PHILIP A. VOGLEWEDE

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PROFESSIONAL PREPARATION

2004 **Georgia Institute of Technology** Atlanta, GA
- Ph.D., Mechanical Engineering
- Dissertation: "Measuring Closeness to Singularities of Parallel Manipulators with Application to the Design of Redundant Actuation"
- Advisor: Dr. Imme Ebert-Uphoff

1996 **University of Michigan** Ann Arbor, MI
- M.S., Mechanical Engineering

1994 **University of Notre Dame** Notre Dame, IN
- B.S., Mechanical Engineering, Summa Cum Laude

PROFESSIONAL EXPERIENCE

2017-Present **Marquette University, Dept. of Mech. Eng., Associate Chair** Milwaukee, WI
- Led the Undergraduate Studies committee to oversee curricular improvements.
- Coordinated the ABET accreditation which included writing parts of self-study and organizing visit
- Performed Chair duties in the Chair absence.

2019-Present **Marquette University, Dept. of Biomed. Eng., Adjunct Professor** Milwaukee, WI
2014-Present **Marquette University, Dept. of Mech. Eng., Associate Professor** Milwaukee, WI
2008-2014 **Marquette University, Dept. of Mech. Eng., Assistant Professor** Milwaukee, WI
- Established the Dynamics and Controls Lab focusing on motion related problems in trans-tibial prosthetic design, simulation of human gait, and reconfigurable mechanisms.
- Advised to graduation nineteen masters students and three doctoral students on numerous projects.
- Developed graduate robotics, undergraduate/graduate intermediate dynamics, undergraduate numerical methods, and undergraduate measurements and controls courses.

2015-2017 **Marquette University, Lafferty Chair in Engineering** Milwaukee, WI
- Organized an engineering community of practice on pedagogical practices in technical instruction.
- Researched research based instructional strategies and their application to teaching engineering.

2015-2016 **Eaton Corporation – Power Systems Division, Engineer** South Milwaukee, WI
- Worked as an entry-level engineer during sabbatical from August 2015 – August 2016
- Assisted implementation of a cost and quality project which included design modifications, testing evaluations, supplier engagement, testing and production issues to save approximately $1 million.
- Aided in the design of a new recloser through modeling, design testing, and evaluation.

2004-2007 **University of South Carolina, Dept. of Mech. Eng., Asst Professor** Columbia, SC
- Established robotics and control research laboratory investigating prostheses, human gait, robotic assembly, and stochastic control theory.
- Supervised five masters, nine undergraduate and two high school research experiences.

2000-2004 **Georgia Institute of Technology, Graduate Research Assistant** Atlanta, GA

- Researched singularities of parallel robotic mechanisms including their effects on the kinematics, statics, and dynamics of mechanisms.
- Developed a method to determine how joint clearances propagate through parallel mechanisms.
- Created an overarching mathematical framework that unifies the different measures of singularities.
- Investigated methods to measure effectiveness of singularity elimination through redundant actuation.

2000 **Whirlpool Corporation, Resident Engineer** Findlay, OH

- Implemented new dishwasher model lines. Responsible for pre-pilots, pilots and production of all new models and model changes to the division.
- Interfaced with product engineering and suppliers on all cost and quality projects on current production models.
- Managed the Metrology Lab which included supervision of one hourly and four salary employees.

1998-2000 **Whirlpool Corporation, Third Shift Superintendent** Findlay, OH

- Oversaw all operations on third shift which entailed: personnel, safety, production, maintenance and supervision.
- Directly supervised one salary and thirteen hourly employees. Led a sub-assembly line to record production and CPY (Critical Process Yield) levels.
- Indirectly supervised all third shift supervisors. Administered suspensions, sexual harassment investigations, terminations, and discipline issues.

1996-1998 **Whirlpool Corporation, Project Engineer** Findlay, OH

- Drove improvement of CPY on an automated dishrack line by coordinating unskilled labor and skilled trades, identifying and eliminating downtime, and improving overall cycle time.
- Managed capital projects involving proposal, supplier selection, design improvements, and supervising installation and debugging.
- Completed Operational Excellence (6σ) training and ran several designed experiments and components of variations studies while utilizing statistical process control, thought maps, and process maps.

