

Dr. Kwangkook (David) Jeong, Ph.D., P.E., ASME Fellow

Professor of Mechanical Engineering (Tenured)
Mechanical Engineering, Arkansas State University,
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Education

- Ph.D. in Mechanical Engineering, Lehigh University, 2006 to 2009.
 - Dissertation Title: Condensation of Water Vapor and Sulfuric Acid in Boiler Flue Gas (ISBN 9781109121285, UMI 3354749).
 - Committee: Edward K. Levy (Chair), Harun Bilirgen (Co-Chair), Hugo Caram, Charles Smith and Sudhakar Neti.
- M.S. Mechanical Engineering, KAIST, 1994 to 1996.
 - Thesis Title: A Study on Mixing Characteristics in Hot Flow Model Municipal Solid Waste Incinerator (MME96069).
 - Committee: Sangmin Choi (Chair), Sang Yong Lee and Tae-Ho Song.
- B.S. Mechanical Engineering, Summa Cum Laude, Ajou University, 1987 to 1994 (the period is including three-year military service in Republic of Korea Army, 1st Artillery Brigade, 1 Corps).

Academic and Industrial Appointments

- Professor of Mechanical Engineering (Tenured), Department of Mechanical Engineering, College of Engineering and Computer Science, Arkansas State University, 2020 to Present.
- Associate Professor of Mechanical Engineering (Tenured), Department of Mechanical Engineering, College of Engineering, Arkansas State University, 2015 to 2020.
- Assistant Professor of Mechanical Engineering (Tenure-Track), Department of Mechanical Engineering, College of Engineering, Arkansas State University, 2010 to 2015.
- Director of Master of Science in Engineering, College of Engineering, Arkansas State University, 2017 to 2019.
- Member, Korea Technology Advisory Group (K-TAG), Korea Institute for Advancement of Technology (KIAT), 2021 to Present.
- Visiting Scholar, Korea Institute of Industrial Technology, Korea, May-July, 2021.
- Visiting Professor, Sungkyunkwan University, Suwon, Korea, Mar. 2019 – Feb. 2020.
- Visiting Scholar, Korea Institute of Machinery and Materials, Daejeon, Korea, May-July, 2019.
- Deputy Director of Graduate Program, College of Engineering, Arkansas State University, 2016-2017, and 2019 to Present.
- CEO, Thermal Engineering Group International (TEGI), Jeong and Sherman Professional Mechanical Engineering Consulting Services (JSPMECS), PLLC, 2017 to Present.
- Adjunct Lecturer, Doosan Heavy Industries, Ltd., 2017 to Present.
- Adjunct Professor, Mechanical Engineering, Ajou University, Suwon, South Korea, 2013 to Present.
- Environmental Science Program Associated Professor, College of Science and Mathematics, Arkansas State University, 2011 to Present.
- Director of Research and Technology Development, Engineering Consulting Services (JEPMECS.COM), PLLC, 2013 to 2015.
- Senior Member of Technical Staff, KEPCO (Korea Electric Power Corporation) (listed on the NYSE), 01/1996 to 06/2011.

- Postdoctoral Research Associate, Departments of Chemical/Mechanical Engineering, Lehigh University, 02/2009 to 10/2010.
- Research Assistant, Energy Research Center, Lehigh University, 08/2006 to 02/2009.
- Research Assistant, Department of Mechanical Engineering, KAIST (Korea Advanced Institute of Science and Technology), 03/1994 to 01/1996.

Research Interests and Total Accumulated Research Funding

Thermal and fluid sciences with expertise of thermal transport, fluid mechanics, heat/mass transfer, thermodynamics, phase change, multiphase flow, electrochemistry, and reaction kinetics to apply for thermal engineering and energy fields including fossil/nuclear/renewable power plant engineering, energy recovery systems, and electrochemical/thermal energy storage systems based on computational and experimental approach. Total accumulated research funding: a total of \$2,126,446 including \$1,854,086 (as PI) and \$272,360 (as Co-PI) since affiliated at Arkansas State University, Nov. 1st, 2010.

Research Grants

1. ASU – KIMM, Numerical Simulation of Heat and Mass Transfer in Water and Heat Recovery Heat Exchangers for Organic Ranking Cycle Applications, 2018-2020, PI, Completed, \$150,000.
2. ASU - DHI, Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers, 2015 to 2018, PI, Funded, Completed, \$1,220,000.
3. NSF CMMI-1429690, MRI: Atomic Force Microscope (AFM) for Research to Evaluate Nano-scale Properties of Materials, 2014 to 2017, Co-PI, Funded, Completed, \$272,360.
4. ASTA Basic Research Award, 15-B-37, Conjugated Dynamic Modeling with Non-constant Variance on Vanadium Redox Flow Battery for Renewable Power Plant Applications, 2014 to 2017, PI, Funded, Completed, \$79,379.
5. NSF EPSCoR: Test-bed Development of Advanced Flow Battery for Renewable Energy Storage, 2013 to 2015, PI, Funded, Completed, \$120,000.
6. ASU Faculty Research Award, A Study of Retrofit Engineering Design for Existing Small and Medium Size Gas Turbine Power Cycle into a Combined Cycle Power Plant, 2014 to 2015, PI, Funded, Completed, \$4,859.
7. UAF Sub-award, Test-bed Development of Advanced Flow Battery for Renewable Energy Storage, SA1306027, 2013 to 2014, PI, Funded, Completed, \$36,000.
8. NSF CMMI-1126899, MRI: Differential Scanning Calorimetry System for R&D at Center for Efficient and Sustainable Use of Resources of Arkansas State University, 2011 to 2013, PI, Funded, Completed, \$138,288.
9. Judd Hill Environmental Award, Numerical Investigation for Enhanced Algal Biofuel Process, 2011 to 2012, PI, Funded, Completed, \$5,560.
10. ASU – CWL, MOU: Development of Low Cost Heat Recovery Steam Generator for 45MW Gas Turbine Power Plant, 2011 to 2014, PI, Completed.
11. DOE: Novel Sorption Enhanced Reaction Process for Simultaneous Production of CO₂ and H₂ from Synthesis Gas Produced by Coal Gasification, 2006 to 2010, Postdoctoral Research Associate, Funded, Completed.
12. DOE: Recovery of Water from Boiler Flue Gas, 2006 to 2009, Researcher, Funded, Completed.
13. KEPCO: Development of Stand-Alone Energy System based on Hydrogen Production Technology, 2004 to 2006, Co-PI, Funded, Completed.
14. KEPCO: The Preliminary Study on Feasibility and R&D Strategy Planning of Hydrogen Production using Off-Peak Electricity of Nuclear Power Plant, 2004 to 2005, Co-PI, Funded, Completed.

15. KEPCO: Study on the R&D Strategy for Nuclear Hydrogen Production System, 2003 to 2004, Co-PI, Funded, Completed.
16. MOCIE: Development of Nuclear Electricity Technology Roadmap, 2003 to 2004, Main Author, Funded, Completed.
17. KEPCO: Development of the Slurry Ice Thermal Energy Storage System, 2001 to 2003, Researcher, Funded, Completed.
18. KEPCO: Development of the Ice Slurry Maker for an Ice Storage System, 2000 to 2002, Researcher, Funded, Completed.
19. KEPCO: Development of the P.E. Thermal Storage Tank for an Ice Storage System, 1999 to 2001, Researcher, Funded, Completed.
20. KEPCO: Study on Operational Characteristics for 3T/D Dry-Feeding Coal Gasifier, 1997 to 1999, CFD Modeler and Researcher, Funded, Completed.
21. MOCIE: Technology Development for Integrated Coal Gasification Combined Cycle, 1996 to 1999, CFD Modeler and Researcher, Researcher, Funded, Completed.

Undergraduate Student Research Projects

1. Dohyeon Kim, A Study on Low-Temperature Economizer for Coal-Fired Power Plant Applications: Impact on Emissions and Economic Analysis, Jeong Research Fund, Fall 2019, Completed, \$1,000.
2. Ben Eckerson, ASSET Initiative Summer Research Internship Program, Computational and Experimental Framework on Performance Evaluation of Advanced Vanadium Redox Flow Battery for Renewable Energy Storage Applications, 2013 to 2014, Mentor, Awarded, Completed, \$6,400.
3. John Koch, ASU SURF, “Computational Study on Fluid Flow and Heat Transfer of Synthesized Molten Salts for Concentrating Solar Power Plant Applications”, 2012 to 2013, Mentor, Completed, \$4,000.
4. Joe Earls, National Science Foundation Award, 12-EPS2-0020, “SURF: Experimental Study on the Phase Change of Molten Salts: LiNO₃, KNO₃, and NaNO₃”, 2011 to 2012, Mentor, Completed, \$2,500.

