

Curriculum Vitae – Götz Bramesfeld

RESEARCH INTEREST

Applied aerodynamics, flight vehicle design and analysis, small UAV and MAV configuration designs, ethical challenges of autonomous flight, powerless flight, flight dynamics.

TEACHING INTEREST

Aerodynamics, aircraft design, design ethics, stability and control, project-based aircraft design.

EDUCATIONAL BACKGROUND

The Pennsylvania State University, University Park, Pennsylvania:

- Ph.D., Aerospace Engineering, August 2006
- Master of Science, Aerospace Engineering, 1999

Technische Universität Braunschweig, Braunschweig, Germany:

- Diplom Ingenieur, Mechanical Engineering, 1998

University of Waterloo, Waterloo, Ontario, Canada

- Exchange Student (German Academic Exchange Service fellowship), 1994 – 1995

PROFFESIONAL LICENSE

Professional Engineers Ontario

- Professional Engineer License No. 100207685, 2015

ACADEMIC APPOINTMENTS

August 2013 – present	Associate Professor (since April 2018), before Assistant Professor Department of Aerospace Engineering Ryerson University, Toronto, Ontario, Canada
July 2007 – June 2013	Assistant Professor Department of Aerospace and Mechanical Engineering Saint Louis University, St. Louis, MO, USA
August 2000 – May 2007	Visiting Assistant Professor, 2006-2007, Instructor, 2003-2006; Graduate Lecturer, 2000-2002 Department of Aerospace Engineering The Pennsylvania State University, University Park, PA, USA

PAST PROFESSIONAL EXPERIENCE

Since January 2017	<i>Engineering Consultant:</i> Model 234 (Chinook) rotor load predictions, Columbia Helicopter, Aurora, OR, USA
March 2009 – October 2009	<i>Engineering Consultant:</i> Advanced UAV concept study General Atomics Aeronautical Systems, Poway, CA, USA
Nov. 2006 – March 2007	<i>Engineering Consultant:</i> Wing-planform and winglet design for single- engine turbo-prop and small jet aircraft, Epic Air, Bend, OR, USA
June 2004 – August 2004	<i>Test Engineer:</i> Wind-tunnel tests of an airfoil for use on a folding-wing unmanned-air vehicle, Naval Research Laboratory, Alexandria, VA, USA
June 2003 – August 2003	<i>Test Engineer:</i> Wind-tunnel experiments on a circulation-controlled airfoil for wind turbine applications, AdvanTek International, Boothwyn, PA, USA
Sept. 1999 – August 2000	<i>Flight-Loads and Performance Engineer:</i> Compound helicopter Piasecki Aircraft Corporation, Essington, PA, USA
Oct. 1990 – May 1997	<i>Member, President,</i> 1993, Akaflieg Braunschweig, Braunschweig, Germany

REFEREED JOURNAL PUBLICATIONS

(* indicates authors who were supervised by Dr. Bramesfeld)

- J21 *Kolaei, A. and Bramesfeld, G., “A FEniCS-Based Model for Prediction of Boundary Layer Transition in Low-Speed Aerodynamic Flows,” *Part G: Journal of Aerospace Engineering*, accepted, June 2019. doi:10.1177/0954410019855818.
- J20 *Cole, J., Maughmer, M.D., Bramesfeld, G., Kinzel, M., “A Higher-Order Free-Wake Method for Propeller-Wing Systems,” *Journal of Aircraft*, Vol. 56, No.1, January 2019, <https://doi.org/10.2514/1.C034720>.
- J19 *Kolaei, A., *Barcelos, D., and Bramesfeld, G., “Experimental Analysis of a Small-Scale Rotor at Various Inflow Angles,” *International Journal of Aerospace Engineering*, Volume 2018, Article ID 2560370, Oct. 2018, <https://doi.org/10.1155/2018/2560370>.
- J18 *Yeung, A., Bamesfeld, G., Chung, J, Foster, S., “Measuring low-altitude wind gusts using the unmanned aerial vehicle GustAV,” *Journal of Unmanned Systems*, Vol. 6, No. 4, pp. 235-248, Sept. 2018, <https://doi.org/10.1139/juvs-2017-0029>.
- J17 Schirra, J., *Bissonnette, W., and Bramesfeld, G., “Wake-Model Effects on Induced Drag Prediction of Staggered Boxwings,” *Aerospace*, Vol. 5, No. 1, January 2018, doi:10.3390/aerospace5010014.
- J16 *Bissonnette, W. and Bramesfeld, G., “Effects of Wake Shapes on High-Lift System Aerodynamic Predictions,” *Aerospace*, Vol. 4, No. 2, April 2017, doi: 10.3390/aerospace4020024.
- J15 *Krebs, T. and Bramesfeld, G., “Using an Optimization Process for Sailplane Winglet Design,” *Aeronautical Journal*, Vol. 120, No. 1733, pp. 1726-1745, November 2016, doi: 10.1017/aer.2016.83.
- J14 Bramesfeld, G. and Malik, A., “Micro Aerial Vehicles: Are Two Wings Better than One?” *Journal of Aircraft*, Vol. 52, No. 5, pp. 1575-1585, Sept.-Oct. 2015, doi: <http://arc.aiaa.org/doi/abs/10.2514/1.C033012>.
- J13 *Prinster, R. and Bramesfeld, G., “Design and Testing of Foam-Inflated Wings for Small Unmanned Aerial Vehicles,” *Journal of Unmanned Vehicle Systems*, Vol. 3, No. 4, pp. 176-191, August 2015, doi: 10.1139/juvs-2014-0018.
- J12 LeBeau, R. P., Bramesfeld, G., Warning, S. Palotai, C., *Dreas, J., *Krofta, J., “Examining Conditions for the Potential Exploration of the Atmosphere of Uranus with Autonomous Gliders,” *Journal of Technical Soaring*, Vol. 39, No. 3, pp. 18-29, July 2015.
- J11 *Combes, T., Malik, A., Bramesfeld, G., McQuilling, M., “Efficient Fluid-Structure Interaction Method for Conceptual Design of Flexible, Fixed-Wing Micro Air Vehicle Wings,” *AIAA Journal*, Vol. 53, No. 6, pp. 1442-1454, June 2015.
- J10 *Kody, F., Bramesfeld, G., and Schmitz, S., “An Efficient Methodology for Using a Multi-Objective Evolutionary Algorithm for Winglet Design,” *Journal of Technical Soaring*, Vol. 37, No. 3, pp. 45-56, July 2013.
- J9 *Pifer, E.A. and Bramesfeld, G., “Measuring Wing Profile Drag using an Integrating Wake Rake,” *Journal of Technical Soaring*, Volume 36, No. 3, July 2012.

