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130. P.M. Jansson, W.S. Zanardi, P. Kaladius, E.L. Jansson, S. Sedig, W. McGrath and F.R. Jansson, **“Mach Field Sensor / Detector and Results.”** 2019 IEEE Sensors Applications Symposium (SAS 2019), Sophia Antipolis, France, 11-13 March 2019, **IEEE Xplore Digital Object Identifier:** 10.1109/SAS.2019.8706081
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90. P.M. Jansson and P.S. Kaladius, "*Undergraduate Engineering Students Enhance Novel Instrumentation to Detect the Mach Effect,*" 2020 ASEE Annual Virtual Conference & Exhibition, Montreal, Quebec Canada, 21-24 June 2020

89. P.M. Jansson and V.E. Udo, "*Poster: The Challenges to Dam Removal on the Susquehanna River – A Focus on Conowingo and PJM Ancillary Services,*" 14<sup>th</sup> Susquehanna River Symposium, Bucknell University, Lewisburg, Pennsylvania, 18-19 October 2019

88. P.M. Jansson, "*Students Engineer Tools for Scientific Discovery via Empirical Research on the Mach Field,*" *Proceedings of the 2019 Zone 1 ASEE Conference*, University of Buffalo, Niagara Falls, New York, 11-13 April 2019

87. P.M. Jansson, S. Zanardi, P. Kaladius, E.L. Jansson, W. McGrath, "*Update on Empirical Results, New Experiments and Data Analysis on the Mach Field Detector,*" 3rd Annual Advanced Propulsion Workshop, 10-14 September 2019, Estes Park, CO

86. O. Sikder, C. Torres and P.M. Jansson, "*Energy Storage for Photovoltaics: Electrical vs Virtual,*" 47th Annual National Conference and Summit of the American Solar Energy Society (ASES), August 5-8, 2018, Boulder, Colorado

85. P.M. Jansson, E.L. Jansson, W. McGrath and F.R. Jansson, "*An Empirical Pursuit of Mach's Principle: Experimental Results Indicating a 'Machian' Inertial reaction Force is Detectable and Electromagnetic,*" 2nd Annual Advanced Propulsion Workshop, Aerospace Corporation, November 1-3, 2017, El Segundo, CA

84. C. Ononuju, P. Asare and P.M. Jansson, "*Poster Abstract: Preliminary Exploration of Virtual-Storage-Based Load Management,*" Poster and Paper presented to ACM Buildsys 2016, Stanford, California, 15-17 November 2016

83. P.M. Jansson, P. Asare, P.R. Diefenderfer, "*The Smart, Residential Microgrid: Affordable Virtual Storage Today,*" Abstract and Presentation to the 6<sup>th</sup> International Symposium on Energy Challenges and Mechanics, Inverness, Scotland, 14-18 August 2016

82. P.M. Jansson, "*Net Metering PV Distributed Resources Benefits All Stakeholders on PJM,*" Solar 2016 / INTERSOLAR 2016, the American Solar Energy Society, San Francisco, California, 11-13 July 2016

81. P.M. Jansson and N.M. Boyd, "*Poster: Co-Curricular Engagement to Build Leadership in Sustainability,*" Poster presented to the Fall 2015 Mid-Atlantic ASEE Conference, Bucknell University, Pennsylvania, 18-19 September 2015

80. P.M. Jansson and A. Kaban, "*Creating a New, Junior-Level, Engineering Design Course in ECE,*" *Proceedings of the Spring 2015 Mid-Atlantic ASEE Conference*, Villanova University, Pennsylvania, 10-11 April 2015

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78. P.M. Jansson, "*Poster: Incorporating Distributed Generation (PV) Project Based Learning in Bucknell's Power System Course,*" Presented at the NSF / DOE / ONR / University of Minnesota: Electric Energy Systems Curriculum for Sustainability Workshop, Napa, California, 6-9 February 2014

77. P.M. Jansson and P.R. Diefenderfer, "*Carbon Reduction and Grid Storage via a CNG/Hybrid Smart Car,*" Presentation to the Carbon Management Technology Conference (CMTC 2013), Alexandria, VA, 21-23 October 2013

