DR. KELLY SENECAL RECEIVES SAE JOHN JOHNSON DIESEL ENGINE RESEARCH MEDAL

MADISON, WI, USA, April 18, 2024 /EINPresswire.com/ -- Dr. Kelly Senecal, Co-Founder of Convergent Science, was awarded the SAE John Johnson Diesel Engine Research Medal at the 2024 WCX World Congress Experience. The Medal recognizes prominent leaders in the automotive community who have contributed significantly to the advancement of diesel engine technology.


Dr. Kelly Senecal, Co-Founder of Convergent Science

Senecal is a co-founder and owner of Convergent Science, a leading computational fluid dynamics (CFD) company that develops and supports CONVERGE CFD software. Senecal was one of the original creators of CONVERGE, and he implemented the initial spray and combustion models used for diesel engine simulations into the software. He went on to improve these models, increasing their accuracy and reducing their computational cost. CONVERGE is used widely by industry, government organizations, and academic institutions around the world to model diesel engines, among many other applications.

Throughout his career, Senecal has advanced the state-of-the-art in diesel engine simulations, pioneering the use of detailed chemistry as a direct combustion model, developing and implementing new Lagrangian spray models, and demonstrating grid convergence in Lagrangian diesel spray simulations for both RANS and LES. He developed best practices for RANS and LES diesel engine simulations that enabled manufacturers to adopt analysis-led design processes, resulting in significant cost savings. In addition, Senecal introduced cutting-edge genetic algorithm (GA) optimization techniques for diesel engine design and established a framework to couple GA optimization with CFD simulations. This work was recognized by international news outlets, including The New York Times and England's The Sunday Times.

Senecal is the co-founder and director of the Computational Chemistry Consortium (C3), which brings together industry, government, and academic partners to develop and improve chemical

kinetic mechanisms with the goal of advancing sustainable propulsion technology. The first version of the C3 mechanism, released in December 2021, includes chemistry to accurately model the combustion and emissions of compression ignition engines.

A longtime member of SAE, Senecal has published dozens of SAE journal articles, chaired many SAE technical conference sessions, authored several SAE Update articles, and given keynote addresses at numerous SAE events. Furthermore, he published his award-winning book, Racing Toward Zero: The Untold Story of Driving Green, through SAE International. In 2018, Senecal was elected an SAE Fellow, SAE International's highest grade of membership.

"I am very honored to receive the SAE John Johnson Diesel Engine Research Medal," says Senecal. "Anyone who knows me knows that I am passionate about engines, and much of my career has been dedicated to creating tools to improve them. This medal is particularly meaningful to me because I started my career working on diesel engines back in graduate school. It's incredible to see how that work, and the work of brilliant engineers around the world, is continuing to push the bounds of innovation for diesel engine technology. I look forward to carrying on my advocacy for diesel engine research—there's still a lot of progress to be made."

###

About Convergent Science
Headquartered in Madison, Wisconsin, Convergent Science is a global leader in computational fluid dynamics (CFD) software. Our mission is to enable our customers to perform revolutionary CFD simulations by creating accurate, versatile, user-friendly software and providing unparalleled support.

Our flagship product, CONVERGE, is an innovative CFD software that eliminates the grid generation bottleneck through autonomous meshing and features a suite of advanced physical models, fully coupled detailed chemistry, and the ability to easily accommodate moving geometries. CONVERGE is revolutionizing the CFD industry and shifting the paradigm toward predictive CFD.

For more information about Convergent Science, please visit convergecfd.com.

Tiffany Cook
Convergent Science
+ +1 2108464034
email us here
Visit us on social media:
Facebook
Twitter
LinkedIn

YouTube