Curriculum Vitae – Götz Bramesfeld

- J8 *Kody, F. and Bramesfeld, G., “Small UAV Design Using an Integrated Design Tool,” *International Journal of Micro Air Vehicles*, Volume 4, No. 2, June 2012.
- J7 Bramesfeld, G., "Small and Micro Aerial Vehicles: How Much Span is Too Much Span?" *Journal of Aircraft*, Vol. 47, No. 6, pp. 1982–1990, Nov.–Dec. 2010.
- J6 Maughmer, M.D. and Bramesfeld, G., “Experimental Investigation of Gurney Flaps,” *Journal of Aircraft*, Vol. 45, No. 6, pp. 2062–2067, Nov.–Dec. 2008.
- J5 Bramesfeld, G. and Maughmer, M.D., “The Effects of Wake Rollup on Formation-Flight Aerodynamics,” *Journal of Aircraft*, Vol. 45, No.4, pp. 1167–1173, July–August 2008.
- J4 Bramesfeld, G. and Maughmer, M.D., “A Relaxed Wake Vortex-Lattice Method Using Distributed Vorticity Elements,” *Journal of Aircraft*, Vol. 45, No.2, pp. 560–568, March–April 2008.
- J3 Bramesfeld, G., Maughmer, M.D., and Willits, S.M., “Piloting Strategies for Controlling a Transport Aircraft after Vertical-Tail Loss,” *Journal of Aircraft*, Vol. 43, No. 1, pp. 216–225, Jan.–Feb. 2006.
- J2 Bramesfeld, G., Wierach, P., Ückert, C., Kickert, R., “A Feasibility Study of a Contour-Adaptable Airfoil for a FAI-Racing Class Sailplane,” *Journal of Technical Soaring*, Vol. XXIX, No. 2, pp. 36-43, April 2005.
- J1 Bramesfeld, G. and Maughmer, M.D., “An Experimental Investigation of Self-Actuating, Upper-Surface, High-Lift Enhancing Effectors,” *Journal of Aircraft*, Vol. 39, No. 1, pp. 120–124, Jan.–Feb. 2002.

REFEREED JOURNAL PUBLICATIONS UNDER REVIEW

(* indicates authors who were supervised by Dr. Bramesfeld)

- J1. *Krebs, T. and Bramesfeld, G., “A Sailplane Split-Winglet Design Study,” *Aeronautical Journal*, revisions requested April 2018.
- J2. *Choephel, T., Schmitz, S., Maughmer, M., Bramesfeld, G., “Aerodynamic Analysis of Helicopter Rotors Using a Higher-Order, Free-Wake Method,” *Journal of Aircraft*, under review.
- J3. *Cole, J., Maughmer, M., Bramesfeld, G., Kinzel, M., “Time-Accurate Propeller-Wing System Lift Prediction using the Kutta-Joukowski Theorem,” *Journal of Aircraft*, under review.

PEER REVIEWED CONFERENCE PROCEEDINGS

(* indicates authors who were supervised by Dr. Bramesfeld)

- C1. *Melville, M. and Bramesfeld, G., “Development of Flight Dynamics Model for a High-Performance Sailplane,” CASI Aero 2019 Conference, Montreal, QC, Canada, May 14-16 2019.
- C2. *Barcelos, D., Bramesfeld, G., and Apkarian, J., “Efficiency Comparison of a Passively Coupled Tiltrotor and Traditional Small UAV Configurations,” CASI Aero 2019 Conference, Montreal, QC, Canada, May 14-16 2019.