76. P.M. Jansson, D. Schmalzel, R.R. Krchnavek and J.L. Schmalzel, "*Developing a State-Wide Energy Assurance Plan: Course + Work = Success,*" *Proceedings of the 120<sup>th</sup> ASEE Annual Conference*, Atlanta, GA, 23-26 June 2013

75. R.R. Krchnavek, P.M. Jansson and J.L. Schmalzel, "*Microsoft to Android: Developing a Tablet Application for Energy Monitoring,*" *Proceedings of the 120<sup>th</sup> ASEE Annual Conference*, Atlanta, GA, 23-26 June 2013

74. P.M. Jansson, "*Poster: Training Tours and Laboratories in Bucknell's Electrical Energy Conversion (Devices and Systems) Course,*" NSF / DOE / ONR / University of Minnesota: Electric Energy Systems Curriculum for Sustainability Workshop, Napa, California, 7-9 February 2013

73. P.M. Jansson and D.M. Kelley, **"Increasing Hands-On Laboratory Equipment Experience via Rotation of Notebook Recording Duties."** Proceedings of the 119<sup>th</sup> ASEE Annual Conference, San Antonio, TX, 10-13 June 2012
72. P.M. Jansson, C. Barreiro and J.L. Schmalzel, **"Architecture of a Smart Photovoltaic Module."** Proceedings of the 38<sup>th</sup> IEEE Photovoltaic Specialists Conference, Austin, TX, 3-8 June 2012
71. P.M. Jansson and M.F. Aburdene, **"Poster: Power System Engineering Education at Bucknell University."** NSF / University of Minnesota Power Curriculum Workshop, Napa, California, 2-4 February 2012
70. C. Barreiro, P.M. Jansson and D. Schmalzel, **"Educating Engineers in Sustainability Through Undergraduate Clinics."** Proceedings of the International Conference on Engineering Education, Belfast, Northern Ireland, 21-26 August 2011
69. P.M. Jansson, K. Whitten, C. Delia, M. Angelow, B. Ferraro, M. Giordano, M. Colosa, **"EE Students Complete Photovoltaic R&D for Industry in Electrical Engineering Curriculum."** Proceedings of the 118<sup>th</sup> ASEE Annual Conference, Vancouver, BC, Canada, 26-29 June 2011
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65. P.M. Jansson and J.L. Schmalzel, **"Increasing Utilization and Eco-efficiency of Global Electric Grids via Societal Initiative – Integration of Load Management, Real Time Pricing, Renewables, EVs and Smart Grid Sensors."** 7<sup>th</sup> International Conference on Technology, Knowledge and Society, Bilbao, Spain, 25-27 March 2011
64. P.M. Jansson and S.A. Mandayam, **"Poster: Teaching Power System Engineering at Rowan University,"** NSF/UMN Power Curriculum Workshop, Napa, California, 4-6 February 2011
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62. P.M. Jansson and J.L. Schmalzel, **"Increasing the Efficient Utilization of the Electric Grid through Smart Integration of Renewables, EVs, Sensors and Load Management,"** 3rd International Conference on Quantified Eco-Efficiency Analysis for Sustainability, Egmond Aan Zee, Netherlands, June 9-11, 2010
61. P.M. Jansson, A. Mugweru, K.V. Ramanujachary and U. Schwabe, **"Potential Novel, Renewable Thermal Energy Source,"** Proceedings of the Fifth International Conference on Thermal Engineering Theory and Applications, Marrakesh, Morocco, May 10-14, 2010
60. P.M. Jansson, E. Dusseau, J. Everett, D. Farish and J. Imperatore, **"Carbon Neutral Campus Plan: Elements of Sustainable Design,"** The 3<sup>rd</sup> World Universities Forum, Davos, Switzerland, January 9-11, 2010
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53. S. Wilson, K. Blauth, W. Riddell and P. Jansson, **"RFID Technology for Universally Accessible Doors in Public Buildings,"** 5<sup>th</sup> International Conference on Technology, Knowledge and Society, Huntsville, AL, January 30 - February 1, 2009
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51. P.M. Jansson, U. Schwabe and A. Hak, **"Medium Voltage Switchgear, Transformer and Interconnection Specification in An ECE Clinic,"** Proceedings of the 2008 ASEE Annual Conference, Pittsburgh, PA, June 22-25, 2008
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45. W.T. Riddell, E. Constans, J. Courtney, K. Dahm, R. Harvey, P.M. Jansson, M. Simone, P. von Lockette, B. Wolff, **"Lessons Learned from Teaching Project Based Learning Communication and Design Courses,"** 2007 ASEE Middle Atlantic Section Fall 2007 Conference, Philadelphia, PA, November 3, 2007