1994 - 1996 **Whirlpool Corporation, Technical Excellence Program** Benton Harbor, MI

Corporate Technology and Engineering Development, Refrigeration, Benton Harbor, MI

- Evaluated new and improved designs for ice maker water valves in conjunction with the next generation ice maker project.

Alliance Project, Schorndorf, Germany

- Transferred information and technology to and from American and European projects while considering cultural differences.

Sequoia Project, St. Joseph Technology Center, St. Joseph, MI

- Brainstormed, designed, and built a system to position, stop, and open washer basket doors.

TEACHING ABILITY AND PERFORMANCE

Marquette University Courses Taught

Course Number	*Course Title*	*No. of Semesters*
MEEN2120	Dynamics	5
MEEN3210	Measurements and Control	5
MEEN3260	Numerical Methods of Mechanical Systems	8
MEEN 4220/5220	Intermediate Dynamics	11
MEEN4590	Engineering Fundamentals Review	2
MEEN4931	Special Topics: Mechanical Engineering Potpourri	2
MEEN6250	Industrial Robotics	2

University of South Carolina Courses Taught

ENGR101	Intro to Engineering I	1
EMCH201	Intro to Applied Numerical Methods	2
EMCH516	Control Theory in Mechanical Engineering	3
EMCH561	Robotics in Mechanical Engineering	2

Graduate Student Supervision

Name	*Comp. Date*	*Degree*	*University*	*Type*
Thayer, Jessica	8/2020	Masters	Marquette	Thesis
Willingham, Maxwell	5/2020	Masters	Marquette	Thesis
Callahan, Ryan	5/2019	Masters	Marquette	Thesis
Alberts, Jack	12/2018	Masters	Marquette	Thesis
Klein, Joseph	8/2018	Masters	Marquette	Thesis
Buchta, Anthony	5/2018	Masters	Marquette	Thesis
Bayless, John	8/2017	Masters	Marquette	Thesis
Ryan, Paul	12/2018	PhD	Marquetee	Dissertation
Guerroro, Moises	5/2018	Masters	Marquette	Coursework
Malak, Peter	8/2016	Masters	Marquette	Thesis
Wu, Shaoli	5/2017	Masters	Marquette	Coursework
Korves, Brian	8/2014	Masters	Marquette	Thesis
Boyarsky, Michael	8/2014	Masters	Marquette	Thesis
Jennings, James	5/2014	Masters	Marquette	Thesis
Prisco, Joseph	8/2013	Masters	Marquette	Thesis
Slaboch, Brian	8/2013	PhD	Marquette	Dissertation
Slaboch, Brian	5/2011	Masters	Marquette	Thesis
Rogers, Lindsay	5/2011	Masters	Marquette	Thesis
Sun, Jinming	5/2015	PhD	Marquette	Dissertation
Sun, Jinming	12/2012	Masters	Marquette	Thesis
Bergelin, Bryan	8/2010	Masters	Marquette	Thesis
Ziesmer, Jacob	12/2009	Masters	Marquette	Thesis

Atilola, Funmi	12/2008	Masters	USC	Thesis
Frassica,Michael	12/2008	Masters	USC	Thesis
Mattos, Javier	12/2007	Masters	USC	Thesis
Guo, Fuxiao	5/2007	Masters	USC	Thesis
Bonivel, Joseph	8/2006	Masters	USC	Thesis