Curriculum Vitae – Götz Bramesfeld

- C3. *McQuaid, J., *Kolaei, A., Bramesfeld, G. and Walsh, P., “Aerodynamic Analysis of a Multirotor Drone under Vortex Ring State,” CASI Aero 2019 Conference, Montreal, QC, Canada, May 14-16 2019.
- C4. Cole, J., *Krebs, T., * Barcelos, D., *Yeung, A., Bramesfeld, G., “On the Integrated Aerodynamic Design of a Propeller-Wing System,” 2019 AIAA Aerospace Sciences Meeting, San Diego, CA, 7-11 January 2019.
- C5. Bissonnette, B., *Krebs, T., *Melville, M., Bramesfeld, G., “An Ultra-Long Endurance Solar-Powered Unmanned Airplane,” XXXIV OSTIV Congress, Hosin, Czech Republic, 28 July-3 August 2018.
- C6. *Barcelos, D., *Kolaei, A., and Bramesfeld, G., “Performance Prediction of Multirotor Vehicles Using a Higher Order Potential Flow Method,” 2018 AIAA Aerospace Sciences Meeting, Kissimmee, FL, 8-12 January 2018.
- C7. *Melville, M., *Kolaei, A., Bramesfeld, G., Alighanbari, H., “An Efficient Model for Aeroelastic Tailoring of Aircraft Wings Under Gust Loads,” 2018 AIAA Aerospace Sciences Meeting, FL, 8-12 January 2018.
- C8. *Tsaltas, J. and Bramesfeld, G., “Trim Routine for Multirotor Vehicles in Straight and Level Flight,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017
- C9. *Krebs, T. and Bramesfeld, G., “A Sailplane Split-Winglet Design Study,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017
- C10. *Yeung, A. and Bramesfeld, G., “Measuring Atmospheric Gusts at Low Altitude,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017
- C11. *Cole, J., Maughmer, M., Bramesfeld, G., Kinzel, M., “A Higher-Order Free-Wake Method for Propeller-Wing Systems,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017.
- C12. *Cole, J., Maughmer, M., Bramesfeld, G., Kinzel, M., “A Practical Application of an Unsteady Formulation of the Kutta-Joukowski Theorem,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017.
- C13. Colletti, C., LeBeau, R., and Bramesfeld, G., “A Numeric Method to Evaluate Autonomous Gliders for Exploration of Outer Solar System Atmospheres,” 2017 AIAA Aviation and Aeronautics Forum and Exposition, Denver, CO, 5-9 June 2017.
- C14. *Tsaltas, J. and Bramesfeld, G., “Trim Routine of Multirotor Vehicles in Straight and Level Flight,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.
- C15. *Barcelos, D., Kolaei, A. and Bramesfeld, G., “Higher Order Potential Flow Analysis of Rotor Performance for Unmanned Aircraft Systems,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.
- C16. *Yeung, A. and Bramesfeld, G., “Design and Testing of Small Unmanned Aerial System for Low-altitude Wind Gust Modeling,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.

Curriculum Vitae – Götz Bramesfeld

- C17. *Cole, J. and Bramesfeld, G., “Performance Prediction of Propeller-Wing Systems for Design Space Exploration,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.
- C18. *George, I. and Bramesfeld, G., “Effect of Flight Orientation on Quadcopter Flight Performance,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.
- C19. *Melville, M., Bramesfeld, G., Alighanbari, H., Kolaei, A. “The Effects of Elastic Deformation on HALE Aircraft Flight Performance,” 63rd CASI Aeronautics Conference, Toronto, ON, May 16-18 2017.
- C20. *Krebs, T. and Bramesfeld, G., “An Optimization Approach to Split-Winglet Design for Sailplanes,” 54th AIAA Aerospace Sciences Meeting, San Diego, CA, 4-8 January 2016.
- C21. *Bissonnette, W. and Bramesfeld, G., “Effects of Wake Shapes on High Lift System Aerodynamics,” 54th AIAA Aerospace Sciences Meeting, San Diego, CA, 4-8 January 2016.
- C22. *Carroll, T., *George, I., Bramesfeld, G., Raahemifar, K., “Multi-disciplinary Design of Small Rotor Blades in Multiple Rotor Configurations,” 54th AIAA Aerospace Sciences Meeting, San Diego, CA, 4-8 January 2016.
- C23. *Krebs, T. and Bramesfeld, G., “Maximizing Sailplane Average Cross-Country Speed through Winglet Optimization,” 62nd CASI Aeronautics Conference, Montreal, QC, May 19-21 2015.
- C24. *Bissonnette, W., *East, B., and Bramesfeld, G., “Design Optimization of the Flap System of a Large Transport Aircraft,” 62nd CASI Aeronautics Conference, Montreal, QC, May 19-21 2015.
- C25. *George, I., *Carroll, I., and Bramesfeld, G., “PropOp: Multi-disciplinary Optimization Tool for the Design Phase for a UAV Propeller Design-Fabrication-Test Stream,” 62nd CASI Aeronautics Conference, Montreal, QC, May 19-21 2015.
- C26. *Bissonnette, W. and Bramesfeld, G., “Demonstration of a Conceptual Design Tool for Multiple Lifting Elements,” 53rd AIAA Aerospace Sciences Meeting, Kissimmee, FL, 5-9 January 2015, AIAA 2015-1031.
- C27. *Combes, T.P., Zhang, F., Hackett, M., Malik, A., and Bramesfeld, G., “Performance Reliability Assessment of a Flexible Wing Micro Air Vehicle using an Efficient Fluid-Structure Interaction Method,” 31st AIAA Applied Aerodynamics Conference, San Diego, CA, June 24-27 2013.
- C28. *Kody, F., Bramesfeld, G., and Schmitz, S., “Winglet Design for Sailplanes Using a Multi-Objective Evolutionary Algorithm,” 51st AIAA Aerospace Sciences Meeting, Grapevine, TX, 7-10 January 2013.
- C29. *Cole, J., Maughmer, M., and Bramesfeld, G., “Aerodynamic Design Considerations for Tiltrotor Wing Extensions and Winglets,” 51st AIAA Aerospace Sciences Meeting, Grapevine, TX, 7-10 January 2013.
- C30. Potvin, J., Reyes, P., McQuillcing, M., Goldbogen, J.A., Shadwick, R.E., Bramesfeld, G., “Rorqual whale hydrodynamics and body drag during non-feeding transport, as revealed by Computational Fluid Dynamics (CFD),” 2013 Annual Meeting, Society for Integrative and Comparative Biology, San Francisco, CA, January 3-7 2013.

