

Area of Specialization: Design and analysis of multirate digital control systems, focusing on synthesis of low order multirate control laws via numerical optimization, and analysis via structured singular values

M.S. Mechanical Engineering

Georgia Institute of Technology, Atlanta, Georgia, 1984

Area of Specialization: Computer Integrated Manufacturing

B.S. Mechanical Engineering

Gonzaga University, Spokane, Washington, 1983

Licensed Professional Engineer, Washington State, 1989

Work Experience

Professor

Mechanical Engineering, 1993-present

Seattle University, Seattle, Washington

Department Chair, 2000-2012

{ Developed the curriculum for the Manufacturing Engineering Program at Seattle University

{ Courses Taught

Manufacturing Automation with Emphasis on Digital Controls

Data Acquisition and Instrumentation

Computer Aided Design using Parametric Solid Modeling

Engineering Methods/Programming for Engineers

Manufacturing Processes

Statics

Computer Integrating Manufacturing

Control Systems & Robotics

{ Research

Engineering Education

Controls Systems and Data Acquisition

Affiliate Associate Professor, University of Washington 2000-2018

Adjunct Faculty, Seattle Pacific University, Seattle, Washington 1993

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11. D •}vU ' v }CE vÁ ooU ZU ^ == WCE}PCE u p]ve it in Z Numerical ^]u%o](Ç ' D šZ} • }μCE• _U }u%oμš CE•]v μ š}}v :}μCE 2007U s}o ys//U E} îU
- 12.

Invited Presentations, Posters and Publications

1. Design and created all interactive online content for textbook Introduction Applied Digital Controls, Starr, Springer Publishing 2020
2. Cook, K. E., Han, Y., Shuman, T. R., & Mason, G., Turns, J. Implicit Association-Testing the unconscious mind. NSF RED Workshop, 2019
3. ASEE Workshop using BasysMX3 in a Mechanical Engineering Data Acquisition Course, June 2018.
4. Design and created interactive content for book version of Modern Control Systems, Bishop and Dorf, Pearson 2017, 2020
5. ASEE NSF Workshop using AEPCL in a Heat Transfer Class, June 2016
- 6.

- 19. Zmuš ÖU dXU D •}vU 'XU v u•}vU :X ^ ÖE š}}v }(> ÖEv]vP }uuµ Coordinationt WZ • dÁ}X_ E^& 'ÖE vš W}•š ÖE ^ ••}}v %oÖESocietyoš}}v š šZ Engineering Education Annual Conference & Exposition, Nashville, TN, 2003.

Seattle University Presentations and Posters

- 1. Jeimmy Barbosa, J*,Cordano, A.*, Lee, D.*, Tamura, C.*, Mason, G. McLaughlin, Chemistry Laser Induced Breakdown SpectroscopyPresented at the Seattle University summer research poster session, 2019.
- 2. '}} u vU XŽU E}}ÖE(•Z vU ^XŽU D •}vU 'XU D > µPZo]vU ZX ^ v }vš u]v vš• µ•}vP > • ÖE /v µ ÖE I }Áv ^%o šÖE Seattle University ^•_X WÖ summer research poster session, 2018.
- 3. D •}vU 'XU Zmuš ÖE ^Zµu vU dXU v u•}vU :X ^ ÖE š}vP > ÖEv]vP Course through Curriculum CoordinationExamples of Three Design Projects/ Teamwork Assessment/ ^šµ vš /vš ÖEÀ] Á•X_ W}•š ÖE š šZ ïïñ o ÖE š}}v }(& µošÇ Z •
- 4. D •}vU 'XU Zmuš ÖE ^Zµu vU dXU v u•}vU :X ^ ÖE š}vP > ÖEv]vP
- 5. Zmuš ÖE U dX v D •}vU 'X ^ ÖE š}}v }(> ÖEv]vP} ÖE u]vµš]}šÇ šZ}ÖEš µÖE Z the 2004 Celebration of Faculty Research.Day
- 6. Zmuš ÖE U dX v D •}vU ÖE u'X}µÖEš • ••u všU /u%oÖE}À u všU v s ÖE]() Poster at the 2003 Celebration of Faculty Research Day.
- 7. D •}vU 'XU ^h•}vP Àµ •,]α š <µ]•}š}}v }µÖE• _ ^] v v vP]v Seminar, 2000.

