ERIC LOTH

Rolls-Royce Professor
Mechanical and Aerospace Engineering
University of Virginia
Fluid Research and Innovation Laboratory
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ENGINEERING EDUCATION

University of Michigan, Ph.D. Aerospace Engineering (1985–1988)
Pennsylvania State University, M.S. Aerospace Engineering (1984–1985)
West Virginia University, B.S. Aerospace Engineering (1979–1983)

ADMINSTRATIVE TRAINING

Harvard Business School, Executive Education, Authentic Leadership (Summer 2019)
University of Virginia, Provost's Leadership in Academic Matters (Fall 2019)

EMPLOYMENT

University of Virginia Mechanical & Aerospace Engineering, Charlottesville, VA
Professor (2010–present)
Department Chair (2015–2022)
Associate Chair (2010–2015)
University of Illinois at Urbana-Champaign, Aerospace Engineering, Urbana IL
Professor and Willett Faculty Scholar (2002–2009)
Associate Head (2008–2009)
Associate Professor (1995–2002)
Assistant Professor (1990–1995)
Naval Research Lab, Lab for Comp. Physics & Fluid Dynamics, Washington D.C.
Aerospace Engineer (1989–1990)
Berkeley Research Associates, Springfield, VA
Staff Scientist (1988–1989)

AFFILIATE APPOINTMENTS

Environmental Institute, University of Virginia (2021- present)
LinkLab, University of Virginia (2020 - present)
National Institute of Aerospace, Liaison (2018 - 2021)
Governor of Virginia, Aerospace Advisory Panel (2011–2014)
Cambridge University (UK), Visiting Scholar, Engr. Dept. (Fall 2004, Spring 2011)
National Energy Technology Lab, Summer Faculty, Morgantown WV (2002)
Brown University, Visiting Associate Professor (Fall 1997 sabbatical)
University of California at San Diego, Visiting Associate Prof. (Fall 1997 sabbatical)
Molten Metal Technology, Sr. Res. Engineer, Waltham MA (Summers 1996 & 1997)
Naval Research Lab, Senior Fellow & ASEE Summer Faculty, Wash., D.C. (1995)
Arnold Engineering and Development Center, AFOSR Summer Faculty, TN (1993)
Science Applications Intl. Corp., Sr. Research Engineer, VA (Summers 1990, 1991)

Index for CV:

MEDIA COVERAGE SUMMARY:

More than 50 media articles including: Scientific American, New York Times, MIT Technology Review, USA Today, CNBC, Daily Mail, Los Angeles Times, Mechanical Engineering and The Cool Down

Journal Front Covers: Energy Solutions (see right), Wind Energy, and Journal of Renewable and Sustainable Energy

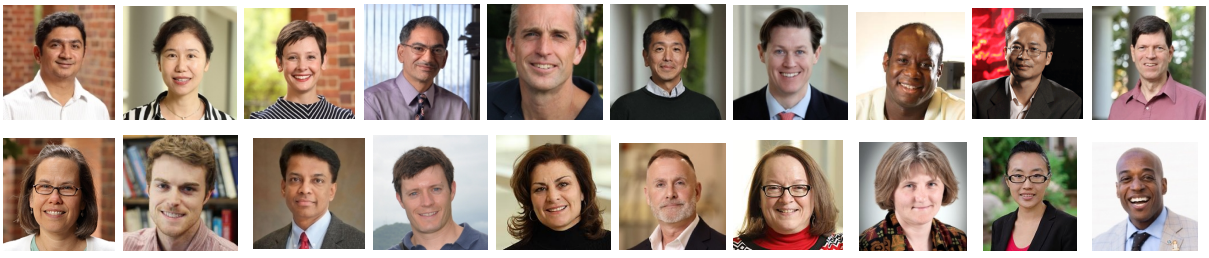
Listed in Popular Science (June 2015) as one of the 12 scientists who are "The Brilliant Minds Behind the New Energy Revolution"

ADMINISTRATIVE TEAM-BASED HIGHLIGHTS

While MAE Department Chair (2015-2022)

MAE Faculty Highlights

- Tenured faculty reached new levels of productivity
    - Google Scholar H-index average > 33.8 (highest ever)
    - External research funding per faculty >$737K/yr (highest ever)
    - Research proposal value per faculty >$3,902K/yr (highest ever)
    - PhD students advised per faculty > 6.3 (highest ever)
- MAE Full Professors who are national fellows now 80% (highest ever)
- MAE faculty award firsts:
    - Presidential Early Career Award for Scientists and Engineers (Hopkins)
    - National Academy of Engineers (West)
    - National Academy of Inventors (Gillies)
    - DARPA Young Faculty Award (Balachandran, Dedic)
    - NASA Early Career Award (Dedic)
- MAE faculty increased cross-disciplinary activities with first ever joint appointments with Chemical Engineering, Electrical & Computer Engineering, Engineering & Society, Environmental & Systems Engineering, and Orthopedics
- MAE brought in 20 new faculty: Balachandran, Chang, Dedic, Esfarjani, Fittro, Furukawa, Gerling, Green, Ma, Momot, Opila, Quinn, Ramasubramanian, Reidenbach, Reimers, Salzar, Schnipke, Smith, Sun, and Williams (below)



MAE Curricula and Graduate Programs

- Major revisions of our BS and PhD curricula (largest in decades) with several new courses to improve theory/experiment/computation integration increased flexibility
- MAE PhD enrollment per year grew by 174% with 450% increase in women
- Partnered with UVA's School of Commerce (#7 in USN&WR) to help increase MAE Master of Engineering enrollment by 420% in 3 years
- Restructured Master of Engineering curricula to include the Case Study method of the Harvard Business School (HBS) with one of UVA's greatest entrepreneurs

MAE Rankings

- #1 USN&WR Grad Programs among public MAE departments with 25 or less tenure/tenure-track faculty
- #6 Online Mechanical Engineering Degree (Masters Programs)
- #8 Online Mechanical Engineering Degree (Best Colleges)
- #12 Aeronautical Engineering Best Engineering Colleges

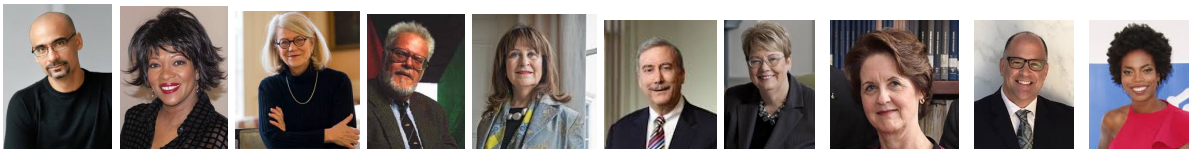
…continued: While MAE Department Chair (2015-2022)

MAE Diversity, Outreach, Infrastructure and Finances

- Developed Diversity, Inclusion and Excellence Task Forces and a DEI Council for faculty hiring, annual faculty reporting, student recruiting, and department culture
- Hosted Department Heads from: Berkeley, Carnegie Melon, Duke, Georgia Tech, Harvard, Illinois, Johns Hopkins, Michigan, MIT, Northwestern, Penn, Texas, and Yale as well as several members of National Academy of Engineering
- Formed MAE Academy of Distinguished Alumni and hired Advancement Officer and a Communications Director to improve giving and outreach
- Increased MAE departmental alumni giving (by 262%)
- Developed advancement plan that resulted in first MAE named laboratory
- MAE was a key partner to secure $14.8M in new internal funds for the LinkLab and Multifunctional Material Integrations for infrastructure and equipment
- MAE financial health strongly improved (eliminated over $1.1M of inherited debt)
- MAE undergraduate laboratories and 3-D printing capabilities upgraded to state-of-the-art equipment, computers and lab space infrastructure with more than $1.2M in funds from state, institutional, and industry contributed funds
- Developed and funded broad graduate MAE fellowship program for new Ph.D. students focused on excellence and diversity with more than $1M in awards
- Increased portion of the MAE overhead research returned to faculty (as discretionary funds) from 16.67% to 50%

While Principal (Director) of the International Residential College (2012-2017)

- Instituted new programs which increased incoming student applicants by 310% (largest ever increase and number of applications in IRC history)
- Worked to secure $13M in Building and Infrastructure Improvements (2017-2018)
- Developed proposal and worked with President's Office to rename Lewis House to Yen House (dedication ceremony featured UVA's President Sullivan)
- Invited and Hosted Several Internationally Distinguished Guests (below):
    - Junot Diaz (Pulitzer Prize Winner)
    - Rita Dove (US Poet Laureate)
    - Diana Eck (National Humanities Medal Awardee)
    - Nat Howell (Former US Ambassador)
    - Helena Kennedy (Baroness & Member of U.K. House of Lords)
    - Larry Sabato (3-time Emmy Award Winner)
    - Theresa Sullivan (UVA President)
    - Katherine Thornton (Hall of Fame NASA Astronaut)
    - Jerry White (Nobel Prize Recipient)
    - Sasheer Zamata (Saturday Night Live TV Star)



RESEARCH HIGHLIGHTS

EXTERNAL RESEARCH FUNDING

Loth Research Expenditures for last 20 years ~ **$700K/year**

GRADUATE ADVISING

Graduated **30** Ph.D. dissertation students, serving as the primary advisor
Graduated **33** M.S. thesis students, serving as the primary advisor
2024 research group of 5 PhD students & 1 Post-Doc & 1 Research Scientist:
(Branch, Fletcher, Jennings, Jeong, Rodriguez) & (Asare-Addo) & (Tetteh)



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PUBLICATIONS

Journal Papers: **>200**
Conference Papers: **> 200**
Book Chapters: **7**
Patents: **10**
h-Index: **54** and Citations: **> 11,000** (Google Scholar)
2024 Top Cited Scientists for "Aerospace & Aeronautics" (Elsevier, Stanford)
Loth Career Publication Impact Ranking: **#45** worldwide, **#36** USA
Loth Single Year Publication Impact Ranking: **#21** worldwide, **#18** for USA

UNIVERSITY and RESEARCH LAB INVITED TALKS (summary)

Invited University Talks: **>40,** including Brown, Carnegie Melon, Cambridge, Duke, Harvard (twice), Oxford, MIT (twice), Penn, and Princeton
Invited National Lab Talks: **>10**, including NASA Glenn Research Center, National Energy Technology Lab, National Institute of Aerospace, National Renewable Energy Lab (thrice), Naval Research Lab, Sandia National Labs

RECENT INVITED TALKS (last 7 years)

American Society of Thermal & Fluids Engineering, March 2025
Virginia Ocean Plan Energy and Infrastructure Workgroup Meeting, 2024
Blades USA, February 2024
National Wind Technology Center, National Renewable Energy Laboratory, April 2023
Institute of Ocean Energy, Saga and Kyushu Universities, March 2023
Department of Wind and Energy Systems, Technical University of Denmark, Sept. 2022
Wind Energy Systems Workshop, National Renewable Energy Laboratory, August 2022
Energy Transitions Panel, Austrian Academy of Sciences, March 2022
Barnes McCormick Memorial Lecture, Penn State University, March 2022
Energy Transitions Panel, Austrian Academy of Sciences, March 2022
Keynote for 13th International Conference on Applied Energy, Nov. 2021
World Energy Storage Conference, Chinese Academy of Sciences, June 2021
Host of National Academy of Engineering Panel on Energy Research, IMECE, Nov. 2020
Keynote Speaker at MIT A+B Applied Energy Symposium, May 2019
Host of National Academy of Engineering Panel on Aerospace Research, Sci Tech, Jan 2018

ADMNISTRATIVE ACTIVITIES

At National/State Level

National Science Foundation Review Panel (Oct. 2023, Feb. 2024, Nov. 2024)
TIG Review Panel for Research for Energy Innovation (Aug. 2024)
Academic Program Review Committee, University of Arizona (March, 2023)
Chair of ASME Mech. Engr. Department Heads Exec. Committee (2020– 2021)
Chair of AIAA Aerospace Department Chair Association (2017–2019)
Chair of Southeast Mechanical Engineering Chairs & Heads Association (2017–2019)
Aerospace Advisory Panel for the Governor of Virginia (2011–2014)

At University of Virginia (2010–present)

Advising Advisors Committee, Mech & Aero Engr. Dept. (2024-2025)
Promotion and Tenure Committee, School of Engineering (2023-2024)
Chair of Mechanical and Aerospace Engineering Dept. (2015–2022)
University of Virginia Academic Leaders Program (2019)
Chair of School of Engineering Department Chairs Meetings (2019–2020)
Chair of School of Engineering Task Force for Effective Practices (2019–2020)
Principal of International Residential College (2013–2018)
Chair of School of Engineering's Leadership Council (2016–2017)
Chair of Search Committee for Assoc. Dean for Engr Finance & Ops (2016–2017)
Member of Search Committee for Asst Vice President for Research Admin. (2015)
School of Engineering Promotion and Tenure Committee (2013–2015)
MAE Graduate Studies Committee (2012–2015)
Associate Chair of Aerospace Engineering Dept. (2010–2015)
Chair, MAE Tenure-Track Faculty Search Committee (2010–2013)
Chair of SEAS Faculty Hiring Strategic Plan (2011–2012)
School of Engineering Promotion & Tenure Committee (2010–2011)