Curriculum Vitae – Götz Bramesfeld

- C31. *Combes, T., Malik, A., and Bramesfeld, G., “Efficient Fluid-Structure Interaction Method for Optimization of Micro Air Vehicle Wings,” 12th AIAA Aviation Technology, Integration, and Operations Conference and 14th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference, Indianapolis, IN, September 17-19 2012.
- C32. *Kody F., Schmitz, S., and Bramesfeld, G., “Design of a Winglet for a Sailplane using a Multi-Objective Evolutionary Algorithm Optimization Method,” XXXI OSTIV Congress, Uvalde, TX, August 8-15, 2012.
- C33. LeBeau, R., Bramesfeld, G., Warning, S., Palotai, C., “Examining Atmospheric Conditions for the Potential Exploration of Gas Giant Vorticities with Autonomous Gliders,” XXXI OSTIV Congress, Uvalde, TX, August 8-15, 2012.
- C34. Bramesfeld, G., *Pifer, E., Vierra, B., Premi, A., “Experimental Comparison: Integrating Wake Rake and Wake Survey,” XXXI OSTIV Congress, Uvalde, TX, August 8-15, 2012.
- C35. *Combes, T., Malik, A., and Bramesfeld, G., “Fluid-Structure Interaction Simulation for the Design of Bio-Inspired Micro Air Vehicle Wings,” AIAA 30th Applied Aerodynamics Conference, New Orleans, LA, June 25-28, 2012.
- C36. *Ghobadi, K., *Pifer, E., LeBeau, R., Bramesfeld, G., McQuilling, M., “A Computational and Experimental Investigation of Flow over an Inflatable Wing,” AIAA 30th Applied Aerodynamics Conference, New Orleans, LA, June 25-28, 2012.
- C37. *Ironsides, D. J., Bramesfeld, G., and Schwochow, J., “Modeling of Wing Drag Reductions due to Structural Dynamics in Atmospheric Gusts,” AIAA 28th Applied Aerodynamics Conference, Chicago, IL, June 28-July 1, 2010, AIAA-2010-4683.
- C38. *Copenhaver, S., *Gucwa, P., *Reder, N., Bramesfeld, G., “Alternate Fuel Source Trainer,” ASEE Annual Conference Proceedings, Austin, TX, June 14-17, 2009, AC 2009-01765.
- C39. *Safont, D., *Rodrigue, B., *Maday, J., *Reese, A., Vilaplana, F., Bramesfeld, G., “Bumblebee,” ASEE Annual Conference Proceedings, Austin, TX, June 14-17, 2009, AC 2009-2458.
- C40. Bramesfeld, G., *Ironsides, D. J., and Schwochow, J., “Simplified Modeling of Wing-Drag Reduction due to Structural Dynamics and Atmospheric Gusts,” AIAA 26th Applied Aerodynamics Conference, Honolulu, HI, Aug. 18-21, 2008, AIAA 2008-6238.
- C41. Langelaan, J. and Bramesfeld, G., “Gust Energy Extraction for Mini- and Micro-Uninhabited Aerial Vehicles,” 46th AIAA Aerospace Sciences Meeting, Reno, NV, Jan. 7-10, 2008, AIAA 2008-223.
- C42. Bramesfeld, G. and Maughmer, M.D., “The Effects on Formation Flight Aerodynamics due to Wake Rollup,” 45th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, Jan. 8-11, 2007, AIAA 2007-729.
- C43. Bramesfeld, G., Wierach, P., Ückert, C., Kickert, R., “A High-Performance Sailplane Airfoil with a Variable Upper-Surface Contour,” 15th International Conference on Adaptive Structures and Technologies, Bar Harbour, ME, Oct. 25-27, 2004.

Curriculum Vitae – Götz Bramesfeld

- C44. Bramesfeld, G., Maughmer, M.D., Horstmann, K.H., “A Free-Wake, Lifting-Surface Model Using Distributed Vorticity Elements,” AIAA 22nd Applied Aerodynamics Conference, Providence, RI, Aug.16-29, 2004, AIAA 2004-5075.
- C45. Maughmer, M.D., Lesieutre, G., Bramesfeld, G., Thepvongs, S., Kinzel, M., and Anderson, W., “Miniature Trailing-Edge Effectors for Rotorcraft Applications,” AHS 59th Annual Forum, Phoenix, AZ, May 6–8, 2003.
- C46. Bramesfeld, G., Maughmer, M.D., “The Penn State Sailplane Project – The First Decade,” (invited), AIAA 20th Applied Aerodynamics Conference, St. Louis, MO, July 24-27, 2002, AIAA 2002-2723.
- C47. Bramesfeld, G., Maughmer, M.D., “The Penn State Sailplane Course,” ASEE Annual Conference Proceedings, Montreal, Quebec, Canada, June 16-19, 2002, ASEE 2002-2158.
- C48. Bramesfeld, G., Willits, S.M., Maughmer, M.D., “An Investigation of Strategies for Controlling Damaged Transport Aircraft,” AIAA Atmospheric Flight Conference, Montreal, Quebec, Canada, Aug. 6-9, 2001, AIAA 2001-4256.