Undergraduate Supervision

Student	***University***	***Dates***
Belyaev, Zachary	Marquette	5/2020 – 8/2020
Downes, Samuel	Marquette	5/2020 – 8/2020
Fitzgerald, Joseph	Marquette	5/2020 – 8/2020
Plata, Devon	Marquette	3/2019 – 12/2019
Thayer, Jessica	Marquette	1/2018 – 5/2019
Erato, Daniel	Marquette	5/2015 – 8/2015
Andrews, Clark	Marquette	9/2013 – 5/2015
Korves, Brian	Marquette	11/2011 – 12/2012
Prisco, Joseph	Marquette	8/2010 – 1/2011
Flynn, Kevin	Marquette	8/2009 – 5/2011
Redick, Robin	USC	8/2007 – 12/2007
Armstrong, Laura	USC	8/2007 – 12/2007
Shaw-Alley, Kevan	USC	1/2007 – 5/2007
Kane, Evan	USC	10/2006 – 5/2007
Hodgins, Micah	USC	8/2006 – 12/2007
Behling, Thomas	USC	8/2006 – 12/2007
Leverette, William	USC	5/2006 – 5/2007
Soles, Jarrett	USC	8/2005 – 12/2005
Navarette, Ruben	USC	9/2004 – 12/2005
Wells, Joseph	USC	8/2004 – 5/2005

Teaching Recognition

- Outstanding Teacher Award (Marquette University, College of Engineering): 2019
- Teacher of the Year Award (Marquette University, Department of Mechanical Engineering): 2019
- Outstanding Teacher Award (Marquette University, College of Engineering): 2017
- Reverend John P. Raynor, S.J., Faculty Award for Teaching Excellence (Marquette University): 2015
- Outstanding Teacher Award (Marquette University, College of Engineering): 2015
- Outstanding Teacher Award (Marquette University, College of Engineering): 2013
- Teacher of the Year Award (Marquette University, Department of Mechanical Engineering): 2012
- Outstanding Teacher Award (Marquette University, College of Engineering): 2011
- Teacher of the Year Award (Marquette University, Department of Mechanical Engineering): 2011
- Semi-Finalist for Faculty Award for Teaching Excellence (Marquette University): 2010
- Outstanding Teacher Award (Marquette University, College of Engineering): 2009
- Teacher of the Year Award (Marquette University, Department of Mechanical Engineering): 2009
- Faculty STAR Award (Marquette University National Residence Hall Honorary): 2008
- ASME Graduate Teaching Fellow: 2002 – 2004

RESEARCH ABILITY AND ACHIEVEMENT

Honors and Awards

- Marquette Faculty All-Star Award: 2016
- Honorary Membership in Alpha Sigma Nu (Marquette University Chapter): 2011
- Sigma Xi Rising Star Award (Marquette University Chapter): 2011
- Freudenstein / General Motors Young Investigators Award (ASME DETC): 2007
- MSC Simulation Software Best Paper Award (ASME DETC): 2006

Invited Colloquia

Title	Location	Date
EMG Controlled Trans-Tibial Prostheses	Design of Medical Devices Conf. University of Minnesota	4/2018
Bionic Below the Knee Prostheses From Theory to Practice	University of Nebraska, Lincoln	11/2011
Bionic Below the Knee Prostheses From Theory to Practice	Sigma Xi Banquet	3/2011
Powered Ankle Prostheses	MCW (Grand Rounds)	4/2010
Transformational Engineering Education at Marquette	ASEE Regional Conference	10/2008
Development of an Active Below the Knee Prosthesis	University of Wisconsin, Madison	4/2009
Design and Analysis of Bionic Trans-Tibial Prosthetics	The Ohio State University, Columbus	4/2007
Bionic Trans-Tibial Prosthetics	Columbia College, Columbia, SC	1/2007
Parallel Manipulators	Society of Manufacturing Engineers	10/2004

Publications

Journal Publications (published or in press)