At University of Illinois (from 2000-2009)

Associate Head of Undergraduate Studies for AE Dept. (2008–2009)
Faculty Search Committee of AE Department (1999-2006, Chair in 2007–2008)
College of Engineering Executive Committee (2002–2008)
College of Engineering Research and Planning Committee (2004–2009)
Chair of AAE Department Planning Committee (2002–2009)
Chair of AAE Department Graduate Policy Committee (2002–2009)
Search Committee for Head of Computer Science Department (2000–2001)
Chair of AAE Department Faculty Meetings (1999–2001)
Chair of College of Engineering Awards Committee (1999–2001)
AAE Department Advisory Committee (2000–2002, 2005–2006)

AWARDS and HONORS

While at the University of Virginia (2010–present)

Outstanding Academic Title, Choice, American Library Association (2024)
Barnes McCormick Memorial Lecture, Penn State University (2022)
Keynote for 13th International Conference on Applied Energy (2021)
MIT/Harvard Applied Energy Symposium, Intl. Scientific Advisory Committee (2021)
School of Engineering Research Innovation Award (2019)
Fellow of AIAA (2017–present)
ARPA-E Congressional Showcase in Washington DC (March, 2017)
Popular Science's "Brilliant Minds of New Energy Revolution" (2015)
Rolls-Royce Commonwealth Professor, University of Virginia (2014-present)
NASA Patent Application Award (2012)
NSF Innovation Corps Commemoration Ceremony (2012 at NSF HQ)
NASA Group Achievement Award "Large-Scale Low-Boom Supersonic Inlet" (2011)
Yip Fellow, Cambridge University, U.K. Easter Term (2011)

While at the University of Illinois & Naval Research Laboratory (1989- 2010)

Scientific Committee, International Conference of Multiphase Flow (2009–2010)
Fellow of ASME (2008–present)
Academy of Distinguished Alumni of Aerospace Engineering at WVU (2008–)
UIUC List of Teachers Ranked Excellent (1990, '91, '92, '93, '95, '97, '02, '05)
Engineering Council Award for Excellence in Advising, UIUC ('07)
Willett Faculty Scholar, UIUC College of Engineering (2002–2010)
Faculty Fellow, National Center for Supercomputing Applications (2000, 2001, 2002)
NASA "Revolutionize Aviation" Team Award (2001)
Associate Fellow of AIAA (2000–2017)
Senior Fellow, Naval Research Lab, Washington D.C. (1995)
Teacher of the Year, AAE Department, UIUC (1994)
UIUC Campus Research Board Award (1990, 1994)
Finalist, UIUC Vice-Chancellor Teaching Scholars (1994)
UIUC College of Engineering Advisors List, for advising excellence (1993)
UIUC International Paper Co. Undergraduate Instructional Support Award (1991)
National Science Foundation Research Initiation Award (1990)
Department of Navy Exceptional Performance Award (1989)

RESEARCH FUNDING

Current

1. E. Loth (PI) and B. Etienne & Mahoney, C. (Co-PIs) "Super-rated Wind Turbines for Offshore Wind Energy" UVA Explore-2-Build Clean Energy Initiative, $300,000; June 2024 – May 2026.
2. E. Loth "Impeller-based Inertial Particle Separator"; Honeywell; $244,991; Sept. 2023 – May 2025.
3. Mahoney, C. (PI) and T. Denckla-Cobb, B. Etienne, E. Loth & W. Shobe (Co-PIs) "Appalachian Renewable Energy & Resilience Climate Collaborative" UVA Environmental Institute, $1,500,000; October 2023 – September 2026.
4. E. Loth "Offshore Wind Energy Co-Design Toolkit for Frontline Communities" Sandia National Labs, $90,000; April 2024 – October 2025.
5. E. Loth "Technology Translation for Wind Energy Storage Technology" Virginia Innovation Partnership Corporation, $100,000; April 2024 – October 2025.
6. E. Loth (PI) "EAGER Thermo-fluid Physics of isothermal Compressed Air Energy Storage", National Science Foundation $100,000; September 2023 – August 2025.
7. H. Bart-Smith (PI) and E. Loth (Co-PI) "Bio-Inspired Renewable Energy (BIRE) for Highly-efficient Low-cost Riverine Hydrokinetics" ARPA-E, $2,900,000; August 2021 – February 2025.
8. E. Loth (PI) "Unsteady Flow Physics of Particle Separators", Rolls-Royce, $1,445,000; Jan. 2011 – Dec. 2024 (via multiple annual renewals).

Past

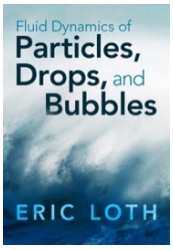
1. E. Loth (PI), "Ultraflexible Smart FLoating Offshore Wind Turbine (USFLOWT)", Colorado School of Mines, $150,000; Subcontract to DE-AR0001181, April 2020 – October 2022.
2. E. Loth (PI), R. Blom, T. Griffith, K. Johnson, N. Johnson, and L. Pao "Segmented 50 MW Segmented Ultralight Morphing Rotors (SUMR) for Wind Energy", ARPA-E, $6,117,497; DE-AR000066, April 2016 – May 2022.
3. E. Loth "Anti-Icing Nano-Composite Polymer Coatings", Rolls-Royce, $818,000 (via multiple annual renewals); June 2012 – December 2020.
4. E. Loth (PI), D. Gayme, L. Pao, D. Sadoway, and S. Smith "Planning Grant: Engineering Research Center for Wind Integrated with Storage for Energy Resilience (WISER)" NSF, $100,000, Sept. 1, 2019–Aug. 30, 2021.
5. E. Loth "Three-Dimensional Unsteady Swept Icing Aerodynamics" NASA AS&ASTAR Program, $110,000, August 2016 – August 2019.
6. E. Loth "Computations to Support of Experimental Icing Test of Full-Scale Swept Wings", University of Illinois/NASA, $235,835; January 2014 – May 2017.
7. E. Loth "Anti-Insect Fouling Coatings", Boeing Company (Seattle), $185,000; January 2014 – March 2016.
8. E. Loth "Nano-Texture Coatings and Spray Simulations for Open Accumulators", University of Minnesota, $500,000; August 2010 – August 2015 (part of a $2,000,000 National Science Foundation grant to University of Minnesota).
9. E. Loth "Ultralight Pre-Aligned Rotor for Off-shore Wind", Alliance for Sustainable Energy/NREL, $80,000; January 2014 – November 2015.
10. E. Loth "Ultralight Technologies for Off-Shore Wind Cost-of-Energy Savings", Dominion Resources, $150,000; March 2013 – February 2015.

11. E. Loth “Nano-Textured Protective Coatings for Structurally Integrated Panels”, Virginia Commonwealth Research Commercialization Fund, $150,000; October 2012 – August 2014.
12. M. Bragg and E. Loth "Experimental Icing Simulation Capability for Full-Scale Swept Wings" NASA Glenn Research Center, $541,989, Jan. 2012 – Dec. 2013.
13. E. Loth "Methodology of a Computational Icing Research Tunnel" NASA Glenn Research Center, $675,570, January 2009 – December 2012.
14. E. Loth and A. Steele "Ultra-lubricating and Hemocompatible Nanocomposite Coatings for Surgical Devices" National Science Foundation I-Corps Program, $50,000, Feb. 2012 – July 2012.
15. E. Loth “Low-Cost Nano-composite Coatings for Wind Turbine Surfaces”, AREVA, $310,500; July 2010 – June 2012.
16. E. Loth “Feasibility of Water Aluminum Reactor Power for UUVs”, Northrop-Grumman, $100,000; August 2010 – December 2011.
17. E. Loth, M. Bragg, G. Elliott, & A. Broeren "Development of a Large-Scale Low-Boom Supersonic Inlet for Investigating Micro-Array Flow Control" NASA Glenn Research Center, $787,292; March 2008 – June 2011.
18. M. Bragg, G. Elliott, D. Bodony &, E. Loth "Bypass Flow Analysis" Gulfstream/Rolls Royce, $666,251; January 2008 – June 2011.
19. E. Loth, G. Elliott, & M. Bragg, "μVG’s for Supersonic Inlets" Gulfstream/Rolls Royce, $700,788; January 2008 – June 2011.
20. E. Loth "SBLI Flow Control with μVG’s using LES" NASA Glenn Research Center, $263,190; May 2007 – December 2010.
21. E. Loth “Nano-Texturing for Fluid Power Efficiency” Center for Compact, Clean and Efficient Fluid Power, NSF Engineering Research Center, $353,100 July 2006 – August 2010.
22. E. Loth “Carbon Nano-Tube Additives to Reduce Volumetric and Pressure Losses” Center for Compact, Clean and Efficient Fluid Power, NSF Engineering Research Center, $543,900; July 2006 – June 2010.
23. I. Jasuik, E. Loth and I. Bayer "Novel Biocompatible Bone Adhesion Technology" Grainger Foundation, $100,000, January 2009 – December 2009).
24. E. Loth and H. Babinsky "Understanding Micro-ramp Control for Shock Boundary Layer Interactions" Air Force Office of Scientific Research, $120,000; June 2006 – June 2007.
25. E. Loth, "Unstructured Multiphase Code Development" Arnold Engineering Development Center, $142,000, June 2004 – September 2007.
26. E. Loth "CFD for Refrigerated Display Cases" Carrier Corporation, $50,000; June 2006 – May 2007.
27. E. Loth, "Optimization of the Icing Research Tunnel" NASA Glenn Research Center, NAG3-2623, $75,000, October 2005 – October 2006.
28. E. Loth & J.C. Dutton "Supersonic Bump Compression", Boeing, Phantom Works (St. Louis), $165,115, August 2003 – March 2006.
29. E. Loth, M. Bragg & A. Hamed "Simulation of Icing Technology on Turbo-machinery" Ohio Aerospace Institute, $150,000, March 2004 – October 2005.
30. E. Loth, "Virtual Icing Research Tunnel" NASA Glenn Research Center, NAG3-2623, $261,880, June 2001 – December 2004.

31. M. Bragg, P. Voulgaris, N. Sarter, E. Loth, M. Selig, K. Sivier, T. Baser, W. Perkins, and C. Wickens "Smart Icing Systems" NASA Lewis Research Center, NAG 3-2135, Phase I: $2,196,181, January 1997 – March 2004.
32. E. Loth "Closed-Loop Control of Air Curtains" Air Conditioning Research Center, ACRC-136, $67,000, Sept. 2001 – Aug. 2003.
33. E. Loth, S. White, P. Guebelle, D. Tortorelli, J. Dutton, A. Alleyne, D. Davis "Smart Mesoflaps for Aeroelastic Transpiration to Control Shock/Boundary-Layer Interactions" DARPA/AFOSR, F49620-98-1-0490, Phase I: $268,914, July 1998 - June 1999; Phase II: $2,069,595, July 1999 – September 2002.
34. M. Bragg and E. Loth "Effect of Large-Droplet Ice Accretions on Airfoil and Wing Aerodynamics and Control", Federal Aviation Administration, DTFA 96-G-023, $900,199, June 1996 – December 2002.
35. E. Loth, "MEMS-based Microbubble Simulations for Ultra-Efficient Drag Reduction" DARPA, MDA-972-01-C-0042, $119,345, March 2001 – Sept. 2002.
36. J. Molner and E. Loth "Contaminant Dispersion around Large Urban Buildings" National Center for Supercomputing Applications, $39,766, Aug. 2001 – July 2002.
37. E. Loth "Bubble Dispersion in Non-Equilibrium Turbulent Boundary Layers" Office of Naval Research, N00014-96-1-0312, $291,302, Jan. 1996 – May 2000.
38. E. Loth and P. Hrnjak "Understanding and Reducing Refrigerated Air Curtain Entrainment" Air Conditioning Research Center, $125,820, Aug. 1999 – July 2001.
39. E. Loth "Virtual Rendering of Multiphase Flows" National Center for Supercomputing Applications, $26,000, August 2000 – July 2001.
40. E. Loth and A. Alleyne "Defining Microsensor Capabilities for Supersonic Boundary Layer Control " NASA Glenn Research Center, $24,000, July 1999 – Oct. 1999.
41. E. Loth, P. Guebelle, S. White, D. Tortorelli "Smart Microflaps for Aeroelastic Transpiration for SBLI Flow Control" Air Force Office of Scientific Research, F49620-98-1-0381, $85,401, March 1998 – November 1998.
42. E. Loth "Simulation of Icing Clouds and Droplet Impingement on Test Models" NASA Lewis Research Center, NAS 3-97011, $124,072, Jan. 1997 – Sep. 1999.
43. E. Loth and D. Jeffers " Engineering Orientation for Students with Disabilities" PURSUIT (supported through NSF), $12,078, April 1996 – April 1997.
44. E. Loth "Interaction Between Turbulence Modulation and Bubble Dispersion" Office of Naval Research, N00014-92-J-1157, $256,000, Oct. 1991 – Dec. 1995.
45. E. Loth "Computational Methodology for Wind Tunnel Spray Bar Droplet Dispersion" Sverdrup (Arnold Engineering Development Center), AF SVERDRUP A955-11, $52,000, August 1993 – November 1995.
46. W. Schowalter, M. Bragg, M. Brewster, R. Buckius, R. Burton, J. Dutton, B. Jones, H. Krier, E. Loth, J. Peters, W. Solomon "Renovation Of Mechanical Engineering Laboratory" National Science Foundation, $750,000, October 1992 - October 1993.
47. E. Loth "Research Experience for Undergraduates" National Science Foundation Grant No. CTS-9010594x, $8,000, April 1992 – August 1992.
48. E. Loth "Experimental and Computational Study of Supersonic Mixing Layers" National Science Foundation, CTS-9010594, $70,000, July 1990 – Dec. 1992.
49. E. Loth "Investigation of Transient Compressible Flows Past 2-D and 3-D Objects" Science Applications International Corporation, DNA SAIC 21900208-82, $90,886, Jan. 1990 – July 1992.