Honors, Awards, and Fellowships

1. Elected as a Fellow of ASME, American Society of Mechanical Engineers (ASME), Mar. 2020.
2. Nominated for Faculty Achievement Award for Professional Service, Arkansas State University, Apr. 2021.
3. Nominated for Faculty Achievement Award for Professional Service, Arkansas State University, Apr. 2020.
4. Received Appreciation Plaque in Contributions to the Korean Society for Power System Engineering (KSPSE), KSPSE, Busan, South Korea, May 2019.
5. Received Appreciation Plaque in Contributions to Growth of Technology at Arkansas State University, Arkansas State University, Jonesboro, AR, Mar. 2019.
6. Faculty Achievement Award for Excellence in Scholarship, Arkansas State University, Apr. 2016.
7. Advanced Institute of Research Development Fellowship, Arkansas State University, 2014.
8. Institute of Research Development Fellowship, Arkansas State University, 2011.
9. Student of Dean of P. C. Rossin College of Engineering and Applied Science, Lehigh University, 2006 to 2007.
10. National Scholarship Student for Power Industry, Korea Ministry of Commerce, Industry and Energy, 2006 to 2009.
11. Presidential Award for Distinguished Technical Service in Power Industry, Korea Electric Power Corporation, 1999.

12. National Scholarship Student, Korea Ministry of Science and Technology, 1994 to 1996.
13. Summa Cum Laude, Ajou University, 1994.
14. Daewoo Scholarship Student for Top Honor in College of Engineering, Ajou University, 1993.
15. University Scholarship Student for Top Honor in Mechanical Engineering, Ajou University, 1992 to 1993.

Peer Reviewed Journals (Accumulated Citations: 316 in Google Scholar)

1. Aryal, S., Tamang, S., Abutayeh, M., Kim, Y., Jeong, K., “Analytical Modeling on Simultaneous Phase Transitions in Low-Temperature Evaporator for Pilot-Scale Organic Rankine Cycle with R134a Coolant and its Comparative Study with Water Coolant”, International Journal of Heat and Mass Transfer, Submitted, 2021.
2. Abutayeh, M., Jeong, K., “Retrofitting Solar Power Plants with Thermal Energy Storage”, International Journal of Renewable Energy Technology, Vol. 11, No. 2, pp. 165-185, 2020.
3. Abutayeh, M., Padilla, R. V., Lake, M., Lim, Y. Y., Garcia, J., Sedighi, M., Too, Y. C. S., Jeong, K., “Effect of short cloud shading on the performance of parabolic trough solar power plants: motorized vs manual valves”, Renewable Energy, Vol. 142, pp. 330-344, 2019.
4. Abutayeh, M., Jeong, K., Alazzam, A., and El-Khasawneh, B., “Streamlining the Power Generation Profile of Concentrating Solar Power Plants”, ASME Journal of Solar Energy Engineering, Vol. 141, Issue 2, pp. 021002-1~8, 2019.
5. McMoran, E., Mugenzi, C., Fournier, K., Draganjac, M., Tony, D., Jeong, K., Powell, D., Yang, L., “Synthesis and Characterization of Divalent Metal Complexes with Bipyridylamide Ligands”, Journal of Coordination Chemistry, Vol. 69, Issue 3, pp. 375-388, 2016.
6. Sivakumar, G., Jeong, K., and Lay, J., “Biomass and RRR- α -tocopherol production in *Stichococcus bacillaris* strain siva2011 in a balloon bioreactor”, BMC Biology, 13:79, 2014.
7. Sivakumar, G., Jeong, K., and Lay, J., “Bioprocessing of *Stichococcus bacillaris* strain siva2011”, Biotechnology for Biofuels, 7:62, 2014.
8. Jeong, K. and Levy, E., “Theoretical Prediction of Sulfuric Acid Condensation Rates in Boiler Flue Gas”, International Journal of Heat and Mass Transfer, Vol. 55, pp. 8010-8019, 2012.
9. Jeong, K., Sircar, S., and Caram, H., “Modeling of Heat Recovery from a Steam-Gas Mixture in a High Temperature Sorption Process” (Recognized as Original Contribution in this area), AIChE Journal, Vol. 58, pp. 312-321, 2012.
10. Jeong, K., Kessen, M., Bilirgen, H., and Levy, E., “Analytical Modeling of Water Condensation in Condensing Heat Exchanger” (Original Research Article), International Journal of Heat and Mass Transfer, Vol. 53, pp. 2361-2368, 2010.
11. The reports generated in KEPCO during 1996-2011 are not listed here based on non-disclosure agreement.
12. Han, J., Jeong, K., Choi, J., and Choi, S., “A Hot-Flow Model Analysis of MSW Incinerator”, International Journal of Energy Research, Vol. 21, No. 10, pp. 899-910, 1997.
13. Ahn, D., Shin, Y., and Jeong, K., “Experimental Study on Coal Gasification using Pressure Drop Tube Furnace”, Journal of Theory and Application of Chemical Engineering, Vol. 2, No. 2, 1996.
14. Han, J., Jeong, K., Choi, J., and Choi, S., “Mixing Characteristics Measurement according to Flow Conditions in the Reactor of Incinerator”, Journal of Korea Society of Waste Management, Vol. 13, No. 2, pp. 177-185, 1996.
15. Han, J., Jeong, K., Choi, J., and Choi, S., “Hot Flow Experiments of a Model Municipal Solid Waste Incinerator”, Journal of Korea Society of Waste Management, Vol. 12, No. 5, pp. 618-625, 1995.

Book Chapters

1. Abutayeh, M., Jeong, K., Alazzam, A., El-Khasawneh, B., “Reducing Optical Losses in Parabolic Trough Collector Solar Fields” in “Securing Sustainable Future”, CRC/Taylor & Francis, 2019.
2. Jeong, K., “Sec. 3.3 Cooling of natural gas combustion and combined cycle power plants” in “Thermal Power Plant Cooling: Context and Engineering”, ASME 860250, ISBN: 9780791860250, 2014.
3. Jeong, K., “Sec. 3.4 Extraction of water from power plant exhaust gas” in “Thermal Power Plant Cooling: Context and Engineering”, ASME 860250, ISBN: 9780791860250, 2014.

Technical Publications

1. Abutayeh, M., Jeong, K., Alazzam, A., El-Khasawneh, B., “Reducing Optical Losses in Parabolic Trough Collector Solar Fields”, Proceedings of Energy and Resources for Tomorrow 2019, University of Windsor, Ontario, Canada, 2019.
2. Jeong, K., Saifujjaman, M., Aryal, S., Tamang, S., Lee, S., Lee, E., “Modeling for Blended Coal Combustion and its Impact on Ash Deposition in Full-Scale Post-Boiler Equipment in a Supercritical Pulverized Coal-Fired Power Plant”, Proceedings for 12th Asia-Pacific Conference on Combustion, Fukuoka, Japan, 2019.
3. Jeong, K., Lee, S., Lee, E., Seo, H., “A Numerical Study on Impact of Blended Coal Combustion on Performance of Boiler and Post-Boiler Heat Exchangers for Supercritical Coal-Fired Power Plant Applications”, Proceedings for Korean Society of Combustion Conference, Samcheok, Korea, 2019.
4. Islam, R. and Jeong, K., “Experimental Study on Effects of Operational Parameters on a Single-Cell Test-Bed Vanadium Redox Flow Battery”, IMECE2019-10998, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, 2019.
5. Saifujjaman, M., Yi, J., Lee, S., Lee, J., Jeong, K., “Modeling for Mineral Redistribution of Coal Blending during Pulverized Coal Combustion”, IMECE2018-87834, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, 2018.
6. Aryal, S., Tamang, S., Jeong, K., and Lee, J., “Ash Deposition Modeling in Low Temperature Heat Exchangers for Pulverized Coal Fired Power Plant Applications”, Proceedings of Clearwater Coal Conference, Clearwater, FL, 06/2018.
7. Islam, R., Nolen, C., and Jeong, K., “Effects of Sulfuric Acid Concentration on Volume Transfer across Ion-Exchange Membrane in a Single-Cell Vanadium Redox Flow Battery”, IMECE2017-72359, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, 2017.
8. Siddiquee, A., and Jeong, K., “Conjugated Dynamic Modeling on Vanadium Redox Flow Battery with Non-constant Variance for Renewable Power Plant Applications”, IMECE2016-67462, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, Vol. 6A, 2016.
9. Islam, R., Eckerson, B., Nolen, C., Jeong, K., and McCann, R., “Experimental study on test-bed vanadium redox flow battery”, PowerEnergy2015-49493, ASME Proceedings Paper, ASME Power & Energy Conference, Vol. 2, pp. V002T13A006, 2015.
10. Listenbee, R., Jeong, K., and McCann, R., “Computational and Experimental Study on Advanced Flow Battery for Renewable Power Plant Applications”, ES-FuelCell2014-6501, ASME Proceedings Paper, ASME Conference on Energy Sustainability, Vol. 2, pp. V002T04A011, 2014.
11. Jeong, K., “Waste Heat Recovery and Saving Fresh Water Consumption in Power Plants”, IMECE2012-89450, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, Vol. 6, pp. 751-756, 2012.
12. Jeong, K., Bilirgen, H., and Levy, E., “Numerical Simulations of Heat and Mass Transfer in Condensing Heat Exchangers for Water Recovery in Power Plants” (Nominated in Best Quality

