

**Dr. Narayanan Menon Komerath**

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Professor Komerath retired on 1 January 2020 after 41 years at Georgia Institute of Technology, the last 25 as Professor in the Daniel Guggenheim School of Aerospace Engineering.

**Summary Contributions In 4 Quadrants Of Scholarship.**

	<p><b>Teaching:</b> 36 years, over 3500 students. ~ 300 UG mentees. 73MS, 21 PhDs: 4 Outstanding PhD awards (top 1% of GT), 7 nominations (top 10%). 36 peer-reviewed papers on Teaching. First NSF Leadership in Lab Dev. grant in Engg, 1992. Designed Fluids &amp; Propulsion curricula, '96. Freshman Design-Centered Introduction to AE; Boeing Welliver Fellow, 2014. PI, NSF CSEM scholarship at GT, 2000-09. G.I.A.N. course on micro renewables, 2016. ASEE/AIAA 2015 John Leland Atwood Award for Excellence in Aerospace Education.</p>	<p><b>Discovery:</b> First measurements of pressure-velocity correlation in turbulent pipe flow and in premixed turbulent flames (1982). Rotor tip vortex structure, vortex-surface collisions &amp; rotor/airframe interaction (1980s). Twin-tail buffeting and forebody instability; Large area velocimetry (1990s), Acoustic Shaping, Acoustic/e-mag force field analogy (2000s), Multi-winglets; Unsteady rotorcraft ground effect (2006), Hub Drag (2013), Bluff-body aerodynamics (2013-), Slung load divergence (2014-), Hypersonic inlet aerothermo elasticity (USAF Fellow 2014). 3D rotor dynamic stall (2010-15), Reverse flow (2017) and low Reynolds number rotor aerodynamics (2019).</p>
<p><b>Application and Innovation:</b> 100 sponsored projects across govt and industry. 4 DURIP Awards. 30 years Director, JJH Wind Tunnel (near-100% external funding), 5 US Patents (spatial correlation velocimetry, wind driven dynamic manipulator, stagnation point actuator, Glitter Belt high altitude reflectors). Fellow, NASA Institute of Advanced Concepts 2002-: Ph1 &amp;2 projects on Force Field Tailoring. Space Power Grid. Micro Renewable Energy Laboratory 2006-EXTROVERT cross-discipline innovation demonstration (2010-). Single Teacher Schools PV system installations 2016-17. 2<sup>nd</sup> place, NSF Innovation national finals ("Team TOUCHDOWN"), 2018.</p>	<p><b>Integration:</b> 450+ publications, 220+ peer reviewed. Aerospace Digital Library (1998). Workshops on Intro to AE, Amrita U (2003), GE J.E.W. Research Center 2004. Chair, ASEE AE Division (2010) &amp; AHS Aerodynamics (2014). Sam Nunn Senior Security Fellow, CISTP 2005-. Organized three US Army Workshops 1990-2010; "Urj Svavalambi" Smart Village Roadmap for energy self-reliance, 2017; 2018 WAVES International Conference; 1<sup>st</sup> Abdul Kalam Conference, 2019. Founding Board member, NASA/CSM 8<sup>th</sup> Continent Chamber of Commerce, 2006. CEO, SCV Inc, 1994-2019. Global Indian Business Council, 2014 -. Director Smart Village Initiative, Taksha Institute, 2017-.</p>	