1. E. Baker, P. Voglewede, B. Silver-Thorn, "Novel Orthotic Ankle Joint Design for Enhancing Ankle Mobility with AFO Use After Stroke," Submitted to *ASME Journal of Medical Devices,* In Press, 2020.
2. J. Bayless and P. Voglewede, "Joystick Steering In Recreational Boats Using L1 Adaptive Control," *ASME Journal of Dynamic Systems, Measurement and Control*, Vol. 142, No. 6.: 064501, June 2020.
3. P. Ryan, S. Baxter, and P. Voglewede, "Automating the Derivation of the Equations of Motion of a Multi-Body Dynamic System with Uncertainty Using Polynomial Chaos Theory and Variational Work," *ASME Journal of Computational and Nonlinear Dynamics*, Vol. 15, No. 1, January 2020.
4. L. Bosman and P. Voglewede, "How Can a Faculty Community of Practice Change Classroom Practices?," *College Teaching*, https://doi.org/10.1080/87567555.2019.1594149, pp 1-11, May 2019.
5. J. Sun, S. Wu, and P. Voglewede, "Dynamics Simulation of Human Gait Model with Predictive Capability," *ASME Journal of Biomechanical Engineering*, Vol. 140, 031008, March 2018.
6. J. Prisco and P. Voglewede, "Dynamic Modeling of a Belt Driven Electromechanical XY Plotter Cutter," *ASME Journal of Computational and Nonlinear Dynamics*, Vol 10, No. 2, March, 2015.
7. S. Farmer, B. Silver-Thorn, P. Voglewede, and S. Beardsley, "Within-Socket Myoelectric Prediction of Continuous Ankle Kinematics for Control of a Powered Transtibial Prosthesis," *Journal of Neural Engineering*, Vol. 11, 056027, September 2014.
8. J. Sun, J. Fritz, D. DelToro, and P. Voglewede, "Amputee Subject Testing Protocol, Results and Analysis of a Powered Transtibial Prosthetic Device," *ASME Journal of Medical Devices*, Vol. 8, No. 4,

041007, August 2014.

9. M. Telwak, P. Voglewede, and M.B. Silver-Thorn, "Determination of Optimal Counter-Mass Location in Active Prostheses For Transfemoral Amputees To Replicate Sound Limb Swing" *ASME Journal of Medical Devices*, Vol. 8, No. 4, 041003, August 2014.
10. B. Slaboch and P. Voglewede, "Profile Synthesis of Planar Rotational-Translational Variable Joints," *ASME Journal of Mechanisms and Robotics*, Vol. 6, No. 4, 041012, July, 2014.
11. J. Sun and P. Voglewede, "Powered Transtibial Prosthetic Device Control System Design, Implementation and Bench Testing," *ASME Journal of Medical Devices*, Vol. 8, No. 1, 011004, March, 2014.
12. Kulkarni, R., Voglewede, P., and Liu, D., "Mechanical Vibration Directly Inhibits Osteoclast Formation by Reducing DC-STAMP Receptor Expression in Osteoclast Precursor Cells," *BONE*, Vol. 57, No. 2, pp. 493-498, December, 2013.
13. B. Slaboch and P. Voglewede, "Underactuated Part Alignment System (UPAS) for Industrial Assembly Application," *ASME Journal of Mechanisms and Robotics*, Vol. 5, February, 2013.
14. B. Bergelin and P. Voglewede, "Design of an Active Ankle-Foot Prosthesis Utilizing a Four-Bar Mechanism," *ASME Journal of Mechanical Design*, Vol. 134, June, 2012.
15. B. Slaboch and P. Voglewede, "Mechanism State Matrices for Planar Reconfigurable Mechanisms," *ASME Journal of Mechanisms and Robotics*, Vol. 3, No. 1, February, 2011.
16. B. Bergelin, B. Slaboch, J. Sun and P. Voglewede, "A Handy New Design Paradigm," *Mechanical Sciences*, Special Issue – Underactuated Grasping, 2010.
17. B. Bergelin, J. Mattos, J. Wells, and P. Voglewede, "Concept Through Preliminary Bench Testing of a Powered Lower Limb Prosthetic Device," *ASME Journal of Mechanisms and Robotics*, Vol. 2, No. 4, November, 2010.
18. P. Voglewede, A.H.C. Smith, and A. Monti, "Dynamic Performance of a SCARA Robot Manipulator with Uncertainty using Polynomial Chaos Theory," *IEEE Transactions on Robotics*, Vol. 25, No. 1, pp. 206-210, February, 2009.
19. N.D. Crews, M. Ghajar, J. Darabi, P. Voglewede, F. Guo, and A. Bayoumi, "An Analysis of Interdigitated Electrode Geometry for Dielectrophoretic Particle Transport in Micro-Fluidics," *Journal of Sensors and Actuators - Chemical B*, Vol. 125, No. 2, pp. 672-679, August 8, 2007.
20. P.A. Voglewede and I. Ebert-Uphoff, "Overarching Framework for Measuring Closeness to Singularities of Parallel Manipulators," *IEEE Transactions on Robotics*, Vol. 21, No. 6, pp. 1037-1045, December, 2005.
21. P.A. Voglewede and I. Ebert-Uphoff, "Application of the Antipodal Grasp Theorem to Cable-Driven Robots," *IEEE Transactions on Robotics*, Vol. 21, No. 4, pp. 713-718, August, 2005.
22. P.A. Voglewede and I. Ebert-Uphoff, "Application of Workspace Generation Techniques to Determine the Unconstrained Motion of Parallel Manipulators," *ASME Journal of Mechanical Design*, Vol. 126, Issue 2, pp. 283-290, March 2004.