- Paper), IMECE2011-62246, ASME Proceedings Paper, International Mechanical Engineering Congress & Exposition, Vol. 1, pp. 361-370, 2011.
13. Sircar, S., Caram H., Jeong, K., Beaver, M., Ni, Fan, and Makebe, A., "Novel Sorption Enhanced Reaction Process for Simultaneous Production of CO₂ and H₂ from Synthesis Gas Produced by Coal Gasification", Final Technical Report, OSTI ID: 1035862, 2010.
 14. Jeong, K., "Condensation of Water Vapor and Sulfuric Acid in Boiler Flue Gas", Ph.D. Dissertation, Lehigh University, ISBN 9781109121285, UMI 3354749, 2009.
 15. Levy, E., Bilirgen, H., Jeong, K., Kessen, M., and Samuelson, M., "Recovery of Water from Boiler Flue Gas", Final Technical Report, OSTI ID: 952467, 2008.
 16. Ha, S., Byun, C. and Jeong, K., "Introduction and R&D Status of Hydrogen Energy Technology", KEPCO Technical Report, TM.04NK09.P2005.554, 2005.
 17. Ha, S., Byun, C. and Jeong, K., "Study on Perspective and Technology Policy of Power Industry for the Hydrogen Economy Era", Korea Ministry of Commerce, Industry and Energy, 2005.
 18. Son, S., and Jeong, K., "Detail Design of Tritium Storage and Delivery System Based on ITER FDR Design", Korea Ministry of Science and Technology, 2005.
 19. Ha, S. and Jeong, K., "Study on the R&D Strategy for Nuclear Hydrogen Production System", KEPCO Technical Report, TM.04NP01.T2005.003, 2005.
 20. Cha, D., Ha, S. and Jeong, K., "Nuclear Electricity Technology Roadmap (Introduction)", Korea Ministry of Science and Technology, 2004.
 21. Cha, D., Ha, S. and Jeong, K., "Nuclear Electricity Technology Roadmap I", Korea Ministry of Science and Technology, 2004.
 22. Cha, D., Ha, S. and Jeong, K., "Nuclear Electricity Technology Roadmap II", Korea Ministry of Science and Technology, 2004.
 23. Jeong, K., Ji, J. and Ha, S., "The Vessel Analysis for Design Factor Derivation of Radio Carbon Gas Bag", KEPCO Technical Report, TM.03NE01.P2004.062, 2004.
 24. Yoo, K. and Jeong, K., "Study on Quality Management System of R&D for Power Industry", Korea Ministry of Commerce, Industry and Energy, 2003.
 25. Lee, H. and Jeong, K., "Study on Quality Assurance System of KEPRI", KEPCO Technical Report, TM.01DP26.T2002.017, 2002.
 26. Jeong, K. and Ahn, D., "Computational Analysis on Coal Gasification", KEPCO Technical Report, TM.97GJ17.P1999.10, 1999.
 27. Jeong, K. and Ahn, D., "Computational Analysis for Design Parameters Derivation of Coal Gasifier", KEPCO Technical Report, TC.96GJ07.R1998.104, 1998.
 28. Ahn, D. and Jeong, K., "Study on Operational Characteristics for 3T/D Dry-Feeding Coal Gasifier", KEPCO Technical Report, TM.96GJ07.R1998.25, 1998.
 29. Jeong, K., and Ahn, D., "Development and Operation of Optical Pyrometer System", KEPCO Technical Report, TC.97GJ17.R1998.28, 1998.
 30. Jeong, K., and Ahn, D., "Experimental Derivation Methods for Char Reactivity", KEPCO Technical Report, TC.97GJ17.I1998.19, 1998.
 31. Jeong, K., and Ahn, D., "A Review on Pyrometric Temperature Measurement Technique", KEPCO Technical Report, TC.97GJ17.E97.94, 1997.
 32. Jeong, K., and Ahn, D., "Photomultiplier Tube Calibration with Quests Tungsten Halogen Lamp", KEPCO Technical Report, TC.97GJ17.E97.94, 1997.
 33. Park, H., Jeong, K. and Ahn, D., "Calibration Procedure of Mass Spectroscopy for Experiments of Coal Gasification, Devolatilization and Char Oxidation", KEPCO Technical Report, TM.97GJ17.I97.700, 1997.
 34. Park, H., Jeong, K. and Ahn, D., "Application of Mass Spectroscopy for Coal Gas Analysis", KEPCO Technical Report, TM.97GJ17.I97.698, 1997.
 35. Ahn, D. and Jeong, K., "Operational Characteristics for 3T/D Dry-Feeding Coal Gasifier", KEPCO Technical Report, TM.96GJ07.P97.170, 1997.

36. Ahn, D. and Jeong, K., “Experimental Study on PDTF Coal Gasification for Fuel Characteristics Assessment”, KEPCO Technical Report, TR.92GJ11.97.26-6, 1997.
37. Jeong, K., “A Study on Mixing Characteristics in How Flow Model Municipal Solid Waste Incinerator”, Korea Advanced Institute of Science and Technology, MME96069, 1996.
38. Choi, S., Han, J., and Jeong, K., “Integrated System Design of Municipal Waste Incinerator”, Korea Ministry of Energy, 1995.
39. Choi, S., Han, J., and Jeong, K., “Development of Low Pollution Municipal Incineration System”, Korea Ministry of Energy, 1994.

Technical Presentations and Demonstrations

1. Jeong, H., Jeong, K., Kim, Y., “Life Cycle Assessment on Water Recovery from Boiler Flue Gas”, 2020 USA-Korea Conference (UKC), Virtual, 12/2020.
2. Jeong, H., Jeong, K., Kim, Y., “Life Cycle Assessment (LCA) and Cost Benefit Analysis (CBA) of low temperature economizer (LTE) for coal-fired power plant”, 2020 the 3rd International Conference on Sustainable Development of Water and Environment (ICSDWE2020), Incheon, Korea, 01/2020.
3. Abutayeh, M., Jeong, K., Kim, Y., Cho, G., “Numerical Modeling on Water and Heat Recovery from Combustion Flue Gas”, 2019 AIChE Annual Meeting, Orlando, FL, 11/2019.
4. Jeong, K., Saifujjaman, M., Aryal, S., Tamang, S., Lee, S., Lee, E., “Modeling for Blended Coal Combustion and its Impact on Ash Deposition in Full-Scale Post-Boiler Equipment in a Supercritical Pulverized Coal-Fired Power Plant”, 12th Asia-Pacific Conference on Combustion, Fukuoka, Japan, 07/2019.
5. Jeong, K., Lee, S., Lee, E., Seo, H., “A Numerical Study on Impact of Blended Coal Combustion on Performance of Boiler and Post-Boiler Heat Exchangers for Supercritical Coal-Fired Power Plant Applications”, Korean Society of Combustion Conference, Samcheok, Korea, 05/2019.
6. Aryal, S., Jeong, K., “Unsteady Modeling on Fly Ash Deposition in Full-Scale Gas-to-Gas Heaters for Ultrasupercritical Pulverized Coal-Fired Power Plant Applications”, Create State Research Symposium, Jonesboro, AR, 04/2019.
7. Tamang, S., Jeong, K., “Analytical Modeling on Multiphase Heat and Mass Transfer in Full-Scale Gas-to-Gas Heaters for Ultrasupercritical Pulverized Coal-Fired Power Plant Applications”, Create State Research Symposium, Jonesboro, AR, 04/2019.
8. Saifujjaman, M., Jeong, K., “Modeling for Mineral Redistribution of Blended Coals during Pulverized Coal Combustion”, Create State Research Symposium, Jonesboro, AR, 04/2019.
9. Aryal, S., Jeong, K., Lee, E., and Lee, S., “Transient Ash Deposition Modeling in Full-scale Low Temperature Heat Exchangers for Pulverized Coal-fired Power Plant Applications”, IMECE2018-89694, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Pittsburgh, PA, 11/2018.
10. Tamang, S., Jeong, K., Lee, E., and Lee, S., “Analytical Modeling On Multiphase Heat And Mass Transfer In Full-Scale Gas-to-Gas Cooler For Pulverized Coal-Fired Power Plant Applications”, IMECE2018-89698, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Pittsburgh, PA, 11/2018.
11. Siddiquee, A., Jeong, K., Lee, E., and Lee, S., “Performance Prediction Modeling of a Full-Scale Electrostatic Precipitator”, IMECE2018-89748, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Pittsburgh, PA, 11/2018.
12. Saifujjaman, M., Yi, J., Lee, S., Lee, J., Jeong, K., “Modeling for Mineral Redistribution of Coal Blending during Pulverized Coal Combustion”, IMECE2018-87834, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Pittsburgh, PA, 11/2018.