50. K. Kailasanath and E. Loth "Supersonic Nozzle and Test Body Computations." Strategic Systems Planning Office JON44-3310-0-9, $250,000, January 1989 – January 1990 (granted to Naval Research Laboratory, Washington, D.C.).

BOOKS and PATENTS



BOOKS

1. E. Loth, Fluid Dynamics of Bubbles, Drops and Particles, Cambridge University Press (August, 2023).

BOOK CHAPTERS

1. E. Tetteh, E. Loth, M. Neuteboom, and J. Fisher "Icing on Compressors and Fans" in Gas Turbine Compressors and Fans, editor S. Wellborn, AIAA, April 2024.
2. S. Stebbins and E. Loth "Numerical Simulation of Iced Swept Wing Aerodynamics with RANS, DES, and IDDES" in Handbook of Numerical Simulation of In-Flight Icing, editor W. Habashi, Springer, 2023.
3. P. Li, E. Loth, etc." Open Accumulator Isothermal Compressed Air Energy Storage (OA-ICAES) System" in Advances in Energy Storage, editor A. Bauer, Wiley, 2022.
4. E. Loth "Numerical Methods for Multiphase Flow" in Handbook on Multi-Phase Flows, editor C. Crowe, CRC Press, 2016.
5. A. Milionis, I.S. Bayer, and E. Loth "Recent Progress in Evaluating Mechanical Durability of Liquid Repellant Surfaces" in Advances in Contact Angle, Wettability and Adhesion, editor K.L. Mittal, John Wiley & Sons, 2015.
6. I.S. Bayer, A.J. Davis and E. Loth "Liquid Repellant Amorphous Carbon Nanoparticle Networks" in Advances in Contact Angle, Wettability and Adhesion, editor K.L. Mittal, John Wiley & Sons, 2015.
7. E. Loth "Overview of Multiphase Modeling" in Handbook on Multi-Phase Flows, editor C. Crowe, CRC Press, 2006.

GRANTED PATENTS

1. E Loth, A. Milionis, Y. Yeong, J. Sokhey "Methods and System for Self-lubricating Icephobic Elastomer Coatings" Canadian Patent CA3023908C, June 2024.
2. BJ Connolly, E Loth, CF Smith III "Turbine engine inertial particle separator with particle rebound suppression" US Patent 11,834,988, December 2023.
3. E. Loth, M. Selig and A. Steele "Morphing Segmented Wind Turbine and Related Method", US Patent No. 11466660, October 2022.
4. P. Snyder, E. Loth, and D. Barone "Particle Separator", U.S. Patent No. 11073083, July 2021.
5. Loth, E. and Selig, M.S., "2-D Fairing for a Wind Turbine Tower," US Patent No. 10415547, September 2019.
6. P. Snyder, E. Loth, and D. Barone "Particle Separator", Patent 10227924, filed Aug. 2014; March 2019.
7. E. Loth, H. Babinsky and S. Lee "Vortex Generators to Control Boundary Layer Interactions" US8656957, Feb. 2014.
8. E. Loth, J.C. Dutton, P. Geubelle, S. White, A. Alleyene, D. Tortorelli, S. McIlwain, and D. Davis, " Methods and Apparatus for Control of Shock/Boundary-Layer Interactions" US6651935; Nov. 2003.
9. E. Loth "Mesoflap Passive Transpiration System and Method for Shock/Boundary Layer Interaction Control" US5971327; Oct. 1999.
10. J. Loth, E. Loth, and F. Loth "Isolated Combustion and Diluted Expansion Piston Engine" US5239959, Aug. 1993.

INVITED PRESENTATIONS

1) “Energy-Storing Wind Turbines” Long Duration Energy Storage in Virginia, Center for Climate and Energy Solutions, Richmond, June 2024.
2) “The future of wind power in the US” (keynote/Kickoff speaker) Blades Technology Forum, Austin, TX, February 2024.
3) “Going Beyond LCOE with Cost of Valued Energy for Wind Turbine Design” with Katherine Dykes for Wind Energy Science Conference, Glasgow, May 2023.
4) “A 50 MW offshore turbine and what’s next for onshore wind?” National Renewable Energy Laboratory, Golden, Colorado, April 2023.
5) “The world's largest 50 MW offshore wind turbine design and next-generation offshore wind energy storage” Institute of Ocean Energy, Saga and Kyushu Universities, March 2023.
6) “World’s Largest Wind Turbine and Compressed Air Energy Storage” Mechanical and Aerospace Engineering Seminar, University of Florida, January 2023.
7) “Offshore 25 MW Turbine for LCOE and future cost metrics” Department of Wind and Energy Systems, Technical University of Denmark, September 2022.
8) “Value and profitability metrics for wind and renewables” Wind Energy Systems Engineering Workshop, National Renewable Energy Laboratory, August 2022.
9) “Designing the World’s Largest Wind Turbines” Barnes McCormick Memorial Lecture, Penn State University, March 2022.
10) “How do we design the Future of Wind Energy and Storage?” Energy Transitions Panel, Austrian Academy of Sciences, March 2022.
11) “Why we must move beyond LCOE for Renewable Energy Design” Keynote for 13th International Conference on Applied Energy, December 2021.
12) "Cost of Valued Energy and the Future of Wind Energy Storage Systems," World Energy Storage Conference & China-UK Energy Storage Technology Forum (hosted by Chinese Academy of Sciences), June 2021.
13) "Online Teaching Strategies," Aerospace Department Chairs Association Meeting, AIAA Sci Tech (online) Jan. 2021.
14) “Designing the World’s Largest Wind Turbine: It is downwind” International Energy Agency, Task 40 Workshop (virtual), October 2020.
15) "Underground Energy Storage for Wind Turbine Farms," National Energy Technology Laboratory, Morgantown, WV, August 2020.
16) “Coating performance for impact ice conditions”. NASA Glenn Research Center, July 2020.
17) "Extreme Scale Wind Turbines," University of Texas at Dallas, Dallas, TX, Nov. 2019.
18) "Wind Energy Advanced Concepts and Storage," University of Buffalo, Buffalo, NY, Sept. 2019.
19) "Morphing and Fluid-Structure Load Alignment for Extreme-Scale Wind Turbine Design," MIT Applied Energy Symposium, Cambridge, May 2019.
20) "Morphing and Fluid-Structure Alignment for Extreme-Scale Wind Turbine Design," Mechanical & Aerospace Engr., North Carolina State University, Raleigh, NC, Sept, 2018.
21) "Unsteady Fluid-Structure Interactions and World’s Largest Wind Turbine?," Mechanical Engr. & Appl. Mechanics, Duke University, Durham, NC, April, 2018.
22) "Segmented Ultralight Morphing Rotor," Aeronautical and Astronomical Engineering, University of Washington, Seattle, WA, February, 2018.

23) "How Large Will Wind Turbines Become?" Mechanical Engr. & Aerospace Engineering, Case Western University, Cleveland, OH, February, 2018.
24) "Morphing Rotors for Extreme-Scale Wind Turbines," Mechanical Engr. & Appl. Mechanics, University of Pennsylvania, Philadelphia, PA, December, 2016.
25) "Technology Innovation in Off Shore Wind Systems," International Partnering Forum, Providence, RI, October, 2016.
26) "Observation of Novel Dynamics for a Low-Boom Relaxed-Compression Supersonic Inlet" National Institute of Aerospace, Oct. 2015.
27) "Morphing Wind Turbines," Mechanical & Aerospace Engineering, Princeton University, Princeton, NJ, March 2015.
28) "Acoustically Induced Shock Oscillation of a Low-Boom Inlet" AIAA Aerospace Sciences Meeting, AIAA-2015-1048, Kissimmee, FL, Jan. 2015.
29) "Extreme Scale Downwind Rotors," Sandia National Laboratories Turbine Blade Workshop, Albuquerque NM, October 2014.
30) "Segmented Ultralight Morphing Rotors for Wind Turbines," National Renewable Energy Laboratory, Golden CO, July 2014.
31) "Nanotextured Hemophobic Surfaces," NanoTech (Advanced Materials and Characterization), Washington DC, June 2014.
32) "Durability of Nanocomposite Superhydrophobic Coatings," Chemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, Mass, March 2014.
33) "Icephobic and Hemophobic Nanocomposite Superhydrophobic Coatings," Mechanical Engineering, Harvard University, Cambridge, Mass, March 2014.
34) "Drop Heat Transfer and Interaction for Compressed Air Energy Storage," Osney Thermo-Fluids Laboratory, Department of Engineering Science, University of Oxford, England, March 2013.
35) "Pressure and Shock Dynamics of a Low-Boom Inlet," Aerospace Sciences Meeting, AIAA 2013-0015, Grapevine, Texas, January 2013.
36) "A Canonical NSBLI Flow Relevant to External Compression Inlets," Aerospace Sciences Meeting, (Invited Presentation and Paper), AIAA 2013-0016, Grapevine, Texas, January 2013.
37) "Effects of Various Vortex Generator Configurations on a Normal Shock Wave / Boundary Layer interaction," Aerospace Sciences Meeting, AIAA 2013-0018, Grapevine, Texas, January 2013.
38) "Nano-Texturing for Energy Storage," Department of Mechanical Engineering, University of Minnesota, October 2012.
39) "Next Generation of Off-Shore Wind Turbines," Governor's Conference on Energy, Richmond, VA, October 2012.
40) "Simulating Fluid-Structure Interactions and a Novel Concept for Extreme-Scale Wind Turbines" National Institute of Aerospace, Oct. 2011.
41) "Segmented Ultralight Morphing Turbines," Fluids Seminar, Department of Engineering, University of Cambridge, England, June 2011.
42) "A Discrete Equation of Motion for Particle of Finite Size and Reynolds Number," AIAA Fluid Dynamics Meeting, Honolulu, Hawaii, June 2011.
43) "Simulations of a Supersonic Single-Stream Axisymmetric Inlet," AIAA Applied Aerodynamics Meeting, Honolulu, Hawaii, June 2011.
44) T "Simulations of a Supersonic Dual-Stream Axisymmetric Inlet," AIAA Applied Aerodynamics Meeting, Honolulu, Hawaii, June 2011.