Referred Conference Proceedings (published or in press)

1. D. Plata, J. Thayer and P. Voglewede, "Mechanical Redsign of a Transtibial Prosthesis with Active and Passive Components and a Four-Bar Mechanism," 2020 ASME DETC Mechanisms and Robotics Conference, Paper Number IDETC2020-22111, August 2020
2. J. Thayer and P. Voglewede, "Improvement of a Forward Dynamic Predictive Human Gait Model," 2019 ASME DETC Mechanisms and Robotics Conference, Paper Number IDETC2019-97162, August 2019
3. E. Baker, P. Voglewede, T. Current, and B. Silver-Thorn, "Design of a Novel Ankle Joint for an AFO for Individuals with Drop-Foot Evaluated on Able-Bodied Subjects," Biomedical Sciences Instrumentation, 55(2), 367-372, April 2019.
4. J. Klein and P. Voglewede, "Impedance Control of an Active, Transtibial Prosthesis," 2018 ASME DETC Mechanisms and Robotics Conference, Paper Number IDETC2018-85455, August 2018.

5. R. Callahan and P. Voglewede, "Profile Synthesis of Prismatic-Prismatic Variable Joints for Use in Reconfigurable Mechanisms," Paper Number IDETC2018-86321, August 2018.
6. S. Baxter and P. Voglewede, "Probabalistic Analysis of a Metamorphic Mechanism Based on a Global Sensitivity Analysis: A Preliminary Study," 2017 ASME DETC Mechanisms and Robotics Conference, Paper Number IDETC2017-67322, August 2017.
7. P. Ryan, S. Baxter, and P. Voglewede, "Variational Analysis of a Two Link Slider-Crank Mechanism Using Polynomial Chaos Theory," 2017 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2017-67328, August 2017.
8. A. Buchta, and P. Voglewede, "A Qualitative Survey of Reconfigurable Mechanisms with Industrial Applications," 2017 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2017-67193, August 2017.
9. S. Wu, and P. Voglewede, "Improvement of a Forward Dynamic MPC Based Human Gait Model," 2016 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2016-59429, Charlotte, NC, August 2016.
10. P. Malak, A. Buchta, and P. Voglewede, "Experimental Analysis of a Planar Reconfigurable Mechanism with a Variable Joint," 2016 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2016-59235, Charlotte, NC, August 2016.
11. J. Sun, S. Wu, and P. Voglewede, "The Development of a Human Gait Model with Predictive Capability and the Simulation of Able-Bodied Gait," 2015 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2015-47382, Boston, MA, August 2015.
12. P. Malak, and P. Voglewede, "Dynamic Analysis of a Planar Mechanism with Variable Topology," 2015 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2015-46271, Boston, MA, August 2015.
13. B. Slaboch and P. Voglewede, "Synthesis of a Reconfigurable Four-Bar Mechanism with Variable Joints" 2014 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2014-34924, Buffalo, NY, August 2014.
14. J. Sun and P. Voglewede, "Dynamic Simulation of Human Gait Using a Combination of Model Predictive and PID Control" 2014 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2014-35582, Buffalo, NY, August 2014.
15. B. Korves and P. Voglewede, "Dynamic Model of a Weld Breaking Mechanism for Automatic Circuit Recloser Applications" 2014 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2014-34371, Buffalo, NY, August 2014.
16. M. Boyarsky, M. Heenan, S. Beardsley and P. Voglewede, "Determination of Variable Stiffness of a Human Elbow for Human-Robot Interaction" 2014 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2014-34420, Buffalo, NY, August 2014.
17. B. Slaboch and P. Voglewede, "Planar, Higher Variable Joints for Reconfigurable Mechanisms" 2013 ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2013-13120, Portland, OR, August 2013.
18. A. M. da Silva, P. A. Voglewede, and K. C. Craig, "Integrated Trajectory Planning, System Modeling, and Control Design for Optimized Motor Selection," Proceedings of the ASME 5th Annual Dynamic Systems and Control Conference Joint with the JSME 11th Motion and Vibration Conference, DSCC2012-MOVIC2012-8775, vol. 2, pp. 103-112, 2012
19. B. Korves, B. Slaboch, and P. Voglewede, "Mechanism State Matrices for Spatial Reconfigurable Mechanisms," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2012-71361, Chicago, August 2012.
20. J. Sun and P. Voglewede, "Controller Design and Preliminary Testing of a Powered Below-Knee Prosthetic Device," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2012-71010, Chicago, August 2012.
21. Prisco, J. and P. Voglewede, "A Dynamic Model of a Belt Driven Electromechanical XY Plotter