13. Jeong, K., “Predictive Modeling for Ash Behaviors in Post-Boiler Equipment for Ultrasupercritical Coal-Fired Power Plant Applications”, Southeast Symposium on Contemporary Engineering Topics, Huntsville, AL, 08/2018.
14. Aryal, S., Tamang, S., Jeong, K., and Lee, J., “Ash Deposition Modeling in Low Temperature Heat Exchangers for Pulverized Coal Fired Power Plant Applications”, Clearwater Coal Conference, Clearwater, FL, 06/2018.
15. Tamang, S., Jeong, K., and Lee, J., “Analytical Modeling on Heat and Mass Transfer in Full-Scale Gas-to-Gas Cooler”, IMECE2017-73387, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Tampa, FL, 11/2017.
16. Saifujjaman, M., Jeong, K., and Lee, J., “A Study on Mineral Redistribution for Sub-Bituminous Coal”, IMECE2017-73429, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, FL, 11/2017.
17. Siddiquee, A., and Jeong, K., Lee, J., “Modeling for Performance Prediction of Electrostatic Precipitator”, IMECE2017-73248, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Tampa, FL, 11/2017.
18. Islam, R., Nolen, C., and Jeong, K., “Effects of Sulfuric Acid Concentration on Volume Transfer across Ion-Exchange Membrane in a Single-Cell Vanadium Redox Flow Battery”, IMECE2017-72359, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Tampa, FL, 11/2017.
19. Jeong, K., “Theoretical Prediction of Sulfuric Acid Condensation Rates in Boiler Flue Gas”, The 7th International Symposium on Energy, NSCJ, Manchester, England, 08/2017.
20. Sadi, N., Jeong, K., “Mathematical Modeling for Mineral Matter Redistribution in Pulverized Coal Combustion”, IMECE2016-68732, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Phoenix, AZ, 11/2016.
21. Siddiquee, A., Jeong, K., “Conjugated Dynamic Modeling on Vanadium Redox Flow Battery with Non-constant Variance for Renewable Power Plant Applications”, IMECE2016-67462, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Phoenix, AZ, 11/2016.
22. Islam, R., Siddiquee, A., Jeong, K., McCann, R., Test-Bed Demonstration for Vanadium Redox Flow Battery (VRFB) with Low-Voltage Inverter Applications, Technical Demonstration at NSF EPSCoR Annual Meeting, NCREPT (National Center for Reliable Electric Power Transmission), Fayetteville, AR, 09/2015.
23. Jeong, K., Test-bed Vanadium Redox Flow Battery for Renewable Energy Storage, Oral Presentation at NSF EPSCoR Annual Meeting, Fayetteville, AR, 09/2015.
24. Islam, R., Siddiquee, A., Nolen, C., Jeong, K., McCann, R., Test-Bed Development for Vanadium Redox Flow Battery (VRFB), Poster Presentation at NSF EPSCoR Annual Meeting, Fayetteville, AR, 09/2015.
25. Siddiquee, A., Jeong, K., Conjugated Dynamic Modeling with Non-constant Variance on Vanadium Redox Flow Battery for Renewable Power Plant, Poster Presentation at NSF EPSCoR Annual Meeting, Fayetteville, AR, 09/2015.
26. Sadi, N., and Jeong, K., Predictive Modeling for Transient Ash Deposition on Heat Exchangers in Coal-Fired Power Plants, Oral Presentation, ASME Conference on Power and Energy, San Diego, CA, 07/2015.
27. Islam, R., Nolen, C., Eckerson, B., and Jeong, K., Experimental study on test-bed vanadium redox flow battery, Oral Presentation, ASME Conference on Power and Energy, San Diego, CA, 07/2015.
28. Nolen, C., Eckerson, B., Islam, R., and Jeong, K., Synthesis of Vanadium Electrolyte for Use in Vanadium Redox Flow Batteries, Create State Research Symposium, Jonesboro, AR, 04/2015.
29. Islam, R., Nolen, C., Eckerson, B., and Jeong, K., Test-bed Preparation and Performance Analysis of a Single Cell Advanced Vanadium Redox Flow Battery, Create State Research Symposium, Jonesboro, AR, 04/2015.

30. Eckerson, B., Listenbee, R., Jeong, K., and McCann, R., "Modeling and Experiments for Test-Bed Development of Vanadium Redox Flow Battery", Poster Presentation, NSF EPSCoR Annual Meeting, Little Rock, AR, 09/2014.
31. Jeong, K., "Thermal Impact of Cyclic Operations on Small/Medium Size Combined Cycle Power Plants at Low Load Factor", IMECE2014-40067, Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Montreal, Canada, 11/2014.
32. Listenbee, R., Eckerson, B., Jeong, K., and McCann, R., "Theoretical Modeling for Dynamic Behavior in Vanadium Redox Flow Battery", 2nd Award in Undergraduate Oral Presentation, Create State Research Symposium, 4/2014.
33. Listenbee, R., Jeong, K., and McCann, R., "Computational and Experimental Study on Advanced Flow Battery for Renewable Power Plant Applications", ASME 2014 8th International Conference on Energy Sustainability, Boston, MA, 7/2014.
34. Jeong, K., Edgar, B., "Retrofit Engineering Design of Existing Simple Small/Medium Size Gas Turbine Power Cycle into Combined Cycle Power", Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, San Diego, CA, 11/2013.
35. Listenbee, R., Jeong, K., and McCann, R., "NSF: Test-Bed Development of Advanced Flow Battery for Renewable Energy Storage", Arkansas Advanced Energy Association Annual Conference, Little Rock, 10/2013.
36. Draganjac M., Fournier, K., Tony, D., Jeong, K., "TICPET Reactions – an Update", 22nd Mid-south Inorganic Chemists Association, Little Rock, AR, 2013.
37. Fournier, K., Tony, D., Jeong, K., and Draganjac M., "Thermal Analysis of Reactions of Ruthenium (III) Chloride or Silver Chloride with Select Metals", 2013 Midwest American Chemical Society Regional Meeting, Springfield, MO, 2013.
38. Fournier, K., Tony, D., Jeong, K., and Draganjac M., "DSC/TGA Analysis of the Reaction of Cu with Select Metal Halides", 246th National Meeting of the American Chemical Society, Indianapolis, 2013.
39. Fournier, K., Tony, D., Jeong, K., and Draganjac M., "DSC Analysis of the Reaction of Cu with Select Metal Halides", Arkansas Academy of Science Meeting (won 2nd place), AR, 2013.
40. Tony, D., and Jeong, K., "Phase Transition Characteristics of Various Molten Salts for Renewable Power Plant Applications", Ark-LSAMP Research Conference, Little Rock, AR, 2013.
41. Bham, M., Koch, B., and Jeong, K., "Construction and Operation of Experimental Simulator with Thermodynamic Modeling for Binary/Ternary Systems", Create State Research Symposium, Jonesboro, AR, 2013
42. Fournier, K., Tony, D., Jeong, K., and Draganjac M., "DSC Analysis of the Reaction of Cu with Select Metal Halides", Mid-south Inorganic Chemists Association, Conway, AR, 2013.
43. Tony, D., and Jeong, K., "Differential Scanning Calorimetric Analysis on Three Molten Salts for Renewable Power Plant Applications", Create State Research Symposium, Jonesboro, AR, 2013.
44. Jeong, K., "Waste Heat Recovery and Saving Fresh Water Consumption at Power Plants", Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Houston, TX, 11/2012.
45. Sivakumar, G. and Jeong, K., "Stichococcus bacillaris Strain Siva2011 Made RRR- α -Tocopherol: Bioprocess Engineering and Mathematical Modeling", ACMAP Conference, 05/2012.
46. Earls, M. J. and Jeong, K., "Thermodynamic Analysis on Phase Change of Molten Salts: LiNO₃-NaNO₃, LiNO₃-KNO₃, and KNO₃-NaNO₃", Create @ State Research Symposium, 04/2012.
47. Jeong, K., Bilirgen, H., and Levy, E., "Numerical Simulations of Heat and Mass Transfer in Condensing Heat Exchangers for Water Recovery in Power Plants", Oral Presentation, International Mechanical Engineering Congress & Exposition, ASME, Denver, CO, 11/2011.
48. Jeong, K., "CAREER: Integrated Experimental and Computational Framework for Excess Molar Gibbs Energy Exploration in Multi-Component Liquid Mixtures", NSF CAREER Award Regional Forum, Baton Rouge, LA, 11/2011.

