park and P. Pena, “Strain effect on thermal transport in carbon nanotube-graphene junctions”, *ASME IMECE 2018*, November, 2018, Pittsburgh, PA.
13. Jungkyu Park *et al.* “Thermal transport in thorium dioxide”, *ASME IMECE 2017*, November 3-9, 2017, Tampa, FL.
14. Jungkyu Park and V. Prakash. “Thermal transport at carbon nanotube-graphene junction”, *ASME IMECE 2013*, November 15-21, 2013, San Diego, CA.
15. Jungkyu Park and V. Prakash, “Thermal transport in 3D pillared CNT-graphene nanostructures”, *ASME IMECE 2012*, November 9-15, 2012, Houston, TX.
16. M.F.P. Bifano, Jungkyu Park, and V. Prakash. “Sensitivity of thermal conductivity of carbon nanotubes to defect concentrations and heat-treatment”, *ASME IMECE 2012*, November 9-15, 2012, Houston, TX.

SERVICE at KENNESAW STATE UNIVERSITY

University:

- Graduate Policies and Curriculum Committee
 - Fall 2024 – as a voting member and Marietta campus representative
 - Fall 2025 – Secretary

- Undergraduate Policies and Curriculum Committee: Fall 2021 – Spring 2023
- Information Technology Advisory Committee (ITAC)
 - Fall 2018 – Spring 2019 as Vice-Chair
 - Fall 2019 – Spring 2020 as **Chair**
- Review Panel for Undergraduate Research & Creative Activities (URCA) Travel Funds: 2018
- Session Moderator and Reviewer at Symposium of Student Scholars at KSU: 2018
- Deputy Director of the Center for Nuclear Studies at KSU
 - Spring 2021 – present
- Judge for Student Research Symposium at KSU
 - Spring 2016 - present

College:

- Cluster Hire Search Committee: Fall 2022, Fall 2023, and Spring 2024
- Judge at student research symposiums

Department:

- Faculty Search Committee **Chair** (2024-2025)
- Tenure and Promotion Committee/○ Faculty Council/○ Faculty Search Committee/○ Course Coordinator for ME 3101/○ Assessment Committee/○ Faculty Advisor

PROFESSIONAL SERVICE

- NASA Postdoctoral Program Review: 2023
- Topic Advisory Panel member at C — Journal of Carbon Research
 - 2022 – present
- Topic Organizer/Session Chair/Paper Reviewer at ASME IMECE Conferences
 - 2017 – present
- Journal Reviewer
 - *Nature Scientific Reports*, 2023
 - *Cell Reports Physical Science*, 2023
 - *Carbon*, 2020 - present
 - *Journal of Nuclear Materials*, 2023, 2024
 - *Nuclear Engineering and Technology*, 2020
 - *The Journal of Physical Chemistry*, 2025
- NSF Proposal Reviewer: 2019
- National Conferences on Undergraduate Research (NCUR) Review Panel: 2018/2019
- American Society of Mechanical Engineers: member
- Korean-American Scientists and Engineers Association: member

SERVICE at the COMMUNITY

- 28th/ 29th Science Olympiad Competition Session Organizer
 - February 2017 and February 2018
- Supervising a Student Researcher from the Magnet Program in Cobb County High School
 - Fall 2017 – Fall 2023
- Competition Reviewer at Lindley Middle School
 - December 2016