SELECTED PRESENTATIONS, INVITED TALKS, AND REPORTS

(* indicates authors who were advisees of Dr. Bramesfeld)

- P1. *Krebs, T. and Bramesfeld, G., “Sailplane Winglets: How Many Tips are Too Many Tips?” XXXIII OSTIV Congress, Benalla, Australia, 8-13 January 2017.
- P2. *Colletti, C., LeBeau, R. J., and Bramesfeld, G., “Investigating Design of Autonomous Glider Exploration of Outer Solar System Atmospheres,” XXXIII OSTIV Congress, Benalla, Australia, 8-13 January 2017.
- P3. Bramesfeld, G., “Applied Aerodynamics Research of Small UAV at Ryerson University,” invited talk, Mechanical and Aeronautical Engineering Seminar, Royal Military College of Canada, April 14, 2016.
- P4. Bramesfeld, G. and Nyers, P., “Ethical considerations of nonmilitary UAVs,” 13th Annual Conference, Unmanned Systems Canada, Halifax, NS, Canada, November 3-5, 2015.
- P5. Lebeau, R., Coletti, C., and Bramesfeld, G., “Exploring the Possibility of Autonomous Gliders in the Atmosphere of Titan,” XXXII OSTIV Congress, Leszno, Poland, July 30-August 6 2014.
- P6. Bramesfeld, G., *Pifer, E., Vieira, O., Premi, A., “Direkte Vergleichsmessungen mit integrierenden und verfahrenen Nachlaufrechen,” Symposium für Segelflugzeugentwicklung 2013, Institute für Aerodynamik, Technische Universität Braunschweig, Braunschweig, Germany, Nov. 21/22, 2013.
- P7. Bramesfeld, G., “Reflections on Student-Run Projects in Aerospace Engineering,” Invited Talk, The DIY Innovator, Toronto Students for the Advancement of Aerospace, Toronto, Canada, Oct. 25-27, 2013.
- P8. Bramesfeld, G., “Drag Reduction and other good Things for UAVs,” Invited talk, Department of Aerospace and Ocean Engineering, Virginia Tech, Blacksburg, VA, April 30, 2012.

Curriculum Vitae – Götz Bramesfeld

- P9. *Pifer, E. and Bramesfeld, G., “Integrating Wake Rake,” 2012 AIAA Region V Student Conference, Boulder, CO, April 4-6, 2012.
- P10. *Carlson, L, *Keadle, K.C, Bramesfeld, G., “Modeling Wings with Slotted Flaps for High Lift,” 2012 AIAA Region V Student Conference, Boulder, CO, April 4-6, 2012.
- P11. *Combes, T., Malik, A., Bramesfeld, G., “Spiral 8 Demo Robot: Bio-Inspired Micro Air Vehicle Wing Simulation,” Invited Talk, ASME St. Louis Chapter, April 2, 2012.
- P12. Bramesfeld, G., “100 Years of Modern Soaring,” Invited Talk, AIAA St. Louis Section at the March Technical Specialist Meeting, St. Louis, MO, March 1, 2012.
- P13. Bramesfeld, G., *Pifer E., and *Atkin, W., “Measuring Wing Profile Drag using an Integrating Wake Rake,” Presentation, SSA Convention, OSTIV Track, Reno, NV, February 2-4, 2012.
- P14. Bramesfeld, G., “Drag Reduction and other good Things for UAVs,” Invited Talk, Department of Mechanical and Aerospace Engineering, West Virginia State University, Morgantown, WV, January 12, 2012.
- P15. Bramesfeld, G., “Drag Reduction and other good Things for UAVs,” Invited Talk, Mechanical, Materials, and Aerospace Engineering Department of the Illinois Institute of Technology, November 28, 2011.
- P16. McQuilling, M., *Kody, F., and Bramesfeld, G., “Computational Fluid Dynamics Simulations of Airfoil Aerodynamics,” SLU Digital Research Symposium, March 8, 2011.
- P17. Bramesfeld, G., “Wing-Drag Reduction with the Help of Structural Dynamics and Gusts,” Presentation, SSA Conference, OSTIV Track, Philadelphia, PA, January 28, 2011.
- P18. Bramesfeld, G., “Unmanned Aerial Vehicle Developments at Parks,” Scott Air Force Base, December 14, 2010.
- P19. Bramesfeld, G., “Low-Speed Aerodynamics Research Activities at Saint Louis University,” Army Research Laboratory, Aberdeen Proving Grounds, MD, Nov. 17, 2009.
- P20. *Ironside, D.J. and Bramesfeld, G., “The Structural Dynamics of Aircraft Wings in Bending and Torsion,” presentation, AIAA Region V Student Conference, Twin Cities, MN, April 22-24 2009.
- P21. *Zidar, D. and Bramesfeld, G., “Laminar Flow-Airfoil Testing with Laser-Doppler Anemometry,” AIAA Region V Student Conference, Twin Cities, MN, April 22-24 2009.
- P22. *Ironside, D.J. and Bramesfeld, G., “The Structural Dynamics of a Bending Wing-Like Euler-Bernoulli Cantilever Beam,” St. Louis Area Undergraduate Research Symposium (honored with 2nd place for Best Presentation out of 44 participants), St. Louis, MO, April 4, 2009. Also received Best Undergraduate Award at 3rd Annual Sigma Xi Research Symposium, Feb 25, 2009.
- P23. Bramesfeld, G., “Drag Reduction using Aeroelastic Tailoring,” invited talk, Applied Aerodynamics Group, University of Illinois at Urbana-Champaign, April 2008.