49. Jeong, K. and Edgar, B., "Experimental and computational study for excess molar Gibbs energy exploration in multi-component liquid mixture", NSF EPSCoR Annual Meeting, Heber Springs, AR, 07/2011.
50. Jeong, K., and Edgar, B., "Advanced Concentrating Solar Power Plant Technologies and Experimental and Computational Approach for Novel Molten Salts Development", Annual Renewable Energy Conference, Arkansas State University, 04/2011.
51. Earls, M. J. and Jeong, K., "Design of Experimental Simulator for Long-Term Performance Evaluation of Advanced Heat Transfer Fluids for Concentrating Solar Plant Application", Create @ State Research Symposium, 03/2011.
52. Levy, E., Bilirgen, H., Samuelson, M., Jeong, K., Kessen, M., and Whitcomb, C., "Separation of water and acid vapors from boiler flue gas in a condensing heat exchanger", International Technical Conference on Coal Utilization & Fuel Systems, 06/2008.
53. Jeong, K. and Ha, S., "Perspective and Technology Policy of Korean Power Industry for the Hydrogen Economy Era", Hydrogen Electric Economy Workshop, White Plains, NY, 12/2005.
54. Yoon, D. and Jeong, K., "Sensitivity Analysis for Small Break Loss of Coolant Accident at Shutdown and Low-Power Operation", 11/2005.
55. Ha, S. and Jeong, K., "Perspective of Korean Power Industry for Hydrogen Economy", International Hydrogen Energy Symposium, Korea, 09/2005.
56. Jeong, K., Ha, S. and Jun H., "The Study on Energy Company's Perspective and Influence of the Hydrogen Economy", Korea Society for Energy Engineering Annual Conference, Korea, 05/2005.
57. Jeong, K., Kim, Y., Ha, S., and Lee, C., "Key Technologies of Electric Power Corporation and Nuclear Hydrogen Development & Demonstration", Korea Society for Energy Engineering Annual Conference, Korea, 11/2004.
58. Jeong, K., Bae, H., Ha, S., and Yoon, D., "Analysis of the LONF ATWS during Low-Power Operation", Korea Nuclear Society Annual Conference, 05/2004.
59. Jeong, K., Ji, J. and Ha, S., "The Computational Analysis for Design Factor Derivation of Radio Carbon Gas Bag", Korea Nuclear Society Annual Conference, 05/2004.
60. Jeong, K., Ji, J. and Ha, S., "The Computational Analysis for Design Factor Derivation of Radio Carbon Gas Bag", Korea Nuclear Society Annual Conference, 05/2004.
61. Jeong, K., Shin, Y. and Ahn, D., "An Experimental Study on Char Combustion Behavior using Optical Pyrometer", Korea Society for Mechanical Engineering Annual Conference, 04/1998.
62. Shin, Y., Ahn, D., Park, H. and Jeong, K., "Experimental Study on Coal Gasification Characteristics in PDTF", Korea Society for Mechanical Engineering Annual Conference, 11/1997.
63. Ahn, D., Shin, Y. and Jeong, K., "Experimental and Numerical Study on Coal Gasification with an Entrained Flow Reactor", USA-Korea Clean Coal Technology Workshop, 10/1997.
64. Park, H., Ahn, D., Shin, Y. and Jeong, K., "Design and Operation of Pressurized Drop Tube Furnace for Coal Gasification Studies", KSME-JSME Thermal Engineering Conference, 10/1996.
65. Park, H., Ahn, D. and Jeong, K., "Characterization of Particle heating in Pressurized Drop Tube Furnace", Korea Society for Energy Engineering Annual Conference, 11/1996.
66. Han, J., Jeong, K., Choi, J., and Choi, S., "Experimental Study on Mixing Characteristics Measurement according to Secondary Air Injection Method of Municipal Solid Waste Incinerator", Korea Society for Waste Annual Conference, 05/1995.
67. Han, J., Jeong, K., Choi, J., and Choi, S., "Operational Condition Setup of Model Incinerator for Derivation of Design Parameter", Korea Society for Waste Annual Conference, 05/1995.

Thesis Publications

1. Saifujjaman, M., “Predictive Modeling on Mineral Redistribution of Blended Coal during Pulverized Coal Combustion”, Master of Science in Engineering Thesis, Proquest-10977649, Committee Chair, December 2018.
2. Aryal, S., “Ash Deposition Modeling In Low Temperature Heat Exchangers for Ultrasupercritical Pulverized Coal-fired Power Plant Applications”, Master of Science in Engineering Thesis, Proquest-10977561, Committee Chair, December 2018.
3. Tamang, S., “Analytical Modeling on Multiphase Heat and Mass Transfer in Full-Scale Gas-to-Gas Heaters for Ultrasupercritical Pulverized Coal-Fired Power Plant Applications”, Master of Science in Engineering Thesis, Proquest-10977591, Committee Chair, December 2018.
4. Siddiquee, A., “Conjugated Dynamic Modeling on Vanadium Redox Flow Battery with Non-Constant Variance for Renewable Power Plant Applications”, Master of Science in Engineering Thesis, ProQuest-10640671, Committee Chair, December 2017.
5. Sadi, N., “Mathematical Modeling for Mineral Matter Redistribution in Pulverized Coal Combustion”, Master of Science in Engineering Thesis, ProQuest-10266872, Committee Chair, May 2017.
6. Islam, N., “Experimental study and performance characterization of a single-cell vanadium redox flow battery”, Master of Science in Engineering Thesis, ProQuest-10140821, Committee Chair, May 2016.

Talks and Invited Seminars

1. Jeong, K., “Trends of Energy Industry in the United States, and its Perspectives of Technology R&D”, Keynote Plenary Presentation, 20th Anniversary Conference, Korean Society for Thermal Environmental Engineers (KSTEE), Jeju, Korea, 12/2020.
2. Jeong, K., “Trends of Electric Power Industry in the United States, and its Perspective in Technology R&D”, KIMM, Daejeon, Korea, 07/2019.
3. Jeong, K., “Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers for Supercritical Coal-Fired Power Plant Applications”, KIMM, Daejeon, Korea, 07/2019.
4. Jeong, K., “Trends of Electric Power Industry and Ocean Energy Development in the United States”, KRISO, Daejeon, Korea, 07/2019.
5. Jeong, K., “Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab”, Korea Institute of Energy Research (KIER), Daejeon, Korea, 06/2019.
6. Jeong, K., “Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers for Supercritical Coal-Fired Power Plant Applications”, GSCO, Seoul, Korea, 06/2019.
7. Jeong, K., “1) Trends of Electric Power Industry in the United States, and 2) Predictive Modeling and its Intelligent Application for Smart Power Plants”, Korea Electric Power Corporation (KEPCO), Daejeon, Korea, 05/2019.
8. Jeong, K., “Trends of Power Industry in the United States and its Perspective”, Keynote Plenary Presentation, 2019 Spring Conference, Korean Society for Power System Engineering, Pukyong National University, Korea, 05/2019.
9. Jeong, K., “Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers: Updates on AshFlow V1.2”, Project Final Meeting, Doosan Heavy Industries (DHI), South Korea, 05/2019.
10. Jeong, K., “Development of Innovative Clean Technology related to Energy: Water Recovery and Fine Particulate Matters”, Korea Institute of Industrial Technology (KITECH), Jeju, Korea, 05/2019.
11. Jeong, K., “Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers for Supercritical Coal-Fired Power Plant Applications”, Korea Institute of Industrial Technology (KITECH), Headquarter, Korea, 05/2019.

12. Jeong, K., "Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers", Project Final Meeting, Doosan Heavy Industries (DHI), South Korea, 12/2018.
13. Jeong, K., "Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers", Sungkyunkwan University (SKKU), South Korea, 12/2018.
14. Jeong, K., "Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers", Collaborative Research Seminar, Reaction Engineering International (REI), Salt Lake City, UT, 11/2018.
15. Jeong, K., "Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers", Project Annual Meeting, Doosan Heavy Industries (DHI), South Korea, 03/2018.
16. Jeong, K., "Integrated Solar Combined Cycle (ISCC)", Korea Electric Power Corporation (KEPCO), South Korea, 02/2017.
17. Jeong, K., "Predictive Modeling for Transient Ash Deposition in Post-Boiler Heat Exchangers", Project Annual Meeting, Doosan Heavy Industries (DHI), South Korea, 02/2017.
18. Jeong, K., "Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab", Sungkyunkwan University (SKKU), South Korea, 07/2016.
19. Jeong, K., "Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab", Korea Electric Power Corporation (KEPCO), South Korea, 07/2016.
20. Jeong, K., "Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab", Korea Advanced Institute of Science and Technology (KAIST), South Korea, 07/2016.
21. Jeong, K., "Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab", Kookmin University (KMU), South Korea, 07/2016.
22. Jeong, K., "Trends of Power Industry in the United States and Research Activities at Thermal Engineering Lab", Pukyong National University (PKNU), South Korea, 07/2016.
23. Jeong, K., "Advanced Energy Recovery/Storage Systems for Existing/Renewable Power Plant Applications", Korea Hydraulic and Nuclear Power (KHNP), South Korea, 06/2013.
24. Jeong, K., "Advanced Energy Recovery/Storage Systems for Existing/Renewable Power Plant Applications", Korea Atomic Energy Research Institute (KAERI), South Korea, 06/2013.
25. Jeong, K., "Advanced Energy Recovery/Storage Systems for Existing/Renewable Power Plant Applications", Korea Electric Power Corporation (KEPCO), South Korea, 06/2013.
26. Jeong, K., "Advanced Energy Recovery/Storage Systems for Existing/Renewable Power Plant Applications", Ajou University, South Korea, 06/2013.
27. Jeong, K., "Advanced Energy Recovery/Storage Systems for Existing/Renewable Power Plant Applications", 2013 KOREA-US Technology Symposium, Busan, Invited by Korea Ministry of Trade, Industry and Energy (MOTIE), KSME, South Korea, 06/2013.
28. Jeong, K., "Low Cost Heat Recovery System Development for 45MW Gas Turbine Power Plant", CWL (City Water and Light), 08/2011.
29. Jeong, K., "Integrated Computational and Experimental Framework for Mixing Enthalpy Exploration of Ternary Excess Molar Gibbs Energy", KAERI (Korea Atomic Energy Research Institute), 06/2011.
30. Jeong, K., "Advanced Heat Transfer Fluids for Renewable Power Plant Applications", KAIST (Korea Advanced Institute of Science and Technology), 06/2011.
31. Jeong, K., "Experimental and Computational Techniques for Thermal and Fluid Energy System Design", KEPCO (Korea Electric Power Corporation), 06/2011.
32. Jeong, K., "Thermodynamic Modeling of Liquid-Liquid Equilibria for Thermophysical Property Prediction", Ajou University, 06/2011.
33. Jeong, K., "Introduction to Nuclear Energy", Jonesboro Rotary Club, 03/2011.
34. Jeong, K., "CFD Modeling and Experimental Verifications for Engineering Design Optimization", Arkansas State University, 07/2010.

