Lane Carasik, Ph.D.

Assistant Professor, Department of Mechanical and Nuclear Engineering at VCU College of Engineering

Richmond, VA, US

Dr. Carasik researches computational and experimental thermal hydraulics and is the Director of the FAST Research Group.

Biography

Dr. Lane Carasik (He/Him/His) is an Assistant Professor within the Department of Mechanical and Nuclear Engineering at Virginia Commonwealth University. Dr. Carasik is also the Director of the Fluids in Advanced Systems and Technology (FAST) research group that focuses on thermal hydraulics research in advanced energy systems including nuclear fusion/fission and concentrated solar power. In August 2023, Dr. Carasik was awarded a Department of Energy Office of Science Early Career Research Program award through the Fusion Energy Science program. Between January 2021 to June 2021, he was the Director of the VCU High Performance Research Computing core facility as a part-time administrative role providing strategic leadership for growing high performance computing needs. Prior to joining VCU, Dr. Carasik was a Nuclear Thermal Fluids Engineer at Ultra Safe Nuclear Corporation and before that, Kairos Power as a CFD & Thermal Fluids Engineer. Dr. Carasik is an Associate Editor of the American Nuclear Society Fusion Science and Technology Journal as well as the current chair of the Diversity and Inclusion in ANS committee, an External Affairs Committee member, and a Thermal Hydraulics Division Executive Committee member. Dr. Carasik has a Ph.D. in Nuclear Engineering from Texas A&M University and a B.S. in Nuclear Engineering from the University of Tennessee, Knoxville. Lastly, he was a co-recipient of the 2020 ASME FED Moody and 2018 ASME CFD Best Paper Awards for work completed while employed at Kairos Power on a DOE GAIN Voucher.

Industry Expertise

Aerospace, Energy, Nuclear

Areas of Expertise

Experimental Thermal-Fluids, Thermal-Fluids Design, Verification and Validation, Computational Fluid Dynamics, Additive Manufacturing, Clean Energy

Affiliations

American Nuclear Society (ANS), Out to Innovate, Out in Science, Technology, Engineering, and Mathematics (oSTEM), American Society of Mechanical Engineers (ASME)

Education

Texas A&M University
Doctor of Philosophy Nuclear Engineering

University of Tennessee, Knoxville
Bachelors of Science Nuclear Engineering

Middle Georgia State University
Associates of Science Mathematics

Accomplishments

2023 Department of Energy Office of Science Early Career Research Program
"The 2023 Early Career Research Program awardees represent 47 universities and 12 DOE National Laboratories across the country. These awards are a part of the DOE?s long-standing efforts to develop the next generation of STEM leaders to solidify America?s role as the driver of science and innovation around the world." - https://science.osti.gov/-/media/early-career/pdf/FY-2023-DOE-SC-Early-Career-Research-Program-Abstracts.pdf

2022 ANS Thermal Hydraulics Division Excellence in Review Award
Excellence in Review Award has been established to recognize THD scholars who have performed exceptional review service to our Division and for exceptional review qualities. An awardee must have provided outstanding general review services to the division for either ANS meeting submissions or THD sponsored or co-sponsored meetings.

2022 ANS Social Responsibility in the Nuclear Community Award
"Lane Carasik, Ph.D., assistant professor of mechanical and nuclear engineering in Virginia Commonwealth University?s College of Engineering, has received the Social Responsibility in the Nuclear Community Award from the American Nuclear Society. Carasik was co-honored recently with Kalin Kiesling, Ph.D., from ANL, and Lisa Marshall, from NCSU." - https://news.vcu.edu/article/2023/04/vcus-lane-carasik-honored-by-american-nuclear-society-for-diversity-efforts

VCU Burnside-Watstein LGBTQIA Award, 2021
16th annual Burnside Watstein LGBTQIA Awards. The awards were created by Equality VCU at a time when the contributions of the LGBTQIA+ community and its allies often went unrecognized. They were named for Chris Burnside and Sarah Watstein, former co-chairs of Equality VCU and outspoken voices for diversity and inclusivity. - https://news.vcu.edu/article/2021/10/two-vcu-students-and-two-staff-members-receive-burnside-watstein-awards

2020 ASME Lewis F. Moody Award
Awarded for the paper, "Calculation of Friction Factors and Nusselt Numbers for Twisted Elliptical Tube Heat Exchangers using NEK5000" (FEDSM2018-83477) for being an "Outstanding original paper useful to the practice of mechanical engineering"

ASME Computational Fluid Dynamics Technical Committee Best Paper Award 2018
Awarded for the paper, "FEDSM2018-83477 Calculation of Friction Factors and Nusselts Numbers for Twisted Elliptical Tube Heat Exchangers Using NEK5000" by D. R. Shaver, L. B Carasik, E. Merzari, N. Salpeter, and E. Blandford

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