Cutter," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2012-71004, Chicago, August 2012.

22. B. Slaboch and P. Voglewede, "Configuration Space Analysis and Synthesis of Planar Variable Kinematic Joints," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2012-71146, Chicago, August 2012.
23. J. Sun and P. Voglewede, "Bench Testing of a Powered Transtibial Prosthesis," 2012 Design of Medical Devices Conference (DMD2012), Minneapolis, MN, 2012
24. J. Sun and P. Voglewede, "Controller Implementation of a Powered Below Knee Prosthetic Device," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2011-47957, Washington, DC, August 2011.
25. B. Slaboch and P. Voglewede, "Underactuated Part Alignment System (UPAS) for Industrial Assembly Tasks," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2011-48267, Washington, DC August 2011.
26. J. Sun and P. Voglewede, "Control of a Powered Lower Limb Prosthetic Device,"2011 Design of Medical Devices Conference (DMD2011), Minneapolis, MN, 2011.
27. B. Bergelin, B. Slaboch, J. Sun, P. Voglewede, "A Handy New Design Paradigm," Proceedings of the IFToMM/ASME Workshop on Underactuated Grasping, Montreal, Canada, 2010.
28. B. Slaboch, P. Voglewede, "Development of Planar Mechanism State Matrices for Reconfigurable Mechanisms," ASME IDETC Mechanisms and Robotics Conference, Paper Number DETC2010-28108, Montreal, Canada, 2010.
29. K. Craig, P. Voglewede, "Multidisciplinary Engineering Systems Graduate Education: Master of Engineering in Mechatronics," Proceedings of the 2010 IEEE Transforming Engineering Education: Creating Interdisciplinary Skills for Complex Global Environments, 2010.
30. J. Ziesmer, P. Voglewede, "Design, Analysis and Testing of a Metamorphic Gripper," Proceedings of the 2009 ASME IDETC/CIE Conference, Paper Number DETC2009-87512, August 2009.
31. P. Voglewede, R. Copsey, "Dynamic Analysis of a Specific 2PRR Robotic Manipulator," Proceedings of the 2009 ASME IDETC/CIE Conference, Paper Number DETC 2009-86789, August 2009.
32. K. Saginus, R. Marklin, P. Voglewede, "Dynamic Modeling of Hand Force to Close a Disconnect Switch at Switching Stations and Substations," Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting, San Antonio, TX, October, 2009.
33. L. Armstrong, S. Baxter, P. Voglewede, "Simplified Model of the Knee as a 2-Dimensional Spring Mechanism," Proceedings of the 2008 ASME IDETC/CIE Conference, Paper Number DETC2008-49797, August 2008.
34. M. Frassica, J. Lyons, P. Voglewede, "A Method to Utilize a Tissue Engineering Laboratory in a Control Theory Course," Proceedings of the 2008 ASEE Annual Conference and Exposition, Pittsburgh, PA, June 2008.
35. P.A. Voglewede, "Novel Design of a Robotic Gripper Allowing for In-Hand Manipulation," Proceedings of the 2007 ASME IDETC/CIE, Paper Number DETC2007-34797.
36. J.O. Mattos, E.D. Kane, P.A. Voglewede, "Active Component Lower Limb Prosthetic Device Research: Concept and Design," Proceedings of the 2007 ASME IDETC/CIE, Paper Number DETC2007-34768.
37. P.A. Voglewede and A. Monti, "Variation Analysis of a Two Link Planar Manipulator Using Polynomial Chaos Theory," Proceedings of the 2006 ASME IDETC/CIE, Paper Number DETC2006-99170, September 2006.
38. J.G. Wells, P.A. Voglewede, and D. Rocheleau, "Design for Improved Trans-Tibial Prosthetic Devices Using Four Bar Mechanisms," Proceedings of the 2005 ASME IDETC/CIE, Paper Number DETC2005-85083, September 2005.