45) "Adhesion strength and superhydrophobicity in polyurethane/organoclay nanocomposites" TechConnect World, Boston, June 2011.
46) "Durable Nanocomposite Superhydrophobic Surfaces," Nanostar Symposium, Charlottesville, May 2011.
47) "Flow Control for Quiet Supersonic Inlets," Plenary Speaker Virginia Space Grant Consortium, Richmond, VA, April 2011.
48) "SBLI Vortex Generator Flow Control Physics," 4th Annual Shock-Wave/Boundary Layer Interaction Flow Control and Modeling Workshop, NASA Glenn Research Center, Cleveland, OH, April 2011.
49) "Morphing for Extreme-Scale Wind Turbines," Virginia Off-Shore Wind Supply Forum, Richmond, December 2010.
50) "Supersonic Inlet Flow Control," Department of Mechanical Engineering, University of Delaware, April 2009.
51) "Vortex Generators for Supersonic Turbulent Boundary Layers," Department of Aerospace and Ocean Engineering, Virginia Polytechnical Institute and State University, April 2009.
52) "Stable and Accurate Loosely-Coupled Scheme for Unsteady Fluid-Solid Interaction," Department of Aerospace and Ocean Engineering, Virginia Polytechnical Institute and State University, March 2008.
53) "High Accuracy and Stability Techniques for Fluid-Structure Simulation," Department of Mechanical Engineering, Univ. of Illinois at Chicago, April 2007.
54) "Electrolytic Micro-Bubbler Matrices," Department of Mechanical and Aerospace Engineering, Florida Institute of Technology, May 2006.
55) "Particle Dispersion in a Turbulent Boundary Layer via DNS and RANS flows," Department of Engineering, University of Cambridge (U.K.), November 2004.
56) "Micro-Fabrication for Generation of Bubbles and their Dispersion in Turbulent Flows," Combined seminar for Mechanical & Industrial Engineering and Iowa Institute of Hydraulic Research, University of Iowa, Iowa City, IA, Sept. 2003.
57) "Boundary Layer Control for Supersonic Inlets," Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA October 2002.
58) "Mesoflaps for Supersonic Inlet Flow Control," AIAA Fluid Dynamics Meeting, St. Louis, MO, June 2002.
59) "Smart Materials for Mesoflap Bleed and Injection," ASME Summer Fluids Engineering Meeting, FEDSM2001-18277, New Orleans, May-June 2001.
60) "Mesoflaps for Supersonic Engine Inlets," Department of Aero. & Astro. Engineering, Massachusetts Institute of Technology, Cambridge MA, Feb. 2000.
61) "Mixing Layer Turbulence and Bubble Deformation," Division of Engineering and Applied Sciences, Harvard University, Boston MA, Nov. 5, 1997.
62) "Free Shear Layer Turbulence and Ellipsoidal Bubble Forces," Center for Fluid Mechanics, Turbulence and Computation (Division of Applied Mathematics), Brown University, Providence RI, Sept. 9, 1997.
63) "Dynamics and Dispersion of Bubbles in a Turbulent Free Shear Layer," Naval Undersea Warfare Center, Newport RI, July 1996.
64) "Adaptive Grid Technology for Two-Phase Compressible Flow" Molten Metal Technology, Waltham, MA, May 1995
65) "Large Eddy Simulations of a Supersonic Shear Layer" University of Michigan, Mechanical Engineering Department, April 1993.

66) "Dynamics of Compressible and Two-Phase Fluids" Virginia Polytechnical Institute and State University, Blacksburg, VA, February, 1992.
67) "Vorticity and Mixing Layer Simulations" Naval Research Laboratory, Laboratory for Computational Physics, June 1991.
68) "Study of Plane Turbulent Underexpanded Air Jets in Water." Dayton Research Institute, Dayton, OH, July 1988.

JOURNAL and CONFERENCE ACTIVITIES

Journal Editorial Activities:

Associate Editor, Next Energy, 2023–present
Associate Editor, Coatings, 2014–present
Guest Editor, Applied Energy, 2022–2023
Associate Editor, Advances in Aerospace Science and Applications, 2008–2014.

Journal Reviewer (partial list):

AIAA Journal
AIAA Journal of Aircraft
AIAA Journal of Heat Transfer & Thermophysics
AIAA Journal of Propulsion & Power
Applied Energy
Applied Surface Science
ASME Journal of Fluids Engineering
Computers & Fluid
Experiments in Fluid
Experimental Thermal & Fluid Science
International Journal of Multiphase Flow
Journal of Applied Physics
Journal of Computational Physics
Journal of Fluid Mechanics
Journal of Heat Transfer
Journal of Micromechanics & Microengineering
Journal of Wind Engineering & Industrial Aerodynamics
Langmuir
Measurement Science and Technology
Particles & Particle Systems Characterization
Physics of Fluids
Powder Technology
Shock Waves
Theoretical and Computational Fluid Dynamics
Wind Energy

Professional/Conference Committees:

Host of National Academy of Engineering Panel on Energy Research, ASME IMECE, Nov 2020
Intl. Scientific Committee, MIT/Harvard A+B Applied Energy Symp, 2019-
Host of National Academy of Engineering Panel on Aerospace Research, AIAA Sci Tech, 2018
Technical Review Committee, TechConnect World, 2015
Vice-Chair, AIAA Air Breathing Propulsion Systems Integration Committee, 2015-
Member, AIAA Air Breathing Propulsion Systems Integration Committee, 2009-
Program Committee, 2007 International Conference of Multiphase Flow
Organizing Committee, 2005 APS Fluid Dynamics
Organizing Committee, 2004 International Conference of Multiphase Flow

Fluid Dynamics Program Committee, 2004 AIAA Aerospace Sciences Meeting
Fluid Dynamics Program Chair, 2003 AIAA Aerospace Sciences Meeting
Organizing Committee, 2002 AIAA Theoretical Fluid Dynamics Conference
Fluid Dynamics Program Committee, 2002 AIAA Aerospace Sciences Meeting
Organizing Committee, 2001 International Conference of Multiphase Flow
Member, 26th Intl. Combustion Symposium Program Review Committee, 1995
Member, AIAA Fluid Dynamics Technical Committee, 1995-
Member, ASME Coordinating Group for Fluid Measurement, 1991–
Member, ASME Coordinating Group on Two-Phase Flow, 1991–

JOURNAL ARTICLES (* current or former Loth-advised students)

1. M Jeong*, E Loth, C Qin*, M. Phandis, M. Pusch and L. Pao "Operational Pitch Actuation Dynamics for Offshore Wind Turbines Ranging from 5 to 50 MW" Wind Energy 28, e2975, 2025.
2. M Jeong*, E Loth, C Qin*, M Selig, N Johnson "Aerodynamic rotor design for a 25 MW offshore downwind turbine" Applied Energy 353, 122035, 2024.
3. E Tetteh*, M Jeong*, E Loth, J Cummings, J Loebig "Static-vs Impact-Ice-Shear Adhesion on Metals and a Self-Lubricating Icephobic Coating" AIAA Journal 62 (9), 3448-3462, 2024.
4. ASE Mendoza, DT Griffith, M Jeong, C Qin*, E Loth, M Phadnis, L Pao, "Aero-structural rapid screening of new design concepts for offshore wind turbines" Renewable Energy 219, 119519, 2023.
5. E. Loth "Wind energy for deep decarbonization, what's next?" Next Energy (invited) 1, 4, 2023.
6. M Kaminski*, J Simpson*, E Loth, LJ Fingersh, A Scholbrock, N Johnson "Gravo-aeroelastically-scaled demonstrator field tests to represent blade response of a flexible extreme-scale downwind turbine" Renewable Energy 218, 119217.
7. J.G. Simpson*, C. Qin*, and E. Loth "Predicted Roundtrip Efficiency for Compressed Air Energy Storage Using Spray-based Heat Transfer" Journal of Energy Storage 2023.
8. J.G. Simpson*, C. Qin*, and E. Loth "Spray-cooled compression: Theory and simulation" Applied Thermal Engineering 229, 120619, 2023.
9. E. Loth "Particles in a turbulent gas: Diffusion, bias, modulation and collisions" Progress in Energy and Combustion Science 97, 101094, 2023.
10. E. Loth and J.S. Marshall "Restitution coefficient models for collisions of airborne particles and drops" Journal of Aerosol Science, 106186, 2023.
11. G.H. Krishnan, K. Fletcher, E. Loth "Influence of Drop Viscosity and Surface Wettability on Impact Outcomes" Coatings 13 (5), 817, 2023.
12. M. Kaminski*, E. Loth, L.J. Fingersh, A. Scholbrock, M. Selig "Parked aeroelastic field rotor response for a 20% scaled demonstrator of a 13-MW downwind turbine" Wind Energy 26 (2), pp. 182-200, 2023.
13. B.J. Connolly*, E. Loth, and C. F. Smith "Efficiency of inertial particle separators" Powder Technology 41, 118004, 2023.
14. E. Loth, C. Qin*, J.G. Simpson*, K. Dykes "Why we must move beyond LCOE for renewable energy design" Advances in Applied Energy 8, 100112, 2022.
15. S. Kianbakht, D. Martin, K. Johnson, D. Zalkind, L. Pao, E. Loth, J. Simpson*, ... "Design space exploration and decision-making for a segmented ultralight morphing 50-MW wind turbine" Wind Energy 25 (12), pp. 2016-2035, 2022.
16. E. Tetteh*, E. Loth, M.O. Neuteboom, J. Fisher "In-Flight Gas Turbine Engine Icing" AIAA Journal 60 (10), pp. 5610-5632, 2022.
17. M.J. Aziz, D.F. Gayme, K. Johnson, J. Knox-Hayes, P. Li, E. Loth, L.Y. Pao, ... "A co-design framework for wind energy integrated with storage" Joule 6 (9), pp. 1995-2015, 2022.
18. J.G. Simpson* and E. Loth "Super-rated operational concept for increased wind turbine power with energy storage" Energy Conversion and Management 14, 100194, 2022.

19. J.G. Simpson*, M. Kaminski* and E. Loth "Influence of tower shadow on downwind flexible rotors: Field tests and simulations" Wind Energy 25 (5), pp. 881-896, 2022.
20. S. Yao, M. Chetan, D.T. Griffith, A.S.E. Mendoza, M.S. Selig, D. Martin, ... "Aero-structural design and optimization of 50 MW wind turbine with over 250-m blades" Wind Engineering 46 (1), pp. 273-295, 2022.
21. B.J. Connolly*, E. Loth, and C. F. Smith "Unsteady separated flows in an S-Duct and a bifurcating duct" Journal of Aircraft 59 (1), pp. 47-57, 2022.
22. J.A. Bennett, J.G. Simpson*, C. Qin*, R. Fittro, G.M. Koenig Jr, A.F. Clarens and E. Loth "Techno-economic analysis of offshore isothermal compressed air energy storage in saline aquifers co-located with wind power" Applied Energy 303, 117587, 2021.
23. X. Zhang, C. Qin, E. Loth, Y. Xu, X. Zhou and H. Chen "Arbitrage analysis for different energy storage technologies and strategies" Energy Reports, 2021.
24. J.G. Simpson*, G. Hanrahan*, E. Loth, G.M. Koenig, D.R. Sadoway "Liquid metal battery storage in an offshore wind turbine: Concept and economic analysis" Renewable and Sustainable Energy Reviews 149, 111387, 2021.
25. E. Loth, J.T. Daspit*, M. Joeng*, T. Nagata & T. Nonomura "Supersonic and Hypersonic Drag Coefficients for a Sphere" AIAA Journal, pp. 1-11, 2021.
26. S. Yao, M. Chetan, D.T. Griffith, A.S. Escalera Mendoza, M.S. Selig, D. Martin, ... "Aero-structural design and optimization of 50 MW wind turbine with over 250-m blades" Wind Engineering, 0309524X211027355, 2021.
27. B. Connolly*, E. Loth & C.F. Smith "Unsteady Separated Flows in an S-Duct and a Bifurcating Duct" Journal of Aircraft, pp. 1-11, 2021.
28. C. Qin* & E. Loth "Isothermal compressed Air Energy Storage using Underground Oil/Gas Wells or Coal Mines" Applied Energy, Vol. 292, 116867, 2021.
29. B. Connolly* and E. Loth "Simulations of Ash and Sand Impact on a Hypersonic Forebody" AIAA Journal, Vol. 59, pp. 1914-1923, 2021.
30. E. Tetteh*, E. Loth, J. Cummings, & J. Loebig "Trends of Ice Impact Adhesion on Various Surfaces" AIAA Journal Vol. 59, pp. 1870-1874, 2021.
31. E. Tetteh*, E. Loth, J. Cummings, J. Loebig & J. Harvell "A Compact Icing Research Tunnel for Ice Adhesion Characterization" Journal of Thermophysics and Heat Transfer pp. 1-11, 2021.
32. L.Y. Pao, D.S. Zlakind, D.T. Griffith, …. "Control Co-Design of 13 MW downwind two-bladed rotors to achieve 25% reduction in Levelized Cost of Energy" Annual Reviews in Controls, 2021.
33. S.J. Stebbins*, E. Loth, A.P. Broeren, M. Potapczuk and C. Porter "Aerodynamics of a Common Research Model Wing with Leading-Edge Ice Shape" Journal of Aircraft, pp. 1-13, 2021.
34. M. Kaminski*, C. Noyes*, E. Loth, R. Damiani, S. Highes, … "Gravo-aeroelastic of a 13-MW downwind turbine for 20% scale blades" Wind Energy Vol. 24, pp. 229-245, 2020.
35. M. Kaminski*, E. Loth, D. Zalkind, L. Pao, M. Selig, K. Johnson "Servo-aero-gravo-elastic (SAGE) scaling and its application to a 13-MW downwind turbine" Journal of Renewable and Sustainable Energy 12 (6), 063301, 2020.
36. C. Qin*, E. Loth, D.S. Zalkind, L.Y. Pao, S. Yao, D.T. Griffith "Downwind coning concept rotor for a 25 MW offshore wind turbine" Renewable Energy, pp. 314-327, 2020.

