

Pierre Q. Gauthier, PhD, P.Eng., RAE, is a combustion scientist and applied mathematician specializing in high-fidelity CFD for gas-turbine propulsion and low-emissions energy systems, with 30+ years of combined industrial and academic experience.

He retired in 2025 from Siemens Canada, where he served as Senior Combustion Key Expert and Global Technical Focal Point for Combustion CFD, after earlier technical leadership roles at Rolls-Royce Energy (Montreal), CAE Electronics, and Pratt & Whitney Canada. His work has included full combustor simulation strategy, model validation, emissions prediction, and deployment of advanced numerical methods in safety- and performance-critical environments.

In parallel, Dr. Gauthier has maintained an active academic career. At Cranfield University (UK), he has held a Royal Academy of Engineering Visiting Professorship (since 2018) in low-emissions combustion system modelling, and he has supervised and co-supervised MSc and PhD research in hydrogen micromix combustion, thermoacoustics, LES/RANS modelling, spray physics, and jets-in-crossflow dynamics. He is also an Affiliate Associate Professor and long-standing lecturer at Concordia University, teaching advanced courses in gas dynamics, combustion, aerodynamics, fluid mechanics, and applied mathematics.

His research spans turbulent premixed and partially premixed combustion, presumed-PDF modelling, LES of reacting flows, hydrogen micromix injectors, flame transfer functions, thermoacoustic stability, and high-pressure spray modelling. He has published in venues including ASME Turbo Expo, ISABE, the Combustion Institute, and journals in computational physics and atomization science.

Honours include the ASME IGTI Outstanding Service Award (2023), Best Paper Award at ASME Turbo Expo (2022), and Concordia University's Teaching Excellence Award (2007). He has served as Chair of the ASME Hydrogen, Biomass & Alternate Fuels Committee.

Today, his work focuses on improving predictive credibility for hydrogen combustion systems by integrating high-fidelity CFD with experimental validation in support of low-carbon propulsion and energy technologies.