44. P.M. Jansson and R. Elwell, **"Design of Photovoltaic Systems for Municipal and School Buildings in Ocean City, New Jersey,"** ASEE 2007 Annual Conference Proceedings, Honolulu, HI, June 24-27, 2007
43. P.M. Jansson, W. Riddell, N. Vizzi, K. Bhatia and R. McDevitt, **"Engineering Students Transforming Public Policy to Promote Green Power,"** ASEE 2007 Annual Conference Proceedings, Honolulu, HI, June 24-27, 2007
42. Y. Mehta, P.M. Jansson and D. Dorland, **"Learning Through the Design of a Fish Hatchery for a Community in the Cheyenne Reservation – an EWB Service-Learning Project,"** ASEE 2007 Annual Conference Proceedings, Honolulu, HI, June 24-27, 2007
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38. J. Cusack, D.R. Wheeler, R. Luke and P.M. Jansson, **"Practical Sustainability for CFOs, Planners and Facilities Administrators,"** Campus of the Future Conference, Honolulu, Hawaii, July 8-11, 2006
37. W. Riddell, P.M. Jansson, K. Dahm, et al. **"Conservation of Energy for Campus Buildings: Design, Communication and Environmentalism through Project Based Learning,"** ASEE 2006 Annual Conference Proceedings, Chicago, IL, June 18-21, 2006
36. P.M. Jansson, B. Hill and R. McDevitt, **"Renewable Energy Resource Assessment: New Jersey Winds,"** ASEE 2006 Annual Conference Proceedings, Chicago, IL, June 18-21, 2006
35. S. Hazel and P.M. Jansson, **"Photovoltaic System Feasibility Assessments: Engineering Clinics Transforming Renewable Markets,"** ASEE 2006 Annual Conference Proceedings, Chicago, IL, June 18-21, 2006
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32. V.E. Udo and P.M. Jansson, **"Bridging the Gaps for Global Sustainable Development: A Quantitative Analysis,"** INCEED 2005 (International Conference on Energy, Environment and Disasters), Charlotte, NC, July 24-30, 2005
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30. P.M. Jansson and R. A. Michelfelder, **"Reliability, Sustainability and Investment in the U.S. Electric Power System,"** Plenary Session of 24<sup>th</sup> Annual CRRRI Eastern Conference, Sky Top, PA, May 18-20, 2005
29. W. Riddell, P. Jansson, D. Cleary, V. Anepete, G. Digneo, M. Eckman, W. Heston, G.A. Patrick and K. Skayla, **"Preliminary Literature Review for NJ DOT Project 2004-04: Compatibility of Highway Railroad Crossing Gates with Overhead Catenary System High Voltage Power for Trains,"** Submitted to NJ DOT as part of Research Project, April 2005.

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27. P.M. Jansson, **"Incubating Entrepreneurism in Engineering Pedagogy."** NCIIA 9<sup>th</sup> Annual Meeting, San Diego, CA, March 2005
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14. P.M. Jansson, M. Burg, M. McCarthy and S. Perlis, **"Are Life Cycle Assessment Tools Readily Usable by Students and Industry?,"** 2001 Green Engineering Conference, Roanoke, Virginia, July 29-31, 2001
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11. R. Phaal, P.M. Jansson, et.al., **"Management of Knowledge and Technology for Sustainable Production,"** Final Report to DGXII of the European Commission, Centre for Technology Management, University of Cambridge, Cambridge, England, June 15, 1999
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8. P.M. Jansson, **"HYDROCATALYSIS: A New Energy Paradigm for the 21st Century,"** Rowan University - School of Engineering, Master of Science in Engineering Thesis, Glassboro, New Jersey, May 1997
7. D.B. Roitman and P.M. Jansson, **"Rapid Prototyping: A Practical Approach to Chaos,"** prepared for participants of the Davies Consulting Reengineering Conference in Washington, D.C., May 1997
6. N.A. Berk, T.C. Crompton, P.M. Jansson and J.L. Schmalzel, **"Improving Portable Inhalation Therapy Through Real-Time Assessment of Patient Pulmonary State,"** 34<sup>th</sup> Rocky Mountain Bioengineering Symposium [RMBS-ISA] Dayton, Ohio, April 11-13, 1997