37. J. Simpson*, E. Loth, & K. Dykes "Cost of Valued Energy for design of renewable energy systems" Renewable Energy, Vol. 153, pp. 290-300, 2020.
38. C. Noyes*, C. Qin*, E. Loth "Analytic analysis of load alignment for coning extreme-scale rotors" Wind Energy 23 (2), 357-369, 2020.
39. S. Yao, D.T. Griffith, M. Chetan, C.J. Bay, R. Damiani, M. Kaminski*, E. Loth "A gravo-aeroelastically scaled wind turbine rotor at field-prototype scale with strict structural requirements" Renewable Energy, pp. 535-547, 2020.
40. E. Tetteh*, E. Loth "Reducing Static and Impact Ice Adhesion with a Self-Lubricating Icephobic Coating (SLIC)" Coatings 10 (3), 262, 2020.
41. M Kaminski*, C. Noyes*, E. Loth, R. Damiani, S. Hughes "Ground Testing of a 1% gravo-aeroelastically scaled additively-manufactured wind turbine blade with bioinspired structural designs" Renewable Energy, pp. 639-650, 2020.
42. B.J. Connolly*, E. Loth, C.F. Smith "Shape and drag of irregular angular particles and test dust" Powder Technology 363, 275-285, 2020.
43. C. Noyes*, C. Qin*, E. Loth "Tower shadow induced blade loads for an extreme-scale downwind turbine" Wind Energy 23 (3), 458-470, 2020.
44. M. Kaminski*, C. Noyes*, E. Loth, R. Damiani, S. Hughes "Gravo-aeroelastic scaling of a 13-MW downwind rotor for 20% scale blades" Wind Energy, 2020.
45. C. Noyes*, E. Loth, D. Martin, K.E. Johnson, G. Ananda, M. Selig "Extreme-scale load-aligning rotor: To hinge or not to hinge?" Applied Energy 257, 113985, 2020.
46. D.S. Zalkind, G.K. Ananda, M. Chetan, D.P. Martin, C.J. Bay, K.E. Johnson, …"System-level design studies for large rotors" Wind Energy Science 4 (NREL/JA-5000-75419), 2019.
47. S.J. Stebbins*, E. Loth, A.P. Broeren, M. Potapczuk "Review of computational methods for aerodynamic analysis of iced lifting surfaces" Progress in Aerospace Sciences 111, 100583, 2019.
48. B.J. Connolly*, E. Loth, P.H. Snyder, C.F. Smith "Influence of scavenge leg geometry on inertial particle separator performance" Journal of the American Helicopter Society 64 (3), 1-12, 2019.
49. C. Noyes*, C. Qin*, and E. Loth, "Pre-Aligned Downwind Rotor for a 13.2 MW wind turbine" Renewable Energy, Vol. 116, pp. 749-754, 2018.
50. S. Lee* and E. Loth, "On ramped vanes to control normal shock boundary layer interactions" Aeronautical Journal 122, 1568-1585, 2018.
51. C. Noyes*, C. Qin*, E. Loth, and S. Schreck, "Measurements and predictions of wind turbine tower shadow and fairing effects" Journal of Wind Engineering and Industrial Aerodynamics 179, 297-307, 2018.
52. R. Robison* and E. Loth, "Critical Protuberance Height for Transition of Leading Edge Boundary Layers" Journal of Aircraft 55 (5), 1905-1913, 2018.
53. A. Milionis, K.G. Krishnan*, E. Loth, and M. Lawrence, "Dynamic wetting of human blood and plasma on various surfaces" Colloids and Surfaces B: Biointerfaces 166, 218-223, 2018.
54. Y.H. Yeong*, A. Milionis, E. Loth, J. Sokhey, "Self-lubricating icephobic elastomer coating (SLIC) for ultralow ice adhesion with enhanced durability" Cold Regions Science and Technology 148, 29-37, 2018.
55. C. Noyes*, C. Qin*, E. Loth, "Pre-aligned downwind rotor for a 13.2 MW wind turbine" Renewable Energy 116, 749-754, 2018.

56. D. Barone*, E. Loth, P.H. Snyder, "Flow Field and Efficiency of a Two-Dimensional Inertial Particle Separator" Journal of the American Helicopter Society 63 (1), 1-9, 2018.
57. C. Qin*, G. Saunders*, and E. Loth, "Offshore Wind Energy Storage Concept for Cost-of-rated-power savings" Applied Energy, Vol. 201, pp. 148-157, 2017.
58. K. Krishnan*, A. Milionis, F. Tetteh*, & E. Loth "Fruit Fly Impact on Surfaces on Aerodynamic Surfaces: Types of Outcomes and Reside Components" Aerospace Science and Technology Vol. 392, pp. 723-731, 2017.
59. E. Loth, A. Steele*, C. Qin*, B. Ichter*, MS Selig and P. Moriarty, C. Noyes*, C. Qin, and E. Loth, "Pre-Aligned Downwind Rotor for a 13.2 MW wind turbine" Wind Energy, Vol. 20, pp. 1241-1259, 2017 (featured on Issue Cover)
60. K. Krishnan*, A. Milionis, E. Loth, TE Farrell, JD Crouch & DH Berry "Influence of Hydrophobic and Superhydrophobic Surfaces on Reducing Aerodynamic Insect Residues" ACS Applied Surface Science Vol. 392, pp. 723-731, 2017.
61. D. Barone*, E. Loth and P. Snyder "Effect of Particle Size on Inertial Particle Separator Efficiency" Powder Technology Vol. 318, No. 4, pp. 177-185, Aug. 2017.
62. D. Barone*, E. Loth and P. Snyder "Flow Field and Efficiency of a 2-D Inertial Particle Separator" American Helicopter Society (in press).
63. C. Qin, E. Loth, S. Lee & P. Moriarty "Hydraulic-Electric Hybrid Wind Turbines: Tower Mass savings and Energy Storage Capacity" Renewable Energy, Vol. 99, pp. 69-79, 2016.
64. S. Candon*, M. Rybalko* and E. Loth "Acoustically Induced Shock Oscillations in a Low-Boom Inlet" AIAA Journal, Vol. 54, pp. 2134-2148, 2016
65. C. Qin* & E. Loth "Numerical Description of a Pressure-Swirl Nozzle Spray" Chemical Engineering and Processing Vol. 107, pp. 68-79, Sept. 2016.
66. C. Qin*, E. Innes-Wimsatt* & E. Loth "Hydraulic-Electric Hybrid Wind Turbines: Tower Mass Saving and Energy Storage Capacity" Renewable Energy Vol. 99, pp. 79-89, Dec. 2016.
67. C. Triphahn*, Jason Mickey* and E. Loth "2D Lagrangian Parcel Volume method for drop flux on a cylinder" International Journal of Multiphase Flow Vol. 84, pp. 9-18, September 2016.
68. A. Milionis, I. Bayer & E. Loth "Recent Advances in Oil-repellant surfaces" International Material Reviews Vol. 61, February 2016.
69. S. Wang* and E. Loth "Droplet Impact Efficiency on an Aerodynamic Surfaces with a Globally Eulerian Locally Lagrangian Method" AIAA Journal of Aircraft, pp. 1-10, 2016.
70. A. Milionis, I. Bayer & E. Loth "Recent Advances in the Mechanical Durability of Superhydrophobic Materials" Advances in Colloid and Interface Science Vol. 229, pp. 57-79, 2016.
71. K. O'Connor*, E. Loth & M.S. Selig "Experiments on Fairing Designs for a Wind Turbine Tower" AIAA Journal, pp. 1-7, 2016.
72. A. Milionis, C. Noyes, E. Loth, I. Bayer, AW. Lichtenberger, V.N. Stathopolous, and N. Vourdas "Water-repellant Approaches for 3-D Printed Internal Passages" Materials and Manufacturing Processes, 2016.
73. Y. Yeong, A. Milionis, E. Loth, J. Sokhey & A. Lambourne "Atmospheric Ice Adhesion on Water Repellant Coatings: Wetting and Surface Topology" Langmuir, Vol. 31, pp. 13107-13116, November 2015.

74. S. Candon*, M. Rybalko* and E. Loth "Near On-Design Unsteadiness in a Supersonic Low-Boom Inlet" Journal of Propulsion & Power pp. 1-13, 2015.
75. M. Rybalko* and E. Loth "Aerodynamic Impact of Vortex Generators on a Relaxed-Compression Low-Boom Inlet" AIAA Journal Vol. 53, pp. 3700-3711, 2015.
76. A. Milionis, J. Languasco*, E. Loth, & I. Bayer "Analysis of wear abrasion resistance of superhydrophobic acrylonitrile butadiene styrene rubber (ABS) nanocomposite" Chemical Engineering Journal, Vol. 281, pp. 730-738, 2015.
77. G. Krishnan & E. Loth "Effects of Gas and Droplet Characteristics on Drop-Drop Collision Outcome Regimes" International Journal of Multiphase Flow, Vol. 77, pp. 171-186, 2015.
78. G. Krishnan, P. Malm & E. Loth "Superhydrophobic Resistance to Dynamic Freshwater Biofouling Inception" Biofouling, Vol. 31, pp. 789-797, 2015.
79. C. Qin* & E. Loth "Simulation of Spray Direct Injection for Compressed Air Energy Storage" Applied Thermal Engineering pp. 24-24, January, 2016.
80. T. Gillen* and E. Loth "Simulations and Experiments of a Dual-Stream Low-Boom Supersonic Inlet" Journal of Propulsion & Power Vol. 31, No. 6, pp. 1567-1577, Nov. 2015.
81. D. Barone*, E. Loth and P. Snyder "Efficiency of an Inertial Particle Separator" Journal of Propulsion & Power Vol. 31, No. 4, pp. 997-1002, April 2015.
82. A. Steele*, A. Davis*, J. Kim*, E. Loth, and I. Bayer "Wear Independent Similarity" ACS Applied Materials & Interfaces, 2015.
83. A. Milionis, K. Krishnan* & E. Loth "Hemolymph Droplet Impact Outcome on Surfaces of Varying Wettability" ACS Applied Surface Science Vol. 345, pp. 36-43, 2015.
84. A. Milionis, K. Dang*, M. Prato & E. Loth "Liquid Repellent Nanocomposites Obtained from One-Step Water-Based Spray" Journal of Materials Chemistry A, 2015.
85. B. Ichter*, A. Steele*, E. Loth, P. Moriarty & M. Selig "A Morphing Downwind-Aligned Rotor Concept Based on a 13.2 MW Wind Turbine", Wind Energy, 2015.
86. I. Bayer, A. Davis*, E. Loth, and A. Steele* "Water Jet Resistant Superhydrophobic Carbonaceous Films by Flame Synthesis and Tribocharging" Materials Today Communications Vol. 3, pp. 57-68, 2015.
87. Y. Yoeng*, A. Milionis, E. Loth, and I. Bayer " Microscopic Receding Contact Line Dynamics on Pillar and Irregular Superhydrophobic Surfaces" Scientific Reports Vol. 5, 2015.
88. C. Zhang, B. Yan, J. Wieberdink, P. Li, J. Van de Ven, E. Loth, & T. Simon, "Thermal analysis of a compressor for application to Compressed Air Energy Storage " Applied Thermal Engineering Vol. 73, pp. 1402-1411, 2014.
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20. T. Nagata, T. Daspit*, T. Nonomura, and E. Loth, "Direct Numerical Simulation of Supersonic Flow Over a Counter-Rotating Vane-Type Vortex Generator Implemented on Slip Wall", ASME Fluids Engineering Division Summer Meeting, AJKFluids2019-5312, November 2019.
21. C. Goss*, B. Connolly*, E. Loth, and C.F. Smith "Scaling Effects on Inertial Particle Separator Performance", AIAA Propulsion and Energy Forum, AIAA 2019-4340, August 2019.
22. C.J. Bay, R Daimiani, LJ Figersh, S. Hughes, M Chetan, S. Yao, DT Griffith, GK Ananda, MS Selig, D Zalkind, L Pao, K. Johnson, M. Kaminski* & E. Loth, "Design and Testing of a Scaled Demonstrator Turbine at the National Wind Technology Center", Wind Energy Symposium, AIAA 2019-1068, January 2019.
23. S. Yao, DT Griffith, M Chetan, CJ Bay, R Damiani, M. Kaminski *& E. Loth, "Structural Design of a 1/5 Scale Gravo-Aeroelastically Scaled Wind Turbine Demonstrator for Field Testing", Wind Energy Symposium, AIAA 2019-1067, January 2019.
24. M. Kaminski*, E. Loth, C. Qin*, and D. Todd Griffith. "Gravo-Aeroelastic Scaling a 13.2 MW Wind Turbine Blade to a 1-meter Model", Wind Energy Symposium, AIAA 2018-1731, January 2018.
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26. C. Noyes*, C Qin*, and E. Loth. "Measurements of Wind Turbine Tower Shadow and Fairing Effects", Wind Energy Symposium, AIAA 2018-1244, January 2018.
27. D. Carter* and E. Loth "Insect Residue Height for Different Coatings and Conditions", Aerospace Sciences Meeting, AIAA 2018-0313, January 2018.
28. B.J. Connolly*, E. Loth and C.F. Smith "Unsteady Numerical Investigation of a Rectangular Diffusing S-duct with High Aspect Ratio", Aerospace Sciences Meeting, AIAA 2018-2130, January 2018.
29. Eric Loth, Lee Fingersh, Daniel Griffith, Meghan Kaminski, and Chao Qin. "Gravo-Aeroelastically Scaling for Extreme-Scale Wind Turbines", 35th AIAA Applied Aerodynamics Conference, AIAA AVIATION Forum, AIAA 2017-4215, June 2017 Denver, CO.
30. Carlos Noyes*, Chao Qin*, and Eric Loth. "Measurements of Wind Turbine Tower Shadow and Fairing Effects", 2018 Wind Energy Symposium, AIAA SciTech Forum, AIAA 2018-1244 June 2017 Denver, CO.