39. I. Ebert-Uphoff and P.A. Voglewede, "On the Connections Between Cable-Driven Robots, Parallel Manipulators and Grasping," Proceedings of the 2004 IEEE International Conference on Robotics and Automation, New Orleans, LA, pp. 4521-4526, May 2004.

40. P.A. Voglewede and I. Ebert-Uphoff, "Measuring 'Closeness' to Singularities for Parallel Manipulators," Proceedings of the 2004 IEEE International Conference on Robotics and Automation, New Orleans, LA, pp. 4539-4544, May 2004.

41. K. Kozak, P.A. Voglewede, I. Ebert-Uphoff, and W. Singhose, "Concept Paper: On the Significance of the Lowest Linearized Natural Frequency of a Parallel Manipulator as a Performance Measure for Concurrent Design," Proceedings of the Workshop on Fundamental Issues and Future Research Directions for Parallel Mechanisms and Manipulators, Quebec City, Canada, pp. 112 - 118, October, 2002.

42. P.A. Voglewede and I. Ebert-Uphoff, "Two Viewpoints on the Unconstrained Motion of Parallel Manipulators at or Near Singular Configurations," Proceedings of the 2002 IEEE International Conference on Robotics and Automation, Washington, DC, pp. 503-510, May 2002.

SERVICE

Committee Service

Activity	*Institution*	*Dates*
Marquette University Classroom Task Force	Marquette	7/2020 – Present
College of Engineering Machinist Interview Committee	Marquette	1/2020 – 6/2020
Mechanical Engineering Search Committee	Marquette	8/2019 – 4/2020
Marquette Patent Review Committee - Member	Marquette	8/2019 – Present
Mechanical Engineering Undergraduate Committee Chair	Marquette	8/2017 – Present
Task Force for Community and Corporate Engagement (P&T) – Member	Marquette	5/2019 – 10/2019
Helen Way Klingler College of Arts and Sciences Dept. of Physics Assistant Professor Search Committee	Marquette	8/2017 – 4/2018
Corporate Engagement Task Force Tech Transfer Member	Marquette	8/2017 – 12/2017
College of Engineering Machinist Interview Committee	Marquette	9/2016 – 11/2016
OPUS College of Engineering Mechanical Engineering Chair Search Committee	Marquette	9/2016 – 4/2017
Mechanical Engineering Mechanical Systems Faculty Search Committee Chair	Marquette	8/2016 – 4/2017
OPUS College of Engineering Manufacturing Center Director Search Committee	Marquette	10/2014 – 5/2015
OPUS College of Engineering Dean Search Committee	Marquette	9/2014 – 4/2015
Mechanical Engineering Mechanical Systems Faculty Search Committee Chair	Marquette	5/2014 – 4/2015
Mechanical Engineering Energy Systems Faculty Search Committee	Marquette	7/2013 – 3/2014
College of Engineering Machinist Interveiw Committee	Marquette	10/2012 – 11/2012, 5/2013 – 6/2013
Mechanical Engineering Strategic Plan Committee	Marquette	8/2013 – 5/2015
Mechanical Engineering Strategic Plan Committee Chair	Marquette	3/2012 – 5/2013
Mechanical Engineering Secretary of the Faculty	Marquette	8/2011 – 5/2014
Mechanical Engineering Energy Systems Faculty Search Committee	Marquette	9/2010 – 5/2011
College of Engineering Computer Advisory Board	Marquette	5/2010 – 5/2011
College of Engineering Mechanics Committee	Marquette	4/2009 – 12/2014
Mechanical Engineering Undergraduate Committee	Marquette	8/2008 – 8/2017

