



## **Executive Committee in the Spotlight**

### **Dr. Stephen A. Ciatti Chair Person**



In an effort to make sure our members know our executive committee, over the coming months we will be taking the time to spotlight each member of the executive committee. This month, we will start with getting to know our current Chair, Dr. Stephen A. Ciatti.

Dr. Ciatti began his education at the University of Minnesota – Twin Cities, where he received his Bachelor of Science in Mechanical Engineering. During his undergraduate work, he interned for Northwest Airlines for three years as a powerplant engineer responsible for A320 aircraft engine monitoring and repair. After completing his undergraduate degree, he took a job with Burlington Northern Railroad as a Locomotive Maintenance Supervisor, where he remained for three years.

This was followed by a return to graduate school at the University of Wisconsin – Madison Engine Research Center, where he received his M.S.M.E under Professor Jay K. Martin, with a thesis titled, “Spark Ignition Effects on Two-Stroke Cyclic Variability.” Subsequently, he received his Ph.D. in Mechanical Engineering, also

from UW-Madison ERC, under Professor David E. Foster, with a dissertation titled, “Determination of Diesel Injector Nozzle Characteristics Using 2-Color Optical Pyrometry .”

Since 2001, Dr. Ciatti has been a Staff Mechanical Engineer at Argonne National Laboratory in Argonne, IL in the Center for Transportation Research where his work is currently focused on investigating diesel and low temperature combustion characteristics using endoscopic in-cylinder imaging. Recently, he has been focusing on LTC operation of a compression ignition GM 1.9L Diesel engine being fueled with low cetane fuels, such as gasoline and gasoline blends. This has resulted in NO<sub>x</sub> emissions as low as a 500% reduction over comparable diesel operation, while maintain diesel-like efficiencies (40+%). His work was recently featured in the ASME magazine (<http://files.asme.org/Divisions/ICE/33204.pdf>).

He has over 24 publications, multiple awards, and has given 14 invited talks.

In addition to his research work at Argonne, he is also an adjunct associate professor of Mechanical Engineer at the University of Illinois – Chicago, working to advise and support graduate students. He is active in multiple professional societies including the Combustion Institute, SAE, ILASS, and is a member of the editorial board of the Journal for Automotive Engineering.

Dr. Ciatti has been a member of ASME for 9 years, and has been involved with the IC Engines Division for 9 years. He has been an Executive Committee member since 2007, and became Chair recently in July 2012. In his time as an ExCom member, he has organized multiple conferences, including the 2009 Fall Technical Conference in Switzerland, and the 2007 Spring Technical Conference in Chicago, IL. When asked to describe his interest and vision for the ASME IC Engines Division, Dr. Ciatti had this to say, “ASME IC Engine Division is an organization that provides the highest quality technical content on engine research and design. Taking an active role in participating in ICED has allowed me to make a significant contribution to the engine community, especially in assisting young engineers start their career in a critically important field for the 21<sup>st</sup> century. Energy and transportation are global issues as resources become scarce and environmental concerns threaten our ecology. Mechanical engineers are playing a pivotal role in addressing and solving these problems; ASME has the global reach and reputation to allow for maximum impact to accomplish these goals.”

Keep following us as we continue to spotlight our Executive Committee members over the coming months!