31. C. Noyes*, C. Qin & E. Loth "Low Mass Morphing Rotor for Extreme-Scale Wind Turbines" 35th Wind Energy Symposium AIAA-2017-0924, Grapevine TX, January 2017.
32. R. Robison* & E. Loth "Theoretical Critical Height for Boundary Layer Transition on Airfoil Leading Edges" 55th Aerospace Sciences Meeting AIAA-2017-0725, Grapevine TX, January 2017.
33. C. Qin*, E. Loth, S. Lee & P. Moriarty "Blade Load Reduction for a 13 MW Downwind Pre-Aligned Rotor" 34th Wind Energy Symposium AIAA-2016-1264, San Diego, TX, January 2016.
34. K. Krishnan*, R. Robison*, E. Tetteh*, E. Loth, T Farrell, J Crouch and D Berry "Characterization of Insect Residue on an Aerodynamic Leading Edge" 8th Atmospheric and Space Environments Conference, AIAA-2016-3445, Washington DC, June 2016.
35. C. Butler*, C. Qin & E. Loth "Improved Delayed Detached Eddy Simulation on a Swept Hybrid Model in the IRT" 8th Atmospheric and Space Environments Conference, AIAA-2016-3445, Washington DC, June 2016.
36. S. Candon*, E. Loth & M. Rybalko "Mass Flow Ratio on Shock and Pressure Spectra for a Low-Boom Supersonic Inlet" AIAA Aerospace Sciences Meeting, AIAA-2016-0532, San Diego, CA, Jan. 2015.
37. P. Snyder, D. Barone* & E. Loth "Unsteady Fluid Dynamics within an Inertial Particle Separator" ASME Turbo Expo, GT2015-43783, Montreal, Canada, June 2015.
38. C. Butler* & E. Loth. "Detached Eddy Simulations of a Swept Hybrid Model in the IRT" SAE Intl. Conf. on Icing of A/C, Engines & Structures, Technical Paper 2015-01-2122, Prague, June 2015.
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40. P. Snyder, E. Loth and D. Barone* "Unsteady Particle Dynamics within an Inertial Particle Separator" AIAA Aerospace Sciences Meeting, AIAA-2015-0871, Kissemme, FL, Jan. 2015.
41. S. Candon* & E. Loth "Acoustically Induced Shock Oscillation of a Low-Boom Inlet" AIAA Aerospace Sciences Meeting, AIAA-2015-1048, Kissemme, FL, Jan. 2015 (**Invited** Presentation and Paper).
42. K. O'Conner*, E. Loth & M. Selig "Experiments on a Fairing Design for a Wind Turbine Tower" AIAA Aerospace Sciences Meeting, AIAA-2015-1664, Kissemme, FL, Jan. 2015.
43. G. Krishnan*, A. Milionis, M. Starr*, and & E. Loth "Fruit Fly Impacts Outcomes and Residue Components on an Aerodynamic Surface" AIAA Aerospace Sciences Meeting, AIAA-2015-1279, Kissemme, FL, Jan. 2015.
44. E. Loth, B. Ichter*, A. Steele*, M. Selig & P. Moriarty "Downwind Pre-Aligned Rotor for a 13.2 MW Wind Turbine" AIAA Aerospace Sciences Meeting, AIAA-2015-1661, Kissemme, FL, Jan. 2015.
45. C. Zhang, J. Wieberdink, T. Simon, P. Li, J. Van de Ven & E. Loth "Thermal Analysis of a Compressor for Application to Compressed Air Energy Storage", ASME 2014 International Mechanical Engineering Conference and Exposition, Paper IMECE2014-38567, Montreal, Nov. 2014.

46. C. Qin* and E. Loth "Tower Mass Savings and Energy Storage Capacity of Hydraulic-Electric Hybrid Wind Turbines" Offshore Energy and Storage Symposium, AIAA-2013-0744, Windsor, Canada, July 2014.
47. E. Innes-Wimsatt*, C. Qin* and E. Loth "Economic Benefits of Hydraulic-Electric Energy Storage Wind Turbines " Offshore Energy and Storage Symposium, AIAA-2013-0744, Windsor, Canada, July 2014.
48. C. Noyes*, A. Milionis, E. Loth and I. Bayer "Superhydrophobic Electrolytic Heat Transfer Networks" 9th International Symposium on Contact Angle, Wetting and Adhesion, Lehigh University, Bethlehem, PA, June 2014.
49. A. Milionis, I. Bayer, R. Ruffilli, E. Loth and A. Athanassiou, "Biodegradable Superhydrophobic Nanocomposites" 9th International Symposium on Contact Angle, Wetting and Adhesion, Lehigh University, Bethlehem, PA, June 2014.
50. A. Milionis, C. Noyes*, E. Loth and I. Bayer "Superhydrophobic 3D Printed Surfaces by Dip Coating" Proceedings of TechConnect, Washington DC, June 2014.
51. A. Milionis, Y.H. Yoeng*, E. Loth and I. Bayer "Mechanically Durable Superhydrophobic Nanocomposites from Acrylonitrile Butadiene Styrene (ABS) Superhydrophobic 3D Printed Surfaces by Dip Coating" Proceedings of TechConnect, Washington DC, June 2014.
52. D. Barone*, E. Loth & P. Snyder "Particle Dynamics of an Inertial 2-D Particle Separator" ASME Turbo Expo, Paper GT2014-26922, June 2014.
53. C. Zhang, B. Yan, J. Wiberdink, P. Li, J Van de Ven, E. Loth and T. Simon. "Thermal Analysis of a Compressor for Application to Compressed Air Energy Storage" International Workshop on Heat Transfer Advances for Energy Conservation and Control, Xi'an, China, October 2013.
54. I. Bayer, A. Steele*, and E. Loth. "Superhydrophobic and Electroconductive Carbon Nanotube Fluorinated Acrylic Copolymer Nanocomposite From Emulsions" Proceedings of TechConnect, Washington DC, May 2013.
55. G. Krishnan* & E. Loth. "Predicting Contact Angles on Regular Surfaces" Proceedings of the TechConnect 2013, Washington DC, May 2013.
56. P. Malm*, G. Krishnan*, R. Loth, A. Steele, I. Bayer & E. Loth. "Coating Resistance to Biofouling Inception for Freshwater Vehicles" Proceedings of TechConnect, Washington DC, May 2013.
57. A. Davis*, Y.H. Yeong*, A. Steele, E. Loth and I. Bayer, "Reducing Surface Roughness of a Spray-Coated Superhydrophobic Nanocomposite" Proceedings of TechConnect , Washington DC, May 2013.
58. C. Triphahn*, J. Mickey* and E. Loth "Impact Efficiency Using Hybrid RANS/LES and the Lagrangian Parcel Volume Method" AIAA Atmospheric and Space Environments Conference, San Diego, June 2013.
59. K. O'Conner*, E. Loth & M. Selig "Design of a 2-D Fairing for a Wind Turbine Tower" AIAA Applied Aerodynamics Conference, San Diego, June 2013.
60. M. Rybalko* and E. Loth "Pressure and Shock Dynamics of a Low-Boom Inlet," Aerospace Sciences Meeting, (**Invited** Presentation and Paper), AIAA 2013-0015, Grapevine, Texas, January 2013.
61. E. Loth, N. Titchener, H. Babinsky and L. Povinelli "A Canonical NSBLI Flow Relevant to External Compression Inlets," Aerospace Sciences Meeting, (**Invited** Presentation and Paper), AIAA 2013-0016, Grapevine, Texas, January 2013.

62. N. Titchener, H. Babinsky and E. Loth "Effects of Various Vortex Generator Confgurations on a Normal Shock Wave / Boundary Layer interaction," Aerospace Sciences Meeting, (**Invited** Presentation and Paper), AIAA 2013-0018, Grapevine, Texas, January 2013.
63. Qin, C.* and E. Loth "Liquid Piston Compression with Droplet Heat Transfer" Aerospace Sciences Meeting, AIAA-2013-0744, Grapevine, Texas, January 2013.
64. D. Barone*, E. Loth and P. Snyder "Efficiency of an Inertial Particle Separator" Aerospace Sciences Meeting, AIAA-2013-1080, Grapevine, Texas, January 2013.
65. D. Barone*, E. Loth and P. Snyder "A Two-Dimensional Inertial Particle Separator Research Facility" AIAA Fluid Dynamics Meeting, AIAA-2012-3290, New Orleans, June 2012.
66. K. Clark*, E. Loth, J. VanZante, R. Ide and L. Steen "Air Flow and Liquid Water Content for the 2012 NASA Glenn Icing Research Tunnel" AIAA Fluid Dynamics Meeting, AIAA-2012-2936, New Orleans, June 2012.
67. C. Triphahn*, J. Mickey* and E. Loth "Droplet Concentration on Aerodynamic Surfaces Using the Lagrangian Parcel Volume Method" AIAA Fluid Dynamics Meeting, AIAA-2012-2397, New Orleans, June 2012.
68. B. Ichter*, A. Steele, and E. Loth "Structural Design and Analysis of a Segmented Ultralight Morphing Rotor (SUMR) Blade" AIAA Fluid Dynamics Meeting, AIAA-2012-2370, New Orleans, June 2012.
69. Y. Yeong*, R. Mudafort*, A. Steele, I. Bayer and E. Loth "Water Droplet Impact Dynamics at Icing Conditions with and without Superhydrophobicity" AIAA Fluid Dynamics Meeting, AIAA-2012-3134, New Orleans, June 2012.
70. Y.H. Yeong*, A. Davis*, A. Steele, I. Bayer, G. DeCombarieu, and E. Loth, "An Electrolytic Reaction to Resist Saturation on Conductive Superhydrophobic Nanocomposites." Proceedings of the TechConnect WORLD – Nanotech Conference and Expo 2012. Santa Clara, CA, USA.
71. J. Cheek*, A. Steele, and E. Loth. "An Electrolytic Reaction to Resist Saturation on Conductive Superhydrophobic Nanocomposites" Proceedings of the TechConnect WORLD – Nanotech Conference and Expo 2012. Santa Clara, CA, USA.
72. E. Loth, A. Steele, B. Ichter*, M. Selig and P. Moriarty "Segmented Ultralight Pre-Aligned Rotor for Extreme-Scale Wind Turbines" AIAA Aerospace Sciences Meeting, AIAA-2012-1290, Nashville, Jan. 2012.
73. K. Clark* & E. Loth "Efficient LES Coupling of Near-Field and Far-Field Domains for Jet Flow" AIAA Aerospace Sciences Meeting, AIAA-2012-1109, Nashville, Jan. 2012.
74. J. Mickey*, C. Triphahn* & E. Loth "Lagrangian Parcel Volume Method for Particle Surface Flux" AIAA Aerospace Sciences Meeting, AIAA-2012-1109, Nashville, Jan. 2012.
75. A. Davis, Y. Yeong, A. Steele, E. Loth and I. Bayer "Spray Impact Resistance of a Superhydrophobic Nanocomposite Coating" AIAA Aerospace Sciences Meeting, AIAA-2012-91, Nashville, Jan. 2012.
76. G. Krishnan & E. Loth "Modeling Drop-Drop Collision Regimens for Variable Pressures and Viscosities" AIAA Aerospace Sciences Meeting, AIAA-2012-170, Nashville, Jan. 2012.