Curriculum Vitae – Götz Bramesfeld

- P24. Bramesfeld, G., “Das Segelflugzeugprojekt der Pennsylvania State University” (The Sailplane Project of The Pennsylvania State University), Idaflieg Wintertreffen, München, Germany, Jan. 2003.
- P25. Bramesfeld, G., Maughmer, M.D., “Windkanalmessungen mit Profilerseitenklappen” (Wind-Tunnel Tests with Airfoil-Upper-Surface Flaps), Idaflieg Berichtsheft, Karlsruhe, Germany, 2001.
- P26. Bramesfeld, G., “Aerodynamische Auslegung eines Profils mit adaptiv veränderbarer Oberseitenkontur“ (Aerodynamic Design of an Airfoil with adaptive variable Upper-Surface Contour), Research Paper, Institut für Leichtbau (Institute for Lightweight Design), Technische Universität Braunschweig, Braunschweig, Germany, May, 1997.
- P27. Bramesfeld, G., “Profilwiderstandsmessungen mit der MOPROMA am Laminarflügel der SB-13” (Airfoil-Drag Measurements on the Laminar Wing of the SB-13 using the MOPROMA), Idaflieg Berichtsheft, Karlsruhe, Germany, 1997.
- P28. Bramesfeld, G., “Nachlaufmessungen am Flügel der SB13” (Wake Surveys on the Wing of the SB13), Segelflugsymposium, DLR/Idaflieg Stuttgart, Germany, Nov. 1996.
- P29. Bramesfeld, G., “Untersuchung von laminaren Ablöseblasen an momentanarmen Laminarprofilen am Beispiel Segelflugzeug SB13“ (Examination of Laminar Separation Bubbles on Low-Moment Airfoils of the Sample Sailplane SB13), Research Paper, Studienarbeit Nr. 96/2, DLR-FZ Braunschweig, Germany, 1996.

Curriculum Vitae – Götz Bramesfeld

RESEARCH FUNDING (since joining RU: secured over \$1.2M external support)

	Funding Agency (Industry Partner)	Cash Amount (+in kind)		Grant Title	Dates
F22	NSERC (Record Technology)	\$25,000	PI	Integration of Solar Cells in a Composite Wing for an Unmanned Aerial Vehicles	2018-2019
F21	OCE (Coriolis Games Corp.)	\$25,000 (\$17,100)	PI	Concept Study of Small Drone with Pitch-Decoupled Tiltrotors	2018-2019
F20	Molson Foundation	\$45,000	PI	Long-Endurance Solar-Powered UAV	2018-2019
F21	SOSCIP/OCE	15,000	PI	TalentEdge	
F19	SOSCIP/OCE (Aeryon Labs)	\$115,000 (+\$91,400)	PI	High-Fidelity Aerodynamic Analysis of Unmanned Multirotor	2017-2019
F18	Molson Foundation	\$64,000	PI	Development of a Small Unmanned Aircraft for the Exploration of Atmospheric Wind Gusts	2015-2017
F17	NSERC/CARIC/OCE (Aeryon Labs)	\$273,600 (+\$87,600)	PI	Advanced Rotor Analysis Method for the Next-Generation Small Multirotor Aerial Vehicle	2017-2019
F16	OCE (Aventech Research)	\$25,000 (+\$22,800)	PI	Measuring Atmospheric Gusts at Low Altitude	2016-2017
F15	NSERC (Aventech Research)	\$25,000	PI	Experimental Classification of a Five-Hole Probe at Large Angles of Attack	2016
F14	OCE (Aeryon Labs)	\$15,000 (+\$5,000)	PI	TalentEdge Internship	2016
F13	NSERC Discovery Grant	\$130,000	PI	Flight Performance Enhancements using Atmospheric Gusts and Aeroelastic Effects	2016-2021
F12	OCE (University of Waterloo, Aeryon Labs)	\$69,600 (total \$220,960)	Co-I (31%)	Rapid Modeling and Control Design for New Rotorcraft Configurations	2016-2017
F11	OCE (Aeryon Labs)	\$25,000 (+\$22,000)	PI	Design and Testing of Rotor Systems for Small Multirotor Aerial Vehicles	2015-2016
F10	OCE (Aeryon Labs)	\$15,000 (+\$5,000)	PI	Testing of Rotor Systems for Small Multirotor Aerial Vehicles	2015
F9	NSERC (Aeryon Labs)	\$25,000	PI	Development of a Design Methodology for Rotors of Small Multirotor Aerial Vehicles	2015
F8	Dean's Research Fund	\$10,000	PI	Flight Performance Prediction of Small Multirotor Aerial Vehicles	2015-2016
F7	Dean's Research Fund	\$5,000	Co-I (50%)	SUAV Flight-test Data Reduction to Simulation	2014-2015
F6	Dean's Research Fund	\$67,000	PI	Motor Upgrade for Large Subsonic Wind Tunnel	2014-2015
F5	Dean's Research Fund	\$10,000	PI	Experimental Determination of Fluid-Structure Interaction of Wings at Low Speeds	2014
F4	Beaumont Faculty Development Fund	US\$4,980	PI	Modeling of High-Lift Devices for Small UAVs	2012-2013
F3	Saint Louis University President's Research Grant	US\$24,236	Co-I	Structural Optimization of Insect-Inspired Micro Air Vehicles	2010-2011

Curriculum Vitae – Götz Bramesfeld

F2	US Army Aviation and Missile Research, Development, and Engineering Center	US\$125,000	PI	Xpander UAS Concept Study	2009-2011
F1	Beaumont Faculty Development Fund	US\$3,755	PI	Reduction of Wing Drag Using Structural Dynamics	2008

STUDENT SUPERVISION

(since joining RU: completed 2 PhD, 7 MASc; currently 1 Postdoc, 3 PhD, 3 MASc)