5. J. Ciccone and P.M. Jansson, "*Utility Design, Implementation and Standardization of Photovoltaic High Pressure Sodium Lighting Systems.*" 22<sup>nd</sup> ASES Annual Conference - Washington, D.C., April 22-28, 1993
4. P.M. Jansson, "*DSM Experiences From a Small Utility.*" Vattenfall Conference on the Efficient Use of Electricity -Stockholm, Sweden, October 20-22, 1987
3. P.M. Jansson and T.K. Nguyen, "*Evaluation, Methodology and Results of Atlantic Electric's Operational Demand-Side Management Programs 1983-1986.*" Third National Conference on Utility DSM Programs - Houston, Texas, June 16-18, 1987
2. P.M. Jansson and D.L. Kirkpatrick, "*Instrumentation, Methodology and Results of a Solar Domestic Water Heating Field Evaluation Study.*" Seventh ASME Solar Energy Conference - Honolulu, Hawaii, March 23-27, 1987
1. P.M. Jansson, "*One Utility's Load Shape Disaggregation Techniques.*" LODESTAR Users Conference - Atlantic City, New Jersey, October 9-12, 1984

### **GRADUATE AND UNDERGRADUATE STUDENT RESEARCH**

Dr. Jansson has directly supervised two (2) Bucknell MSE students the first of which graduated in Summer 2015 and supervised or served on the MSE Thesis committees of two (2) other Bucknell and eleven (11) other Rowan University MSE graduate students during his tenure on faculty. In total he has supervised directly six (6) MSE graduate students. In over 24 years in academe Dr Jansson has supervised over five dozen undergraduate researchers on dozens of research projects for industry and government. As a result of these undergraduate research projects many of those students co-published the results of their research in conference and journal articles cited above.

### **GRANT AND RESEARCH FUNDING – Research Projects Awarded to Dr Jansson Total over \$2,105,663 (\$ 1,212,878 as PI)**

Since entering academia over 24 years ago Dr Jansson has received over 50 research grants in the areas of sustainability, smart grid, energy assurance and reliability, wind resource and technology assessment, photovoltaic system utility grid connection, module performance, optimization and economics, novel renewable energy technology assessments, and renewable energy education. These grants have come from over two dozen funding agencies as well as public and private corporations including: **Governmental Agencies:** National Science Foundation, US Department of Energy, Ben Franklin Technology Partners, Keystone Innovation Zone, New Jersey Wind Working Group, New Jersey Department of Transportation, New Jersey Board of Public Utilities (NJBPU) - Office of Clean Energy, NJBPU Division of Reliability and Security, NASA Institute for Advanced Concepts and New Jersey Department of Military and Veteran Affairs. **Public Utilities, Corporations and Manufacturers in the Northeast:** Atlantic City Electric / Conectiv, PHI, PSEG Nuclear, Public Service Electric & Gas, Johnson-Matthey, ComCast, Nike, Novipod. **Private Renewable Energy Corporations and Organizations:** Degenstein Foundation, BP Solar, Alencon Systems, Ray Angelini Inc., Mesa Environmental Sciences, Kaneka - Japan (Global Leader in Thin Film PV), Kaneka Texas, K.C. Larson, BlackLight Power Corporation, Brilliant Light Power Corporation, SunTechnics Energy Systems, Conergy, New Jersey Higher Ed. Partnership for Sustainability.

### **PROFESSIONAL, ACADEMIC and PERSONAL REFERENCES**

*CV current through July 2020*

*Available upon request*