77. N. Titchener, H. Babinsky & E. Loth "Can Fundamental Shock-Wave / Boundary-Layer Interaction Research be Relevant to Inlet Aerodynamics" AIAA Aerospace Sciences Meeting, AIAA-2012-17, Nashville, Jan. 2012.
78. M. Rybalko & E. Loth "Detached Eddy Simulation of a Low-Boom Inlet" AIAA Aerospace Sciences Meeting, AIAA-2012-15, Nashville, Jan. 2012.
79. E. Loth "A Discrete Equation of Motion for Particle of Finite Size and Reynolds Number," (**Invited** Presentation and Paper) AIAA Fluid Dynamics Meeting, Honolulu, Hawaii, AIAA-2011-4039, June 2011.
80. M. Rybalko* & E. Loth "Simulations of a Supersonic Single-Stream Axisymmetric Inlet," (**Invited** Presentation and Paper) AIAA Applied Aerodynamics Meeting, Honolulu, Hawaii, AIAA-2011-3803, June 2011.
81. T. Gillen* & E. Loth "Simulations of a Supersonic Dual-Stream Axisymmetric Inlet," (**Invited** Presentation and Paper) AIAA Applied Aerodynamics Meeting, Honolulu, Hawaii, AIAA-2011-3802, June 2011.
82. J. Mickey*, E. Loth and Colin Bidwell "Lagrangian Parcel Volume Method for Unsteady Particle Concentration" SAE International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, IL, June 2011 (2011-38-0005).
83. Y.H. Yeong*, A. Steele*, I. Bayer, C. Lakeman, G. De Combarieu, E. Loth "Impact of Temperature and Humidity on Superhydrophobicity of Polyurethane/Organoclay Nanocomposites" TechConnect World, Boston, June 2011
84. A. Steele*, I. Bayer, Y.H. Yeong*, and E. Loth "Adhesion strength and superhydrophobicity in polyurethane/organoclay nanocomposites" (**Invited** Presentation and Paper) TechConnect World, Boston, June 2011
85. K. Clark*, Y.H. Yeong, E. Loth, J.F. Van Zante, D. Sheldon, and R. Ide "Flow Field Predictions of the NASA Glenn Icing Research Tunnel" SAE International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, IL, June 2011 (2011-38-0074).
86. Li, P., Loth, E., Simon, T., Van de Ven, J., and Crane, E., "Compressed Air Energy Storage for Offshore Wind Turbines," National Conference on Fluid Power, International Fluid Power Exposition, Las Vegas, NV, March 23-25, 2011.
87. Steele, A.; Bayer, I.; Martorana, P.; Loth, E. "Highly durable and abrasion resistant superhydrophobic organoclay nanocomposite films" 6th FPNI Ph.D Symposium. West Lafayette, Indiana, June 15-17, 2010.
88. S. Wang* & E. Loth "Simulating Impact Efficiency of IRT Models", AIAA Applied Aerodynamics Conference, Chicago, IL, AIAA-2010-4234, June 2010.
89. T. Gillen*, M. Rybalko* & E. Loth "Vortex Generators for Diffuser of Axisymmetric Supersonic Inlets", AIAA Flow Control Conference, Chicago, IL, AIAA-2010-4253, June 2010.
90. S. Lee*, E. Loth, & Babinsky, H. "Normal Shock Boundary Layer Interaction Control Using Micro-Vortex Generators", AIAA Fluid Dynamics Conference, Chicago, IL, AIAA-2010-4254, June 2010.
91. E. Loth, M.S. Selig & Moriarty, P. "Morphing Segmented Wind Turbine Concept", AIAA Applied Aerodynamics Conference, Chicago, IL, AIAA-2010-4400, June 2010.
92. M. Rybalko* E. Loth, & Babinsky, H. "Experimental Investigation of VG's for NSBLI with a Diffuser", AIAA Fluid Dynamics Conference, Chicago, IL, AIAA-2010-4464, June 2010.

93. S. Lee*, E. Loth, & Babinsky, H. “Micro-Ramped-Vanes Upstream of a Normal Shock Boundary Layer Interaction", AIAA Fluid Dynamics Conference, Chicago, IL, AIAA-2010-4466, June 2010.
94. S. Wang* and E. Loth “Lagrangian Concentration Differential Equation for Particle Trajectories", International Conference of Multiphase Flow, Tampa, FL, May-June 2010.
95. A. Lee* and E. Loth “Unsteady Droplet Dispersion in Cylinder Wake Flows", International Conference of Multiphase Flow, Tampa, FL, May-June 2010.
96. E. Loth “Point Force Collision Models for Solid and Fluid Particles", International Conference of Multiphase Flow, Tampa, FL, May-June 2010.
97. S. Lee*, E. Loth, Georgiadis, N. & DeBonis, J. “Effect of Mach Number of Flow Past Micro-Ramps", AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA-2009-4181, June 2009.
98. S. Lee* & E. Loth “Supersonic Boundary Layer Interactions with Various Micro-Vortex Generator Geometries", AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA-2009-4181, June 2009.
99. M. Rybalko*, Loth, E., Chima, R.V., Hirt, S.M., DeBonis, J.R., “Micro-Ramps for External Compression Low-Boom Inlets,” AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA Paper 2009-4206, June, 2009.
100. T. Coyne*, Davis, D., Koncsek, J., Howe, D., Loth, E., “Simulations of a Low-Boom Axisymmetric External-Compression Inlet,” AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA Paper 2009-4210, June, 2009.
101. Chiles*, Loth, E, Yeong, Y.H., Bragg, M, Elliott, G.., “Computations of Engine Bypass in a Wind Tunnel Configuration,” AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA Paper 2009-4208, June, 2009.
102. Y.H.Yeong, Chiles, I*., Bragg, M, Elliott, G., Loth, E, Conners, T., “Wind Tunnel Testing of a Nacelle Bypass Concept for a Quiet Supersonic Aircraft,” AIAA Fluid Dynamics Conference, San Antonio, TX, AIAA Paper 2009-4207, June, 2009.
103. A. Steele*, Bayer, I. Allen*, K & Loth, E. “Effect of Carbon Nanotube Additives on Drag Reduction in Pipe Flows," ASME Engineering Fluids Division Summer Meeting FEDSM2009-78122, April 2009, Vail, Colorado.
104. P. Martorana*, Bayer, I. Steele*, A. & Loth, E. “Effect of Nano-scale Additives on Gear Pump Performance," ASME Engineering Fluids Division Summer Meeting FEDSM2009-78149, April 2009, Vail, Colorado.
105. M. Rybalko*, E. Loth, & D. Lankford "LES Sub-Grid Diffusion for Lagrangian Particles", ASME Fluids Engineering Conference, Jacksonville, FL, Aug. 2008, FEDSM2008-55207.
106. E. Loth & H. Babinsky “Representative Flow Field of External Compression Inlets and Diffusers", AIAA Aerospace Sciences Meeting, Orlando, FL, AIAA-2009-0032, January 2009.
107. Steele*, S. Moran*, A. Cannon, W. King, I. Bayer & E. Loth, "Conformal Nano-composite Spray Coatings on Micro-Patterned Surfaces for Super-hydrophobicity", ASME Fluids Engineering Conference, Jacksonville, FL, Aug. 2008, FEDSM2008-55051.
108. R. Chin*, E. Hsiao-Wecksler & E. Loth "Fluid-Power Harvesting through the use of a Bellow with Application to Advanced Orthotic Braces", ASME Fluids Engineering Conference, Jacksonville, FL, Aug. 2008, FEDSM2008-55211.

109. E. Loth, J. March* & K. Krishnan* "Predicting Droplet-Droplet Collision Regimes", AIAA Aerospace Sciences Meeting, Reno, NV, AIAA-2008-1022, January 2008.
110. J. Kersey*, E. Loth, and D. Lankford "Effect of Evaporating Droplets on Shock Wave Attenuation", AIAA Aerospace Sciences Meeting, Reno, NV, AIAA-2008-0793, January 2008.
111. J.P. Clarke*, K. Cerven*, J. March*, M. Olszewski*, B. Wheaton*, M. Williams*, J. Yu*, M. Selig, E. Loth, and R. Burton "Conceptual Design of a Supersonic Air-Launch System", AIAA Aerospace Sciences Meeting, Reno, NV, January 2008.
112. S. Lee*, E. Loth, C. Wang & S. Kim "LES of Supersonic Turbulent Boundary Layers with μVGs", AIAA Fluid Dynamics Meeting, Miami FL, June 2007, AIAA-2007-3916.
113. E. Loth & P. Woo*, "Compressibility and Rarefaction Effects on Drag of a Spherical Particle", International Conference on Multiphase Flow, ICMF 2007, Leipzig, Germany.
114. E. Loth & C. Wang*, "Quasi-Steady Shape and Drag of Deformable Bubbles and Drops", International Conference on Multiphase Flow, ICMF 2007, Leipzig, Germany.
115. Dorgan, A. * & E. Loth, "Efficient calculation of the history force at finite Reynolds numbers", International Conference on Multiphase Flow, ICMF 2007, Leipzig, Germany.
116. V. Lee* & E. Loth, "Local Adaptive Timestepping for Lagrangian Particle Tracking", AIAA Aerospace Sciences Meeting, Reno NV, January 2007, AIAA-2007335.
117. R. Jaiman*, P. Guebelle, E. Loth, & X. Jiao, "Stable and Accurate Loosely-Coupled Scheme for Unsteady Fluid-Structure Interaction", AIAA Aerospace Sciences Meeting, Reno NV, January 2007, AIAA-2007-334.
118. G. Martin*, E. Loth, & D. Lankford, "Particle Host-Cell Determination in Unstructured Grids", AIAA Aerospace Sciences Meeting, Reno NV, January 2006, 2006-1084.
119. B. Tilotson*, J.C. Dutton & E. Loth, "Experimental Study of a Mach 3 Bump Compression Flowfield", AIAA Aerospace Sciences Meeting, Reno NV, January 2006, AIAA-2006-11.
120. D. Lankford, V. Lee*, E. Loth, "Development of a WIND-US Multiphase Capability", AIAA Aerospace Sciences Meeting, Reno NV, January 2006, AIAA-2006-635.
121. S. Lee*, E. Loth, A. Broeren & M. Bragg, "Simulation of Icing on a Cascade of Stator Blades", AIAA Aerospace Sciences Meeting, Reno NV, January 2006, AIAA-2006-208.
122. "Random-Walk Simulation of Particle Diffusion," (**Invited** Presentation and Paper) IUTAM Symposium on Computational Multiphase Flow, Argonne National Lab, Illinois, October 2004 (proceedings published by Kluwer Press, Fluid Mechanics and Its Applications, Vol. 81, 2006).
123. R. Jaiman*, J. Jiao, P. Guebelle, and E. Loth, "Assessment of Conservative Load Transfer for Fluid-Solid Interface with Non-matching Meshes", 8th U.S. National Congress on Computational Mechanics, Austin, TX, July 24-28, 2005.

124. A.J. Dorgan*, E. Loth, and E. Frazzoli, "Autonomous Control of a Micro-Aircraft Network in an Atmospheric Boundary Layer", AIAA Aerospace Sciences Meeting, Reno NV, January AIAA-2004-0539.
125. K. Srinivasan*, E. Loth, and J.C. Dutton "Aerodynamics of Recirculating Flow Control Devices for Normal/Shock Boundary Layer Interaction", AIAA Aerospace Sciences Meeting, Reno NV, AIAA-2004-0426, January 2004.
126. C. Bhargava*, E. Loth, and M. Potapczuk "Numerical Simulation of Icing Clouds in the NASA Glenn Icing Research Tunnel", AIAA Aerospace Sciences Meeting, Reno NV, AIAA-2004-0563, January 2004.
127. J. Pan* and E. Loth, "Detached Eddy Simulations for Airfoil with Ice Shapes", AIAA Aerospace Sciences Meeting, Reno NV, AIAA-2004-0564, January 2004.
128. E. Loth, F. Roos, D. Davis, J. Mace, and R. Jaiman*, "SBLI Flow Control with Mesoflaps for a Mach 2 Inlet", AIAA Aerospace Sciences Meeting, AIAA-2004-0855, Reno NV, January 2004.
129. S. Lee*, W. Sutomo, C. Liu, and E. Loth, "MEMS-based Electrolytical Microbubbler in a Water Channel", 4th ASME/JSME Fluids Engineering Conference, Honolulu HA, July 2003, FEDSM2003-45646.
130. E. Loth and W. Sherman, "Multiphase Flow Rendered in Virtual Reality", 4th ASME/JSME Fluids Engineering Conference, Honolulu HA, July 2003, FEDSM2003-45200.
131. A. J. Dorgan*, E. Loth, T. Bocksell*, and P.K. Yueng, "Boundary Layer Dispersion of Near-Wall Injected Particles of Various Inertias", 4th ASME/JSME Fluids Engineering Conference, Honolulu HA, July 2003, FEDSM2003-45492.
132. Bhargava*, E. Loth, and M. Potapczuk, "Aerodynamic Simulations of the GRC Icing Research Tunnel", AIAA Aerospace Sciences Meeting, Reno NV, January 2003, AIAA-2003-0566.
133. R. Jaiman*, E. Loth, and J.C. Dutton, "Numerical Simulations of Normal Shock-Wave Boundary Layer Interaction Control using Mesoflaps", AIAA Aerospace Sciences Meeting, Reno NV, AIAA-2003-0729, January 2003.
134. J. Pan*, E. Loth & M. Bragg “"Simulations of Airfoils with Ice-Shapes", AIAA Aerospace Sciences Meeting, Reno NV, January 2003, AIAA-2003-0729.
135. S. Kim, E. Loth, and J.C. Dutton, "Simulations of Mesoflap Flow Control for Ramp Oblique Shock/Boundary Layer Interactions", AIAA Fluid Dynamics Meeting, St. Louis MO, June 2002, AIAA 2002-3117.
136. Y. Lee, E. Hafenricheter*, R. Jaiman*, M. Orphanides, J.C. Dutton, and E. Loth, "Skin Friction Measurements in Normal Shock-Wave Boundary-Layer Interaction Control with Aeroelastic Mesoflaps", AIAA Aerospace Sciences Meeting, Reno NV, January 2002, AIAA 2002-0979.
137. "Mesoflaps for Supersonic Inlet Flow Control," (**Invited** Presentation and Paper) AIAA Fluid Dynamics Meeting, St. Louis, MO, June 2002.
138. "Smart Materials for Mesoflap Bleed and Injection," (**Invited** Presentation and Paper) ASME Summer Fluids Engineering Meeting, FEDSM2001-18277, New Orleans, May-June 2001.
139. E. Loth, W. Sherman, A. Aumann, and T. Bocksell*, "Virtual Rendering of Multiphase Flows", Fourth International Conference on Multiphase Flows, New Orleans, LA, May-June 2001.