35. Jeong, K., “Numerical Modeling and Experimental Verification of Engineering Designs for (a) Power Plant Flue Gas Drying Systems and (b) Novel Sorption Enhanced Reaction Systems for Hydrogen Production by Coal Gasification”, Praxair Inc., 02/2010.
36. Jeong, K., “Analytical Modeling for Condensation Separation of Water and Sulfuric Acid Vapors in Boiler Flue Gas Condensing Heat Exchanger”, Air Products and Chemicals Inc., 11/2009.
37. Jeong, K., “Computational and Experimental Applications for Engineering Design Processes”, Babcock Power Inc., 09/2008.

Patents

1. Jeong, K., “Air Cooled Condensing Heat Exchanger System with Acid Condensate Neutralizer”, US Utility Patent No. 11,135,547 B1, Patented, 2021.
2. Jeong, K., “Method and System of Increasing Water and Acid Condensation from Flue Gas”, US Utility Patent No. 10,543,434 B2, Patented, 2020.
3. Jeong, K., “Condensing Heat Exchanger System”, US Utility Patent No. 10,010,810 B1, Patented, 2018.
4. Ha, S., Jeong, K., and Jeon, H., “Energy Storage System for Nuclear Power Plant using Hydrogen Technology”, Korea Patent Registration No. 10-2005-0103206, 2007.
5. Jeong, K., “Package Air Conditioner with Ice Storage Pack”, Korea Patent Registration No. 2001954960000, 2000.
6. Jeong, K., “Ice Storage Pack Unit Composed of Several Ice Storage Packs”, Korea Patent Registration No. 2001954950000, 2000.
7. Jeong, K., Lee, W., Cho, S., Nam, S., and Yoon, J., “Water Level Gauge of Ice Storage Tank”, Korea Patent Registration No. 2001970610000, 2000.
8. Yoon, D., Lee, J., Jeon, H., Byun, C. and Jeong, K., “Response Operation Guideline of Loss of Coolant Accident at Shutdown and Low Power Operation”, Korea Patent Registration No. 10-2005-0103211, 2007.

Teaching Philosophy and Specialties

Provide students with thorough fundamentals to be engineering professionals, inspiration of creativities to be technical innovators, and ethics to take respectful leaderships, based on Traditional Lecture Method. Multi-disciplinary teaching to integrate with research and industrial experiences for top quality education in fluid, thermal, and energy stems including but not limited to Engineering Thermodynamics-I, Engineering Thermodynamics-II, Design of Fluid and Thermal Energy Systems, Design of Heating, Ventilating and Air Conditioning Systems, Advanced Fluid Mechanics, Advanced Heat and Mass Transfer, and Advanced Experimental Methods.

Teaching Experiences & Course Evaluations (Average Evaluation Score: 4.76/5.0)

1. ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Fall 2020 (Course Evaluation: 4.54/5.0).
2. ENGR 629V Fundamentals of Combustion, Arkansas State University, Fall 2020.
3. ME 4503 Fluid and Thermal Energy Systems, Arkansas State University, Fall 2020 (Course Evaluation: 4.75/5.0).
4. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2020.
5. ENGR 629V Coal-Fired Power Plant Technology, Arkansas State University, Spring 2020.
6. ME 4593 Design of HVAC, Arkansas State University, Spring 2020.
7. ME 4583 Energy Conversion, Arkansas State University (Course Evaluation 4.74/5.0), Fall 2019.

Curriculum Vitae: Dr. Kwangkook (David) Jeong, Ph.D., P.E., ASME Fellow

8. ME 4503 Fluid and Thermal Energy Systems, Arkansas State University (Course Evaluation 4.79/5.0), Fall 2019.
9. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2019.
10. EME 5912-41 Coal-Fired Power Plant Technology, International Scholar Invited Lecture at Sungkyunkwan University, Suwon, South Korea, Summer 2019.
11. ME 4593 Design of HVAC, Arkansas State University (Course Evaluation 5.0/5.0), Spring 2019.
12. ME 4503/5503 Fluid and Thermal Energy Systems, Arkansas State University (Course Evaluation 4.86/5.0), Fall 2018.
13. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2018.
14. ME 4593 Design of HVAC, Arkansas State University (Course Evaluation 4.99/5.0), Spring 2018.
15. ME 4503/5503 Fluid and Thermal Energy Systems, Arkansas State University (Course Evaluation 4.86/5.0), Fall 2017.
16. ENGR 6143 Advanced Heat and Mass Transfer, Arkansas State University (Course Evaluation 5.0/5.0), Fall 2017.
17. ME 4593/5593 Design of HVAC (Course Evaluation 4.86/5.0), Arkansas State University, Spring 2017.
18. ENGR 6153 Advanced Fluid Mechanics (Course Evaluation 5.0/5.0), Arkansas State University, Spring 2017.
19. ENGR 4482 Senior Design II (Course Evaluation 4.6/5.0), Arkansas State University, Spring 2017.
20. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 4.11/5.0), Arkansas State University, Fall 2016.
21. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2016.
22. ENGR 6143 Advanced Heat and Mass Transfer (Course Evaluation 4.91/5.0), Arkansas State University, Spring 2016.
23. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.44/5.0), Arkansas State University, Spring 2016.
24. ENGR 6153 Advanced Fluid Mechanics (Course Evaluation 5.0/5.0), Arkansas State University, Fall 2015.
25. ME 469V Advanced Fluid Mechanics (Course Evaluation 4.66/5.0), Arkansas State University, Fall 2015.
26. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 4.78/5.0), Arkansas State University, Fall 2015.
27. ENGR 3443 Engineering Thermodynamics I (Course Evaluation 4.48/5.0), Arkansas State University, Fall 2015.
28. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2015.
29. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.61/5.0), Arkansas State University, Spring 2015.
30. ME 4593/5593 Design of HVAC (Course Evaluation 4.81/5.0), Arkansas State University, Spring 2015.
31. ENGR 4482 Senior Design II (Course Evaluation 4.89/5.0), Arkansas State University, Spring 2015.
32. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 5.0/5.0), Arkansas State University, Fall 2014.
33. ENGR 3443 Engineering Thermodynamics I (Course Evaluation 4.81/5.0), Arkansas State University, Fall 2014.
34. Online ENGR 3443 Engineering Thermodynamics I, Arkansas State University, Summer 2014.
35. ME 4593 HVAC (Course Evaluation 4.92/5.0), Arkansas State University, Spring 2014.
36. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.85/5.0), Arkansas State University, Spring 2014.

37. Web-Assisted ENGR 3443 Engineering Thermodynamics I (Course Evaluation 4.61/5.0), Arkansas State University, Spring 2014.
38. ENGR 4463 Senior Design-I (Course Evaluation 4.53/5.0), Arkansas State University, Fall 2013.
39. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 4.73/5.0), Arkansas State University, Fall 2013.
40. Online ENGR 3443 Engineering Thermodynamics I (Course Evaluation 4.97/5.0), Arkansas State University, Summer 2013.
41. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.98/5.0), Arkansas State University, Spring 2013.
42. ENGR 6053 Advanced Fluid Mechanics (Course Evaluation 4.67/5.0), Arkansas State University, Fall 2012.
43. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 4.94/5.0), Arkansas State University, Fall 2012.
44. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.75/5.0), Arkansas State University, Spring 2012.
45. ME 4503/5503 Fluid and Thermal Energy Systems (Course Evaluation 3.78/5.0), Arkansas State University, Fall 2011.
46. ME 3533 Engineering Thermodynamics II (Course Evaluation 4.83/5.0), Arkansas State University, Spring 2011.
47. Nuclear Safety Class, Korea Hydro and Nuclear Power Corporation, 2003 to 2004.