PhD Supervision

- Ph1. Devin Barcelos, PhD supervisor, Ryerson University: Aerodynamic Interaction (1/2018-)
- Ph2. Michael Melville, PhD supervisor, Ryerson University: Gust Energy Harvesting (1/2018-)
- Ph3. Travis Krebs, PhD supervisor, Ryerson University: “A Singularity-Free Potential Flow Method” (9/2014-)
- Ph4. Julia Cole, Ph.D. co- supervisor, The Pennsylvania State University: “A Design Methodology for Hybrid Tiltwing-Tiltrotor Wings” (3/2012-10/2016). Now: Assistant Professor of Mechanical Engineering, Bucknell University, Lewisburg, PA.
- Ph5. Tenzin Choephel, Ph.D. co- supervisor, The Pennsylvania State University: “Aerodynamic Analysis of Helicopter Rotors using a Higher-Order, Free-Wake Method” (4/2014- 10/2016). Now: Sr. Aerospace Engineer, Pratt and Whitney, East Hartford, CT.
- Ph6. Matthew Derginer, Ph.D. co- supervisor, Saint Louis University: “Nonlinear Flight Controls” (9/2010-). Now: Control Systems Engineer, Mercury Marine, Fond Du Lac, WI.

Master Supervision

- M1. Joel McQuaid, MASc co-supervision, Ryerson University: “CFD Modeling of Rotor” (9/2018-)
- M2. Ammar Jessa, MASc supervisor, Ryerson University: “Wind-Tunnel Flown Quality” (9/2018-)
- M3. Tejas, Janardhan, MEng supervisor, Ryerson University: “Robust Wake Rollup Modelling Using DVEs” (2018/19)
- M4. Julia Tsaltas, MASc supervisor, Ryerson University: “Determination of Stability and Control Derivatives of Small Multirotor Vehicles” (01/2016-9/2018). Now L3 Wescam
- M5. Bryan Ho, MASc supervisor, Ryerson University: “Flight Testing Small Drones” (9/2016-MEng in 2018)
- M6. Devin Barcelos, MASc supervisor, Ryerson University: “Modeling Multirotor Vehicles” (9/2016-1/2018)
- M7. Michael Melville, MASc co-supervisor, Ryerson University: “Flexible Wings in Gusts” (9/2016-1/2018), received Alexander Graham Bell Award (Canada Graduate Scholarship-Master’s Competition).
- M8. Alton Yeung, MASc co-supervisor, Ryerson University: “Wind Gust Measuring at Low Altitude Using an Unmanned Aerial System” (9/2015-9/2017). Now: CAE, Montreal, QB.
- M9. Issi George, MASc supervisor, Ryerson University: “Multirotor Vehicle Performance Prediction” (9/2014-12/2016). Now: CAE, Montreal, QB.
- M10. Tim Carroll, MASc supervisor, Ryerson University: “Rapid Propeller and Rotor Design and Fabrication Stream” (9/2014-1/2017). Now: flight training, Royal Canadian Airforce.
- M11. William Bissonnette, MASc supervisor, Ryerson University: “A Conceptual Design Tool of High-Lift Systems” (9/2014-9/2016). Now: Aerospace Engineering Consultant, Windsor, ON.
- M12. Thomas Combes, M.S. co-supervisor, Saint Louis University: “An Efficient Fluid-Structure Interaction Method for Conceptual Design of Flexible Micro Air Vehicle Wings” (9/16-12/2012). Now: Engineer Lead Technical Focal, The Boeing Company, St. Louis, MO.
- M13. Matthew Derginer, M.S. supervisor, Saint Louis University: “Improved handling qualities of tiltrotor aircraft through directional trim management” (1/2010- 8/2010). Now: Control Systems Engineer, Mercury Marine, Fond Du Lac, WI.

Other Highly Qualified Personal Supervision

- Dr. Amir Kolaei, Postdoctoral Fellow, Ryerson University, since January 2017
- William Bissonnette, Research Associate, Ryerson University, since June 2018.

Undergraduate Supervision

- U1. Nafisa Nafees, supervisor, undergraduate RA, 2016-2019
- U2. Nicholas Mejia, supervisor undergraduate RA 2016-2019
- U3. Carolin Zakee, supervisor undergraduate RA 2017-2018
- U4. Anastasia Bondarenko, supervisor undergraduate RA 2016-2018
- U5. Dylan Krcmarov, supervisor, undergraduate RA, 2015-2018
- U6. Thomas Martin, supervisor, undergraduate RA, 2015-2017, now: Aventech Research, Barrie, ON
- U7. Yichuan Wang, supervisor, undergraduate RA, 2015-2017, fourth-year thesis 2017.
- U8. Razvan Rusu, supervisor undergraduate fourth-year thesis, 2016, received 2016 Ryerson Gold Medal, now: graduate school, Purdue University
- U9. Edwing Wong, supervisor, undergraduate RA, 2015
- U10. Thomas Mieloch, supervisor fourth-year undergraduate thesis, 2013-2015
- U11. Ukeme Noah, supervisor fourth-year undergraduate thesis, 2013-2015
- U12. Alexander Velliariis, supervisor undergraduate research assistant 2013-2015
- U13. Ellen Pifer, supervisor undergraduate research assistant, 2011-2013
- U14. Jim Dreas, supervisor undergraduate research assistant 2012-2013
- U15. Justin Krofta, supervisor undergraduate research assistant 2012-2013
- U16. Frank Kody, supervisor undergraduate research assistant, 2009-2012
- U17. Ryan Prinster, supervisor undergraduate research assistant 2009-2012
- U18. Dan Ironside, supervisor undergraduate research assistant, 2008-2010

Research Opportunity Program in Engineering (ROPE)

- Hosted high-school students in my lab
 - Emily Tu and Susan Kovarik, summer 2017
 - Yujin Cho and Alex Malfil, summer 2016