140. T. Bocksell* & E. Loth, "Numerical Simulation of Bubble Diffusion in a Turbulent Boundary Layer", Fourth International Conference on Multiphase Flows, New Orleans, LA, May-June 2001.
141. P. Bhattacharjee* & E. Loth, "Simulation of Air Curtain Entrainment", ASME Summer Fluids Engineering Meeting, New Orleans, LA, May-June 2001, FEDSM2001-18201.
142. B. Field* & E. Loth, "Measurements of Air Curtain Entrainment", ASME Summer Fluids Engineering Meeting, New Orleans, LA, May-June 2001, FEDSM2001-18168.
143. M. Orphanides, E. Hafenricheter*, Y. Lee, J.C. Dutton, E. Loth and S. McIlwain, "Shock Position Sensitivity and Performance of SBLI Passive-Control Methods", AIAA Fluid Dynamics Meeting, Anaheim, CA, June 2001, AIAA 2001-2439.
144. E. Hafenricheter*, Y. Lee, S. McIlwain, J.C. Dutton, and E. Loth, "Experiments on Normal Shock/Boundary Layer Interaction Using Aeroelastic Mesoflaps", AIAA Aerospace Sciences Meeting, Reno NV, January 2001, AIAA 2001-0156.
145. S. Kumar* and E. Loth, "Detached Eddy Simulations of an Iced-Airfoil", AIAA Aerospace Sciences Meeting, Reno NV, January 2001, AIAA 2001-0678.
146. E. Loth, "An Eulerian Model for Free-Shear Multiphase Turbulent Diffusion", ASME IMECE Meeting, Orlando, FL, November 2000.
147. K. Felton* & E. Loth, "Turbulent Bubble Dispersion in Boundary Layer", ASME Summer Fluids Engineering Meeting, Boston, MA, July 2000, FEDSM2000-11140.
148. D. Gefroh*, E. Hafenricheter, J.C. Dutton, S. McIlwain, E. Loth, J. C. Dutton, and P. Geubelle "Simulation and Experimental Analysis of a Novel SBLI Flow Control System," AIAA Fluid Dynamics 2000, Denver CO, June, AIAA 2000-2237.
149. B. Wood*, E. Loth, P. Geubelle, S. McIlwain "A Numerical Methodology for an Aeroelastic SBLI Control," AIAA Aerospace Sciences Meeting, Reno NV, January 2000, AIAA 2000-0552.
150. S. Kumar* and E. Loth "Aerodynamic Simulations of Airfoils with Large-Droplet Ice-Shapes," AIAA Aerospace Sciences Meeting, Reno NV, January 2000, AIAA 2000-0238.
151. P. Hancir*, A. Anderson* and E. Loth "Computations of Droplet Distribution in the NASA IRT," AIAA Aerospace Sciences Meeting, Reno NV, January 2000, AIAA 2000-0101.
152. D. Gefroh*, E. Hafenricheter, J.C. Dutton, S. McIlwain, and E. Loth "Experiments of Aeroelastic Mesoflaps," AIAA Aerospace Sciences Meeting, Reno NV January 2000, AIAA 2000-0355.
153. "Aeroelastic Control of Turbulent SBLI," ECOMASS 2000, Barcelona, Spain, September 2000.
154. "Smart Mesoflaps for Control of Shock Boundary-Layer Interactions," (Invited Presentation) AIAA Fluid Dynamics 2000, Denver, Co, June, AIAA-2000-2476.
155. "Numerical Approaches for Motion of Dispersed Particles, Drops, and Bubbles," (Invited Presentation) ASME Summer Fluids Engineering Meeting, San Francisco, CA, July 1999.
156. B. Wood*, E. Loth, and P. Geubelle "Shock/Boundary-Layer Interaction Control with Aeroelastic Transpiration," ASME Summer Fluids Engineering Meeting, San Francisco, CA, July 1999, FEDSM99-6924.

157. T. Bocksell* and E. Loth "A Lagrangian CRW Model for Diffusion of Bubbles and Particles," ASME Summer Fluids Engineering Meeting, San Francisco, CA, July 1999, FEDSM99-7366.
158. K. Felton* and E. Loth "Concentration Distribution of Spherical Bubbles in a Turbulent Boundary Layer," ASME Summer Fluids Engineering Meeting, San Francisco, CA, July 1999, FEDSM99-7360.
159. P. Hancir* and E. Loth "Computations of Droplet Distribution in the IRT," AIAA Aerospace Sciences Meeting, Reno NV, January 1999, AIAA 99-0097.
160. B. Wood*, E. Loth, and P. Geubelle "Mesoflaps for Aeroelastic Transpiration for SBLI Control," AIAA Aerospace Sciences Meeting, Reno NV, January 1999, AIAA 99-0614.
161. T. Dunn* and E. Loth "Effects of Simulated-Spanwise-Ice Shapes on Airfoils: Computational Investigation" AIAA Aerospace Sciences Meeting, Reno NV, January 1999, AIAA 99-0093.
162. B. Ford* and E. Loth "Diffusion of Ellipsoidal Bubbles in a Turbulent Shear Layer," International Conference on Multiphase Flow, Lyon, France, June 1998.
163. K. Felton* and E. Loth "Sub-Millimetric Bubbly Flow in a Vertical Turbulent Boundary Layer," International Conference on Multiphase Flow, Lyon, France, June 1998.
164. T. Bocksell* and E. Loth "An Enhanced DRW Turbulent Diffusion Model for Free Shear Flows," International Conference on Multiphase Flow, Lyon, France, June 1998.
165. E. Loth, J. Boris and M. Emery "Very Large Bubble Cavitation in a Temporally-Evolving Free Shear Layer," ASME Summer Fluids Engineering Meeting, Washington, D.C., June 1998.
166. T. Bocksell* and E. Loth "Stochastic Diffusion Models for Particles in Wakes and Jets," ASME Summer Fluids Engineering Meeting, Washington, D.C., June 1998.
167. S. Lee, T. Dunn*, H. Gurbacki, M. Bragg, and E. Loth "An Experimental and Computational Investigation of Spanwise-Step-Ice Accretions on Airfoil Aerodynamics," AIAA Aerospace Sciences Meeting, Reno NV, January 1998, AIAA 98-0490.
168. B. Ford* and E. Loth "Forces on Ellipsoidal Bubbles in a Turbulent Free Shear Layer," ASME Summer Fluids Engineering Meeting, FEDSM97-3524, Vancouver, Canada, June 1997.
169. E. Loth "Dispersion of Particles, Droplets and Bubbles in a Turbulent Free Shear Layer," ASME Summer Fluids Engineering Meeting, FEDSM97-3607, Vancouver, Canada, June 1997.
170. E. Loth "Model of Two-Phase Turbulent Dispersion in a Free Shear Layer," AIAA Aerospace Sciences Meeting, Reno NV, January 1997, AIAA 97-0759.
171. E. Loth, S. Sivier* and J. Baum "Dusty Detonation with Unstructured Finite Elements," Aerospace Sciences Meeting, Reno NV, January 1997, AIAA 97-0805.
172. B. DeAngelis*, E. Loth, D. Lankford, and C.S. Bartlett "Computations of Droplet Turbulent Droplet Dispersion for Wind Tunnel Icing Tests," AIAA Aerospace Sciences Meeting, Reno NV, AIAA 95-0634, January 1996.
173. R. Mahadevan*, E. Loth, and K. Chand* "Tone Excitation of a Supersonic Bounded Jet," ASME/JSME Fluids Engineering Conference, Hilton Head, SC, August 1995.

174. T. Oakley*, E. Loth, and R. Adrian "A Study of Bubble Dispersion in a Turbulent Free Shear Layer Using Cinematic PIV," ASME/JSME Fluids Engineering Conference, Hilton Head, SC, August 1995.
175. M. Taebi-Rahni*, E. Loth, and G. Tryggvason "Unsteady Forces on Large Spherical and Ellipsoidal Bubbles," ASME/JSME Fluids Engineering Conference, Hilton Head, SC, August 1995.
176. M. Cebrzynski* and E. Loth "Changes in Thickness of a Free Shear Layer Due to Large Bubbles," ASME/JSME Fluids Engineering Conference, Hilton Head, SC, August 1995.
177. M. Matthys* and E. Loth "Unsteady Low Reynolds Number Shock Boundary Layer Interactions," ASME/JSME Fluids Engineering Conference, Hilton Head, SC, August 1995.
178. R. Mahadevan*, E. Loth, and J.C. Dutton "Effect of an Expansion-Compression Wave Pair on Free Shear Layer Dynamics," AIAA Aerospace Sciences Meeting, Reno NV, AIAA 95-0475, January 1995.
179. M. Taebi-Rahni*, E. Loth, G. Tryggvason "Direct Numerical Simulation of Large Bubbles in a Planar Free Shear Layer," 12th US National Congress of Theoretical and Applied Mechanics, Seattle, WA, June 1994.
180. T. Oakley*, E. Loth, R. Adrian "Cinematic PIV of Bubble Dispersion in a Turbulent Free Shear Layer," 12th US National Congress of Theoretical and Applied Mechanics, Seattle, WA, June 1994.
181. C. Oh* and E. Loth "A Numerical Investigation of Supersonic Turbulent Shear Layers: Effects of Compressibility," AIAA Fluid Dynamics, Plasma Dynamics and Lasers Conference, AIAA 94-2244, Colorado Springs, CO, June 1994.
182. S. Sivier*, E. Loth, J. Baum, and R. Lohner "Dusty Shock Simulations with an Unstructured Grid and Adaptive Finite Elements," AIAA Fluid Dynamics, Plasma Dynamics and Lasers Conference, AIAA 94-2362, Colorado Springs, CO, June 1994.
183. T. Oakley*, E. Loth, R. Adrian "Cinematic Particle Image Velocimetry of a Turbulent Free Shear Layer," AIAA Fluid Dynamics, Plasma Dynamics and Lasers Conference, AIAA 94-2298, Colorado Springs, CO, June 1994.
184. J. Loth and E. Loth "A Novel Staged Internal Combustion Engine," AIAA/SAE/ASME/ ASEE Joint Propulsion Conference, AIAA 94-2723, Indianapolis, June 1994.
185. E. Loth and J. Loth "Detonation Internal Combustion Engine Concept," ASME Conference on Alternate Fuels, Engine Performance and Emissions, Morgantown, WV, September 1993.
186. J. Loth and E. Loth "Isolated Combustion and Diluted Expansion Engine Concept," ASME Conference on Alternate Fuels, Engine Performance and Emissions, Morgantown, WV, September 1993.
187. C. Oh* and E. Loth "Simulation of Naturally Excited Supersonic Mixing Layers," 13th Turbulence Symposium, Rolla, MO, September 1992.
188. F. Davis* and E. Loth "Visualization of Turbulence Modulation Due to Large Particles," 13th Turbulence Symposium, Rolla, MO, September 1992.
189. M. Taebi-Rahni*, E. Loth and G. Tryggvason "Numerical Study of Turbulence Bubble Interaction in a Bubbly Mixing Layer," 13th Turbulence Symposium, Rolla, MO, September 1992.

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195. J. Loth, S. Khalid, and E. Loth "Proposed Improved Natural Gas Engine Using a Separate Detonation Chamber," AIAA/SAE/ASME/ASEE Joint Propulsion Conference, Sacramento, CA, June 1991, AIAA 91-1882.
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200. E. Loth "Shocks Caused by Cross-Stream Pressure Gradients," Annual Fluid Dynamics Meeting of the American Physical Society, Palo Alto, CA, November 1989.
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204. R. Lohner, J. Baum, E. Loth and R. Ramamurti "Finite Element Solver for Axisymmetric and Compressible Flows." AIAA Fluid Dynamics, Plasma Dynamics and Lasers Conference, Buffalo NY, AIAA 89-1794, June 1989
205. E. Loth "Numerical Simulation of Shock-Elevated Box Interaction Using an Adaptive Finite Element Shock-Capturing Scheme," Annual Fluid Dynamics Meeting of the American Physical Society, Buffalo, NY, November 1988.

206. E. Loth "A Numerical Solution of the Downwash Associated with a Blown-Flap System." AIAA Aerospace Sciences Meeting, Reno NV, AIAA 86-0473, January 1986.