Leading Technical Tours for Students and Scholarships (Accumulated Number of Participants: 1,031 Students Since 2011)

1. Eli Dowdy, ASHRAE Scholarship, Nov., 2021.
2. 3 Students, Energy Recovery Wheel System at Coopers Alumni Building, Jonesboro, AR, Apr. 7th, 2021.
3. 8 Students, Black River Steel (BRS), Blytheville, AR, Sep. 28th, 2020.
4. 11 Students, Entergy 1.9 GW Arkansas Nuclear One (ANO) Power Plant, Russellville, AR, Feb. 28th, 2020.
5. 9 Students, Entergy 1.9 GW Arkansas Nuclear One (ANO) Power Plant, Russellville, AR, Feb. 14th, 2020.
6. 6 Students, 2020 ASHRAE Winter Conference, Orlando, FL, Feb. 1-5, 2020.
7. 32 Students, Nucor Steel Arkansas, Blytheville, AR, Nov. 5th, 2019.
8. 35 Students, NEA Memorial Baptist Hospital HVAC and Power Facilities, Jonesboro, AR, Apr. 23rd, 2019.
9. 14 Students, Cooper Alumni Center HVAC Tour, Jonesboro, AR, Apr. 11, 2019.
10. 5 Students, ASHRAE Career Fair, Little Rock, AR, Apr. 4th, 2019.
11. 39 Students, ASU Chiller Plant, Jonesboro, AR, Feb. 21, 2019.
12. Elizabeth Compton, ASHRAE Scholarship, Feb. 2019.
13. 3 Students, 2019 ASHRAE Winter Conference, Atlanta, GA, Jan. 13-15, 2019.
14. 4 Students, 2018 ASME Congress, Pittsburgh, PA, Nov. 12-14, 2018.
15. 2 Students, Clearwater Coal Conference, Clearwater, FL, Jun. 5th-7th, 2018.
16. 11 Students, Cooper Alumni Center HVAC Tour, Jonesboro, AR, Apr. 19, 2018.
17. 23 Students, ASU Chiller Plant, Jonesboro, AR, Feb. 21, 2018.
18. 4 Students, ASHRAE Winter Conference, Chicago, IL, Jan. 20-22, 2018.
19. 5 Students, 2017 ASME Congress, Tampa, FL, Nov. 7th-9th, 2017.
20. 21 Students, NicePak Manufacturing Facilities, Jonesboro, AR, Oct. 18, 2017.
21. 20 Students, CWL Gas Turbine Power Plant, Jonesboro, AR, Apr. 12, 2017.
22. 10 Students, ASHRAE Career Fair, Little Rock, AR, Apr. 6th, 2017.
23. 10 Students, Loren Cook Fan Company, Springfield, MO, Mar. 2-3, 2017.

24. Hunter Brock, ASHRAE Scholarship, Feb. 2017.
25. Emin Afandiyev, ASHRAE Scholarship, Feb. 2017.
26. 6 Students, 2017 ASHRAE Winter Conference, Las Vegas, NV, Jan 28-31, 2017.
27. 2 Students, 2016 ASME Congress, Phoenix, AZ, Nov. 13th-17th, 2016.
28. 20 Students, Dell 580MW Combined Cycle Power Plant, Blytheville, AR, Nov. 9, 2016.
29. 20 Students, NEA Memorial Baptist Hospital HVAC and Power Facilities, Jonesboro, AR, Mar. 16th, 2016.
30. 6 Students, ASHRAE Winter Conference, Orlando, FL, Jan. 23-26, 2016.
31. 29 Students, FedExForum Facility Tour, Memphis, TN, Nov. 12, 2015.
32. 25 Students, Valero Memphis Refinery Plant Tour, Memphis, TN, Oct. 13, 2015.
33. 2 Students, 2015 Arkansas ASSET Annual Meeting, Fayetteville, AR, Sep. 12-15, 2015.
34. 2 Students, 2015 ASME Power and Energy Conference, San Diego, CA, Jun 28-Jul 3, 2015.
35. 18 Students, Cooper Alumni Building Tour, Jonesboro, AR, Apr 7, 2015.
36. 25 Students, Entergy 1.7GW Coal-Fired Power Plant, Newark, AR, Apr 1, 2015.
37. 17 Students, HVAC Tour on Humanities Building, Feb. 19, 2015.
38. 2 Students, STEM Event of State Capitol, Little Rock, AR, Feb. 11, 2015.
39. Stephanie Saenz, ASHRAE Scholarship, Feb., 2015.
40. 8 Students, ASHRAE Winter Conference, Chicago, IL, Jan. 25-27, 2015.
41. 29 Students, Tenaris Plant Tour, Blytheville, AR, Oct 1, 2014.
42. 8 Students, Camfil Farr Company Tour, Jonesboro, AR, Sep. 9th, 2014.
43. 1 Student, Annual ASSET Meeting, Little Rock, AR, Sep 3-5, 2014.
44. 2 Students, ASME 2014 8th International Conference on Energy Sustainability, Boston, MA, Jun 29-Jul 1, 2014.
45. 16 Students, Cooper Alumni Building Tour, Jonesboro, AR, Apr 17, 2014.
46. 9 Students, Loren Cook Company Tour, Springfield, MO, Feb 6-7, 2014.
47. Kathryn Risi, ASHRAE Scholarship, Feb., 2014.
48. 3 Students, 2014 ASHRAE Winter Conference, Manhattan, NYC, Jan 18-20, 2014.
49. 28 Students, Entergy 1.7GW Coal-Fired Power Plant, Newark, AR, Oct 29, 2013.
50. 28 Students, Nordex Windturbine Plant, Jonesboro, AR, Sep 18, 2013.
51. 15 Students, ASU Chiller Plant, Jonesboro AR, Apr 9, 2013.
52. 15 Students, CWL Gas Turbine Power Plant, Jonesboro AR, Mar 28, 2013.
53. Manpreet Bham, ASHRAE Scholarship, Feb., 2013.
54. 5 Students, 2013 ASHRAE Winter Conference, Dallas, TX, Jan 26-28, 2013.
55. 28 Students, Dell 580MW Combined Cycle Power Plant, Blytheville, AR, Oct 5, 2012.
56. 9 Students, ASU Chiller Plant, Jonesboro AR, Apr 12, 2012.
57. 9 Students, CWL Gas Turbine Power Plant, Jonesboro AR, Feb 28, 2012.
58. 2 Students, Arkansas ASHRAE Meeting, Little Rock, AR, Feb 2, 2012.
59. Joe Earls, ASHRAE Scholarship, Feb., 2012.
60. 10 Students, LEED Certified Building, Ritter Communications, Jonesboro, AR, Oct 31, 2011.
61. 14 Students, ASME HPVC, Indianapolis, IN, Apr 1-3, 2011.
62. 14 Students, ASU Chiller Plant, Jonesboro AR, Apr 5, 2011.
63. 14 Students, CWL Gas Turbine Power Plant, Jonesboro AR, Feb 22, 2011.

Press and Media Coverage

1. Jeong, K., "Faculty Guest Speaker"
(<https://www.facebook.com/ArkansasState/videos/vb.69431101263/10154983149356264/?type=2&theater>), 2016 Fall Commencement, Official Facebook, Arkansas State University, 12/2016.
2. Jeong, K., "Power-plant ash focus of Arkansas State University study"
(<https://m.washingtontimes.com/news/2015/dec/26/power-plant-ash-focus-of-arkansas-state-university/>), Washington Times, 12/2015.

3. Jeong, K., "Power-plant ash focus of study"
(<http://www.arkansasonline.com/news/2015/dec/20/power-plant-ash-focus-of-study-20151220/>), Arkansas Democrat-Gazette, 12/2015.
4. Jeong, K., "Engineering Professor on Contract for Power Plant Software"
(<http://kasu.org/post/engineering-professor-contract-power-plant-software>), KASU, 12/2015.
5. Jeong, K., "ASU engineering professor working on contract for Korean power plant software"
(<https://talkbusiness.net/2015/11/asu-engineering-professor-working-on-contract-for-korean-power-plant-software/>), Talk Business & Politics (TB&P), 11/2015.

Professional Credentials and Developments

1. Fellow, ASME (American Society of Mechanical Engineers), 2020-Present.
2. Member, ASME (American Society of Mechanical Engineers), 2011-2020.
3. Member, ASTFE (American Society of Thermal and Fluids Engineers), 2019-Present.
4. S-B-A Associate Member, ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers), 2011-Present.
5. Member, Korean Society of Combustion, 2019-Present.
6. Member, KSEA (Korean-American Scientists and Engineers Association), 2006-2008, 2013-2015, 2020-Present.
7. Registered Professional Engineer, No. 15410, Arkansas State Board of Licensure for Professional Engineers and Professional Surveyors, 2012-Present.
8. Completion of NSF OLPA Workshop, Little Rock, AR, March 12-13, 2015.
9. Advanced Institute of Research Development, Arkansas State University, 2014.
10. Member, AIChE (American Institute of Chemical Engineers), 2009-2014.
11. Member, ASEE (American Society for Engineering Education), 2011-2013.
12. Institute of Research Development, Arkansas State University, 2011.
13. Six Sigma Black Belt, No. 12-02-HOUS-001-A-195, Quality Institute of America, 2002.