Examining Committees

- Rezzag, Tejas, Ryerson, Ryerson University, MASc thesis defence, May 2019
- Jayasinghe, Supun, Ryerson University, PhD defense, August 2018
- Mishriky, Fadi, Ryerson University, PhD defense, August 2018
- Scott Lindsay, Ryerson, Ryerson University, MASc thesis defence, September 2018
- YeongGyun Ryu, Ryerson University, PhD candidacy exam, November 2017
- Taiwo Amida, Ryerson University, MASc thesis defence, October 2017
- Heenkenda Jayasinghe, Ryerson University, PhD preliminary defence, August 2017
- Baki Sibanda, Ryerson University, PhD candidacy exam, September 2017
- Aaron Gee, Ryerson University, MASc thesis defence, September 2017
- Devin Simms, Ryerson University, MASc thesis defence, May 2017
- Zhiliu Lu, Ryerson University, MASc thesis defence, April 2017
- Stephen Andrews, Royal Military College of Canada, PhD thesis defence, April 2016.
- Aaron Sotto, Ryerson University, MEng defence, January 2016
- Prakash, Ryerson University, MASc thesis defence, September 2015
- Jeffrey Haber, University, MASc thesis defence, July 2015.
- Chao Li, Queen's University, PhD thesis defence, June 2015.

Curriculum Vitae – Götz Bramesfeld

- Potchara Wongyai, Ryerson University, MASc thesis defence, April 2015.
- Min Adhikari, Ryerson University, MASc thesis defence, October 2014.
- Harpuneet Pabla, Ryerson University, MASc thesis defence, September 2014.
- YeongGyun Ryu, Ryerson University, MASc thesis defence, August 2014.

UNIVERSITY COURSES TAUGHT

At Ryerson University

- AER 309 Thermodynamics
- AER 504 Aerodynamics
- AER 615 Aircraft Performance
- AER 870 Aerospace Engineering Thesis
- AE8121 High Speed Aerodynamics
- AE8146 Applied Aerodynamics
- AE8135 Rotorcraft Flight Performance (directed study)

At Saint Louis University:

- AENG 518 Applied Aerodynamics
- AENG 450 Flight Vehicle Design and Analysis I
- AENG 451 Flight Vehicle Design and Analysis II
- AENG 420 Stability and Control
- AENG 411 Aerospace Laboratory
- AENG 311 Aerodynamics
- AENG 320 Aircraft Performance
- AENG 200 Introduction to Aeronautics and Astronautics
- ESCI 322 Fluid Dynamics
- ESCI 323 Fluid Dynamics Laboratory

At Penn State:

- AERSP 402 A&B Aircraft Preliminary Design
- AERSP 204H/404H - Flight Vehicle Design and Fabrication

OTHER

- Reviewer for *AIAA Journal of Aircraft*, *Aeronautical Journal*, *Technical Soaring*, *Journal of Aerospace Engineering*, *Aerospace*.
- External Reviewer of NSERC proposals.
- Associate Editor, *Technical Soaring Journal*, since 2013.
- Book reviewer of “Introduction to Flight, 7th Edition,” by John. A. Anderson, McGraw Hill (2010).
- Member of Board of Governors, Saint Louis Soaring Association (2011-2013).
- Pilot license (glider and single engine sea, US) with over 1000 hours of flight time in nearly 50 different types of aircraft.

AFFILIATIONS

- American Institute of Aeronautics and Astronautics, Senior Member.
- American Helicopter Society, Member
- Canadian Aeronautics and Space Institute, Member.
- Organisation Scientifique et Technique du Vol à Vole (OSTIV), International Scientific and Technical Soaring Organization, since February 2015.

COMMITTEE AND OTHER SERVICE ACTIVITIES

- FEAS Diversity, Equity and Inclusion Task Force, since 2019.
- Ryerson Faculty Association Council Representative, 2019
- Aerospace Curriculum Committee, Ryerson University, since 2016.
- Chair of Departmental Council, Ryerson University, 2016-19.
- READ judge for capstone-design projects in FEAS, Ryerson University, 2017.
- Program Committee, CASI AERO 2017 Conference, 17th Aerodynamics Symposium, Toronto, May 16-18, 2017.
- Delegate to 2016 General Conference of the Fédération Aéronautique Internationale, FAI - The World Air Sports Federation, Bali, Indonesia, October 13-15, 2016.
- Ontario University Fair, Ryerson University, helped with recruitment 2013, 2014, 2016, 2017.
- Program Committee, UAV-g 2015, Conference, 2015-08-30 - 2015-09-05.
- Faculty Advisor to Ryerson Aero Design Team, Ryerson University (since 2013).
- Chair Undergraduate and Laboratory Committee, Aerospace Engineering, Ryerson University, 2014/15
- Chair of Technical Advisory Committee to the Board of Directors of the Soaring Society of America (2011—2014).
- Faculty Advisor to Parks College's SAE Aero Design Team, since 2008. Group placed 1st (2010) and 2nd (2011) in SAE-West Competition, 3rd (2011) in SAE-East Competition, an international student design competition of small UAV (2008-2013).
- Internal Affairs Committee, Parks College, Saint Louis University, 2008/2009.
- Graduate and Research Affairs Committee, Saint Louis University, 2008 until 2010.
- Laboratory Committee AE&ME Department, Saint Louis University, 2010-2012, chair since fall 2011.
- Faculty Search Committee for three faculty positions in AE & ME, Saint Louis University, 2008/2009.
- Parks College Selection Committee for Goddard Space Flight Center NASA Co-Op, 2008.
- Faculty Advisor to AIAA Design Build Fly student group, Saint Louis University, 2008.