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EDUCATION

- 1999 Ph.D. in Electrical Engineering rst of om g, Laramie, WY
 1995 Master of Science in Electrical Engineering rst of om g, Laramie, WY
- 1992 Bachelor of Science in Electrical Engineering rst of om g, Laramie, WY

PROFESSIONAL QUALIFICATIONS

Jun 2007-Registered Professional Engineer, Stat of Iaska,, License #: 11793present

TEACHING/INSTRUCTION

Jun 2018- present	Professor, rst of laska a rba ks
	Advising and instruction at the undergraduate and graduate level in Power and Controls.
Jul 2006- Jun 2018	Associate Professor, rst of laska a rba ks
	Advising and instruction at the undergraduate and graduate level in Power and Controls.
Aug 1999- Jun 2006	Assistant Professor, rst of laska a rba ks
	Advising and instruction at the undergraduate and graduate level in Power and Controls.
	<u>Courses instructed</u> : Electric Machinery (\boxplus 303), Electrical Power Systems (\boxplus 404), Electrical Power Engineering (\boxplus 406), Power Electronics Design (\boxplus 408/608), Digital Control Systems (\boxplus 671), and special topic courses (\boxplus 693) in Adaptive Filtering, Nonlinear Systems, and Renewable and Sustainable Energy Systems.
Summer 2002- 2007	Alaska Summer Research Academy, rst of laska a rba ks Lead instructor for junior high and high school students for Electrical Engineering unit dealing with power and energy.
Spring 1999	Assistant Lecturer, rst of om g Instructor for senior Electrical Engineering course in Power Systems.

RESEARCH EXPERIENCE

Aug 1999-Principal Investigator,rst of laska a rba ks

present

1) USDepartment of Energy Office of Electricity Grid Modernization Laboratory Consortium through Pacific Northwest National Laboratory (PNNL) (\$156.94k: Oct 2017-Mar 2019)

-Development of an energy storage monitoring and optimization application for the PNNL GridAPPS-D platform to assist operators in electric utilities with microgrids comprised of intermittent renewables and energy storage.

2) Iowa Department of Transportation Aurora Pooled Fund Consortium (\$30k: Jun 2016

10) USDepartment of Energy

7) USDepartment of Energy

RICHARD W. WIES, Ph. D., P. E.

3) USDepartment of Defense (\$2M: Jan 2005-Dec 2007)

1) R. W. Wies, MicroFEWS Understanding the FEW Nexus in Remote Alaska Communities, , Panel on Research and Education for

Food, Energy, and Water Nexus, 18PESGM2195, Portland, OR, Aug. 2018. PESGM.2018-PESSL

 R. W. Wies, N. T. Janssen, and R. A. Peterson, Autonomous Distributed Secondary Loads for Sole Frequency Regulation in High Penetration Wind-Diesel Microgrids, , Chicago, IL, Jul. 2017. DOI:

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- R. W. Wies, N. T. Janssen, R. A. Peterson, and M. Mueller-Stoffels, Remote Islanded Microgrids in Alaska and the Arctic, , Panel on Lessons Learned from Implementing Portable and Reconfigurable Microgrids for Resilient Operation, 17PESGM2766, Chicago, IL, Jul 2017. PESGM.2017-PESSL
- 4) R. W. Wies, N. T. Janssen, and R. A. Peterson, Voltage and Frequency Stability in Remote Islanded Microgrids with High Penetration of Renewables and Unbalanced Loading,

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- 5) R. W. Wies, Achieving Maximum Value from Variable Resources (In Islanded Grids), , Guam, Apr 2016.
- 6) R. W. Wies, N. T. Janssen, and R. A. Peterson, Distributed Self-Sensing Secondary Loads for Frequency Regulation in Wind-Powered Islanded Microgrids,

, Denver, CO, Jul 2015. DOI: 10.1109/ PESGM.2015.7286033 (47 full

, Panel on Microgrid Stability and Modelling, Boston,

text views IE)

- 7) Paul S Gill, Michael C. Hatfield, Daniel Randle, Richard Wies, Rajive Ganguli, Sena Rosetti, and Samuel Vanderwaal. "Team of Unmanned Aircraft Systems (UAS) and Unmanned Ground Vehicles (UGV) for Emergency Response in Mining Applications", 51st AIAA/SAE/ASEE Joint Propulsion Conference, AIAA Propulsion and Energy Forum, AIAA 2015-4111, Jul 2015. DOI: http://dx.doi.org/10.2514/6.2015-4111 (6 citations GS)
- 8) N. T. Janssen, R. W. Wies, and R. A. Peterson, Improved Frequency Regulation on Hybrid Wind-Diesel Microgrids using Self-Sensing Electric Thermal Storage Devices,

, Perth, WA, Australia, Sep 2014. DOI:

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 R. W. Wies, E Chukkapalli, and M. Mueller-Stoffels, Improved Frequency Regulation in Mini-Grids with High Wind Contribution using Online Genetic Algorithm for PID Tuning, , Washington, DC, Jul 2014. DOI:

10.1109/PESGM.2014.6939257 (4 citations IE)

- 10) N. T. Janssen, R. W. Wies, and R. A. Peterson, Development of a Full-Scale-Lab-Validated Dynamic Smulink[®] Model for a Stand-Alone Wind-Powered Microgrid,
 - , Baltimore, MD, Jul 2014. DOI:10.1115/ POWER2014-32035 (4 citations GS)
- 11) R. W. Wies, N. T. Janssen, and R. A. Peterson, Evaluation of Grid-Interactive Electric Thermal Storage (GETS) Heaters for Islanded Renewable Energy-Diesel Microgrids in Cold Regions, Improved Frequency Regulation in Mini-Grids with High Wind Contribution using Online Genetic Algorithm for PID Tuning, , Narvik, Norway, May 2014.
- 12) B. E. Muhando, R. W. Wies, T. H.

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13) R. W. Wies

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14) R. W. Wies Wind-

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15) R. W. Wies and D. S. Pozo -Efficient Wind-Diesel Generation Systems Employing Smart Grid , Girdwood, AK, Mar

2011.

16) R. W. Wies, R. A. Johnson, and J. D. Aspnes -Efficient Standalone Distributed Generation System Employing Renewable Energy Sources and Smart Grid Technology as a Student

Minneapolis, MN, Jul 2010. DOI: 10.1109/ PES2010.5590089 (17 citations IE)

17) DEL Barbes, R. A. Johnson, R. W. Wies

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- 27) S Bogosyan, M. Gokasan, A. Turan and R. W. Wies, "Development of Remotely Accessible Matlab/Smulink Based Electrical Drive Experiments," 2007 IEE International Symposium on Industrial Electronics, Vigo, Jun 2007, pp. 2984-2989. DOI: 10.1109/ISE2007.4375090 (8 citations IE)
- 28) R. W. Wies Village Metering and Power Study , Session T5-C, Fairbanks, AK, Apr 2007.
- 29) R. W. Wies, A. Balasubramanian, and J. W. Pierre and Auto-Regressive Block Processing Techniques for Estimating the Low Frequency

, Montreal, Canada, Jun 2006. DOI: 10.1109/ PES 2006.1709578 (15 citations

IE)

30) R. W. Wies, A. Balasubramanian, and J. W. Pierre, Using Adaptive Step-Sze Least Mean Squares (ASLMS) for Estimating Low-Frequency Electromechanical Modes in Power Systems

, Stockholm, Sweden,

Jun 2006. DOI: 10.1109/ PMAPS 2006.360409 (19 citations GS)

31) R. W. Wies, A. N. Agrawal, R. A. Johnson, and T. J. Chubb

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41) R. W. Wies	-Battery System for Asian Institute of		
Technology, Bangkok, Thailand, Jan 2004.			
42) N. Zhou, J. W. Pierre, and R. W. Wies	-Frequency Bectromechanical Modes of		
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43) R W Wies	Use of ARMA Block Processing for Estimating		
Stationary Low-Frequency Electromechanical Modes of Power Systems,			
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44) R. W. Wies	-Turbine Generators (WTGs) into Hybrid		
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45) R. W. Wies			
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46) M. G. Anderson, J. W. Pierre, and R. W. Wies			
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47) R. W. Wies and J. D.	-Efficient Hybrid Power Source for Remote		
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48) R. W. Wies -N	lean Squares (LMS) Adaptive Filtering Technique for		
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10.1109/ACC.2002.1025429 (4 citations IE)			
49) R. W. Wies			
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Gernart, Robert VV. Gunderson, Chuck IVI. Shoemaker, Editors, Proceedings of SHE Vol. 4024, pp. 263-272, Jul 2000. DOI: 10.1117/12.391637 (1 citation GS)			

SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIPS

Journal Manuscript Reviewer: IEEE Transactions on Power Systems (1997-pres), Education (2000pres), Energy Conversion (2001-pres), Industrial Electronics (2005-pres), Sustainable Energy (2015pres); International Journal of Adaptive Control and Sgnal Processing (2005-pres), IET Transactions on Generation, Transmission, and Distribution (2005-pres), IET Transactions on Renewable Generation (2007-pres), Progress in Photovoltaics: Research and Applications (2006-2009). Proposal Reviewer: NSF Energy, Power, Controls, and Networks (2016); NSF Science and Technology Centers: Integrative Partnerships Program (2008-2009); US Department of State Civilian Research & Development Foundation STCU (2004-2005)

Lead Instructor (Energy Unit): Alaska Summer Research Academy (2002-2007)

PROFESSIONAL DEVELOPMENT ACTIVITIES

Attended over 30