Awards and Grants*externally funded awards)

- 1. E š}}v o /v•š]}šµš (}ÖE K µ%o š}}v , ošZ v ^ (šÇU D •}vU dX D > µ method for <µ vš]}š š}}v }(WD_U ``ïïUïïïU ïïïôXŽ
- 2. W Z W ÖE }Monitor ÖE Airborne Particulates using / approx.\$50,000 over 2 years, 2011
- 3. E š}}v o ^] v &}µv š}}v Z 'ÖE všU }]}U <XU , vU zXU D •}vU'XU Engineering Ed

11. Hewlett Packard Computers in Education Grant, Mason, G., Dragovich, J., \$70,000, 2006.*
12. Science and Engineering Bannan Chair, ~~2006~~.
13. E š] } v o ^] v & } μ v š] } v > / U ^ Z μ u α } U % d X v š ρ (•) v U O X v U] v P A } u u μ v] š \$103,000, 2001.*
14. Bannan Grant for Computer Equipment, \$2,000, 1997.
15. Norman Archibald Charitable Foundation Grant, \$10,000, 1995.*
16. Seattle University Summer Faculty Fellowship, 1994.
17. Finalists Award for Windows Mobile Pocket PC and Smartphone Calculator, 2007, by PocketPC Magazine.
18. Best Software Award for Windows Mobile Pocket PC Calculator, 2006, by PocketPC Magazine.
19. Casio BE300 Best Software Award, \$30,000, 2002.*

Academic Service

1. University Academic Program Portfolio Review, 2020
2. College of Science and Engineering Laboratory Safety Committee, 2019.
3. Department of Mechanical Engineering Tenure and Promotion review committee, various.
4. APR Scholarship Committee, 2019.
5. Sullivan Scholar Selection Committee, ~~2013~~.
6. Coordinator for Kogakuin University exchange student program, ~~2011~~.
7. Department ABET and Assessment Coordinator, ~~2005~~ent.
8. Mechanical Engineering Hiring Committee, various, 2012-2014.
9. College of Science and Engineering Personnel Committee, ~~2011~~, 2014.
10. System Engineering Graduate Program Committee, ~~2013~~.
11. University Core Assessment Planning Committee Chair, 2012-2013.
12. Project Center Coordinator Hiring Committee, 2012.
13. Mechanical Engineering Department Chair, ~~2012~~.
14. Facilities Planning Committee Fall 2010.
15. CSSE Four Year Review Committee for Dr. Lirong (Annie) Dai, 2010.
16. University of Washington Master, advisor and committee member, Geoff Hohn, 2009-2011.
17. CSSE Tenure Review Committee for Dr. Eric Larson, 2009.
18. Academic Assembly, representative for College of Science and Engineering, 2006
19. Science and Engineering Curriculum Committee ~~1997~~.
20. ASME Student Section Advisor 1998.
21. Acting Department Chair, Mechanical Engineering, summers 1996, 1999.

Professional Service

1. ASEE Division of Experimentation and Laboratory Oriented Studies, Division Chair, 2014-2016.
2. ASEE Division of Experimentation and Laboratory Oriented Studies, Division Chair, 2010-2014
3. ASEE Division of Experimentation and Laboratory Oriented Studies, Session Chair, 2014.
4. ASEE Division of Experimentation and Laboratory Oriented Studies, secretary/ webmaster, 2010

5. Reviewer, Proceedings of the ASEE Annual Conference; IEEE Transactions on Education; ASEE Journal of Engineering Education.
6. Community service Expanding Your Horizons, a program to expose Junior High girls to science and engineering, 1995-1997.

Affiliations

1. American Society of Engineering Educators
2. American Society of Manufacturing Engineers, Senior Member