Professional and International Services

1. Organizer/Chair, Session 8-10-3 Air Conditioning, Energy, IMECE, ASME, Tampa, FL, 2017.
2. Editorial Review, Chapter 3, 8, and 10, Design of Fluid Thermal Systems by William Janna, Fifth Edition, CENGAGE Learning, 2017.
3. Organizer/Chair, Session 8-10-1 Air Conditioning, Energy, IMECE, ASME, Phoenix, AZ, 2016.
4. Chair, Technical Committee on Renewable Energy and Energy Conversion (TC-REEC), ASME, 2014-2015.
5. Organizer/Chair, Track 2-16 Low/Zero Emission Power Plants and Carbon Sequestration, 2015 ASME Power & Energy Conference: Energy Solutions for a Sustainable Future, San Diego, CA, 2015.
6. Co-Organizer/Chair, Track Combined Energy Cycles, CHP & CCHP, IMECE, ASME, Montreal, Canada, 2014.
7. Co-Organizer, Track Combined Energy Cycles, CHP & CCHP, ASME Energy Sustainability Conference, Boston, MA, 2014.
8. Vice Chair, Technical Committee on Renewable Energy and Energy Conversion (TC-REEC), ASME, 2013-2014.
9. Member, Thermal Energy Storage (TES) Task Force, ASME, 2012 to Present.
10. Member, Energy-Water Nexus (EWN) Interdisciplinary Council, ASME, 2011 to Present.
11. Reviewer, Session Energy-Water Nexus Topic, IMECE, ASME, Montreal, Canada, 2014.
12. Co-Organizer/Co-Chair, Session Energy-Water Nexus, IMECE, ASME, San Diego, CA, 2013.

13. Peer Reviewer for the following journals: Energy (SCI IF=4.52), International Journal of Heat and Mass Transfer (SCI IF=2.422), AIChE Journal (SCI IF=2.03), Powder Technology (SCI IF=2.009), International Communications in Heat and Mass Transfer (SCIE IF=1.645).

State, Out-of-State, and Federal Services

1. SURF Review Committee, Arkansas Department of Higher Education, 2013 to Present.
2. 2018 Arkansas Academy of Science Annual Meeting Organizing Committee, 2017-2018.
3. Funding Proposal Reviewer, Maryland Industrial Partnerships Program, Maryland Technology Enterprise Institute, 2016 to Present.
4. Peer Reviewer, ASSET Undergraduate Research Internship Program, 2014-2015.
5. Peer Reviewer, Scientific Proposals and the Ralph Powe Award Program, ORAU (Oak Ridge Associated Universities), 2012 to Present.
6. Peer Reviewer, Louisiana Board of Regents, 2013.
7. Research Mentor, Arkansas LSAMP Students including ASU and Pulaski Tech College, 2011 to 2018.
8. Technical Judge, ASTA Arkansas Solar Design Competition, 2012.
9. Field Test Service at PSEG Coal Power Plant, CT, August in 2007.

University Services

1. Chair, University Faculty Handbook Committee, Arkansas State University, 2017-Present.
2. Chair, Faculty Handbook Task Force, 2018-Present.
3. Member, Dean of Engineering and Computer Science Search Committee, 2018.
4. Member, Graduate School Task Force, 2018-2019.
5. Evaluation Judge for Graduate and Undergraduate Students, Create Astate Symposium, Arkansas State University, 2011-Present.
6. MOU with Pukyong National University (PKNU) in South Korea for Exchange of Students and Scholars in Engineering, 2017-Present.
7. Engineering Representative, Graduate Council Committee, Arkansas State University, 2017-2018.
8. University Teaching and Learning Advisory Committee, Arkansas State University, 2016-2017.
9. Speech on behalf of the faculty, Fall 2016 Commencement, Convocation Center, Arkansas State University, Dec. 10th, 2016.
10. Chancellor's Taskforce on Cost Containment, Arkansas State University, 2015-2016.
11. ITTC Faculty Center Advisory Committee, Arkansas State University, 2015-2018.
12. University Faculty Handbook Committee, Arkansas State University, 2015-2017.

College Services

1. Chair, ME Faculty Search Committee, Arkansas State University, 2020-2021.
2. Member, ADHE Program Review Committee, Arkansas State University, 2021-2022.
3. Member, CoECS Graduate Curriculum Committee, 2019-Present.
4. Chair, Industrial Relations Committee, College of Engineering, 2014-Present.
5. Principal Advisor for ASU ASHRAE Student Chapter, 2011 to Present.
6. Member, College Equity Committee, College of Engineering and Computer Science, 2020.
7. College PRT (Promotion Retention and Tenure) Committee, Arkansas State University, 2016-2019.
8. Honors and Awards Committee, 2017-Present.
9. Chair, Graduate Committee, Engineering, Arkansas State University, 2017-2019.
10. Member, College Faculty Achievement Award Committee, ASU, 2018-2019.

11. Chair, ME Faculty Search Committee, Arkansas State University, 2016-2017.
12. Chair, ABET Outcome No. 10 Assessment Committee, ASU, 2014-2015.
13. Associate Dean of Engineering Search Committee, Arkansas State University, 2017.
14. Principal Advisor for ASU ASME Student Chapter, 2012 to 2014.

Consulting Services for Communities

1. Consulting Service in Collaboration with Dr. Roy McCann at University of Arkansas to Develop 400 MW Renewable Power Plant in the Forrest City, Arkansas, 2014 - Present.
2. Consulting Service for Product Development, Mobility Lift Systems, Arkansas, 2013 - Present.

Development of Programs and Courses

1. Bulletin Change, ME 4593 HVAC, Arkansas State University, 2015.
2. Bulletin Change, ME 4583 Energy Conversion, Arkansas State University, 2015.
3. Bulletin Change, ME 4553 Heat Transfer, Arkansas State University, 2015.
4. Bulletin Change, ME 4503 Fluid and Thermal Energy Systems, Arkansas State University, 2015.
5. Program Development, MSEngr (Master of Science in Engineering) Program, Arkansas State University, 2012.
6. Course Development, ENGR 6013 Advanced Experimental Methods, Arkansas State University, 2012.
7. Course Development, ENGR 6153 Advanced Fluid Mechanics, Arkansas State University, 2012.
8. Course Development, ENGR 6143 Advanced Heat and Mass Transfer, Arkansas State University, 2012.

Research Mentoring and Advisement (Accumulated Number of Students: 22)

1. Ph.D. Student, Sandeep Aryal, EVS, ASU, 2020-Present.
2. Ph.D. Student, Santosh Tamang, EVS, ASU, 2020-Present.
3. Ph.D. Student, Minsoo Kim, Sungkyunkwan University, 2019.
4. Graduate Research Assistant and Post-Graduate Research Scientist, Md. Saifujjaman, ME, ASU, 2017-2019.
5. Graduate Research Assistant and Post-Graduate Research Scientist, Asraf Siddiquee, ME, ASU, 2015-2019.
6. Undergraduate Research Assistant, Dohyeon Kim, ME, ASU, Fall 2019.
7. Graduate Research Assistant and Post-Graduate Research Scientist, Sandeep Aryal, ME, ASU, 2016-2019.
8. Graduate Research Assistant and Post-Graduate Research Scientist, Santosh Tamang, ME, ASU, 2016-2019.
9. Graduate Research Assistant, Noman Sadi, ME, ASU, 2015-2017.
10. Graduate Research Assistant, Rabiul Islam, ME, ASU, 2014-2017.
11. Ark-LSAMP Research Internship, Donavon Tony, ME, ASU, 2011-2018.
12. Undergrad Research Assistant, Cameron Nolen, ME, ASU, 2014-2017.
13. Undergrad Research Assistant, Benjamin Eckerson, ME, ASU, 2013-2015.
14. Undergrad Research Assistant, Ryan Listenbee, ME, ASU, 2013-2014.
15. Graduate Research Assistant, Shiva Ananthoju, ME, ASU, 2012-2013.
16. Ark-LSAMP Research Internship, LaMarcus Cole, ME, ASU, 2013-2014.
17. Undergrad Research Assistant, John Koch, ME, ASU, 2012-2013.

Curriculum Vitae: Dr. Kwangkook (David) Jeong, Ph.D., P.E., ASME Fellow

18. Undergrad Research Assistant, Manpreet Bham, ME, ASU, 2011-2013.
19. Undergrad Research Assistant, Michael Joe Earls, ME, ASU, 2011-2012.
20. Ark-LSAMP Research Internship, D'Andre Anderson, ME, ASU, Fall 2011.
21. Ark-LSAMP Research Internship, Vyunyai Moore, Pulaski Tech College, Summer 2011.
22. Ark-LSAMP Research Internship, Charles Jones, Pulaski Tech College, Summer 2011.