Industrial Innovation Consortium Task Force	Marquette	7/2008 – 7/2009
Computer Systems Manager Search Committee	Marquette	6/2008 – 8/2008
Biomedical Engineering Undergraduate Studies Committee	USC	8/2006 – 12/2007
Mechanical Engineering Undergraduate Studies Committee	USC	8/2004 – 12/2007

Professional Activities

Activity	***Dates***
2020 ASME IDETC Mechanisms and Robotics Conference – Conference Chair	8/2019 – 8/2020
IFToMM ISRM 2019 Programme Committee Member	4/2019 – 10/2019
2018 ASME IDETC Mechanisms and Robotics Conference – Program Co-Chair	8/2017 – 8/2018
2017 ASME IDETC Mechanisms and Robotics Conference – Program Co-Chair	8/2016 – 8/2017
2017 ASME Mechanisms and Robotics Conference – Symposium Coordinator	10/2016 – 8/2017
2015 ASME Mechanisms and Robotics Conference – Symposium Coordinator	8/2014 – 8/2015
2014 ASME IDETC – Student Activities Chair	8/2013 – 8/2014
2014 ASME Mechanisms and Robotics Conference – Symposium Coordinator	8/2013 – 8/2014
2013 ASME Mechanisms and Robotics Conference – Symposium Coordinator	8/2012 – 8/2013
2012 ASME Mechanisms and Robotics Conference – Symposium Coordinator	8/2011 – 8/2012
2012 ASME IDETC – Tutorial and Workshop Chair	8/2011 – 8/2012
2011 ASME Mechanisms and Robotics Conference – Symposium Co-Coordinator	8/2010 – 5/2011
ASME Mechanisms and Robotics Committee Member	8/2008 – 9/2014
Associate Editor, Video Submissions, ASME Robotics and Mechanisms Committee	9/2007 – 7/2010
2008 ASME IDETC – Student Mechanism Design Competition – Graduate Division Coordinator	9/2007 – 10/2008
2007 ASME IDETC – Student Mechanism Design Competition – Sponsorship Organizer	9/2006 – 9/2007
2005 ASME IDETC – Student Mechanism Design Competition – Judge	9/2005

Public Service Activities

Activity	***Dates***
FIRST Lego League – Technical Judge (Franklin HS Regional)	11/2019
Marquette University 707 Hub - Silicon Valley Visit	10/2018
Marquette ELA – Deep Impact – Co-Instructor	7/2018
Marquette HEELS – ME Experience Presentation	6/2018
FIRST Lego League – Head Technical Judge (MUHS Regional)	11/2013

FIRST Lego League – Head Technical Judge (MUHS Regional)	11/2012
FIRST Lego League – Head Technical Judge (MUHS Regional)	11/2011
FIRST Lego League – Technical Judge (MUHS Regional)	11/2010
FIRST Lego League – Technical Judge (MUHS Regional)	11/2009
FIRST Lego League – Technical Judge (MUHS Regional)	10/2008
FIRST Lego League – Head Referee (SC Regional)	12/2007
FIRST Robotics Competition – Team Cueing	3/2007
FIRST Lego League – Head Referee (SC State Tournament)	1/2007
FIRST Robotics Competition – Crowd Control	4/2006
USC Central South Carolina Region II Science and Engineering Fair – Judge	3/2006
FIRST Lego League – Head Referee (SC State Tournament)	1/2006
USC Central South Carolina Region II Science and Engineering Fair – Judge	3/2005
FIRST Lego League – Presentation Judge	2/2005

Professional Associations

- American Society of Mechanical Engineers (ASME)
- Institute of Electrical and Electronics Engineers (IEEE)
- American Society for Engineering Education (ASEE)