

Brief Summary of Evidence Documenting Excellence in Scholarship

Criteria	Documented Evidence
Criteria for Satisfactory Rating	
a. Membership in relevant professional and scholarly societies and organizations.	<ul style="list-style-type: none"> • Hold 5 current international memberships (American Society for Quality, Society for Photo-Optical Engineering, Association of Technology Management and Applied Engineering, American Meteorological Society, American Geophysical Union) and one national membership (Data Science Association)
b. Participation in professional meetings, field conferences, and other scholarly gatherings.	<ul style="list-style-type: none"> • Attended 33 national/international professional conferences since 1999 • Attended 19 national/international professional conferences since joining JMU in 2009 • Attended 30+ local/regional professional society meetings (ASQ) and hacker meetings since 1999
c. Research involving students in independent studies or within the Honors Program.	<ul style="list-style-type: none"> • Research involving students at NRAO resulted in 12 co-authored conference publications and/or posters, and 2 co-authored book chapters • In addition to research conducted via senior capstone projects, have involved 6 JMU students in academic journal article preparation resulting in 2 submissions
d. Supervising student independent study and honors projects.	<ul style="list-style-type: none"> • Supervised 20 Honors students and 5 MS ISAT students in service learning projects via HON 300/ ISAT 680 course in 2012 and 2013
e. Presenting papers at regional meetings.	<ul style="list-style-type: none"> • Presented at 13 regional meetings, 10 as invited speaker, since joining JMU
f. Publishing in non-refereed journals.	<ul style="list-style-type: none"> • Published 5 Newsletter articles for professional society publications • Published 1 whitepaper for Nortel Networks for international distribution • Published 2 essays/popular literature
g. Development of instructional or education materials.	<ul style="list-style-type: none"> • Generated over 20 new exercises for ISAT/CS 344 (Intelligent Systems) and ISAT 341 (Simulation & Modeling) • Supervised the production of new educational materials by students which are now used in the above courses • Developed Test Bank for Macmillan/W. H. Freeman's <i>Statistics in Practice</i>
h. Demonstration of professional development through such activities as: Ongoing personal professional development (NSF short courses, attending national meetings, etc.) or an organized	<ul style="list-style-type: none"> • Regularly attend local, regional, and national/ international professional meetings, and workshops at the National Science Foundation (NSF) • Attended transformational leadership workshops by David Whyte and Charles Eisenstein

<p>program of self-study in a new area of research; Securing additional education at professional short courses and conferences.</p>	<ul style="list-style-type: none"> • Audited three courses at JMU and Naropa University on positive psychology, contemplative education, and sacred learning • Participated in an organized program of self-study between October 2010 and October 2011 in preparation to sit for the Certified Six Sigma Black Belt (CSSBB) exam, which I passed in October 2011 • Participated in first MOOC on Introduction to Artificial Intelligence (w/Thrun and Norvig) offered by Stanford in 2011
<p>i. Engaging in unpublished ongoing research.</p>	<ul style="list-style-type: none"> • Several articles currently in preparation: normalized multi-period total cost of ownership simulation study for <i>Software Quality Professional</i>; article on lean urbanism for <i>Quality Progress</i>; article on psychology of merit pay for <i>Quality Approaches in Higher Education</i> • New Research: Studying attitudes towards innovation and governance at Federally Funded Research and Development Center (FFRDC) management organizations; studying innovation culture and attitudes towards lifelong learning at Burning Man • Pedagogy: Data collection continues for publishing about course organization and outcomes from innovations in HON 300 (Quality and Process Improvement in Action) and GISAT 251 (Statistics)
<p>j. Presentation of faculty seminars and colloquia.</p>	<ul style="list-style-type: none"> • Presented at 2 workshops, including one for the JMU Center for Faculty Innovation
<p>k. Reviewing proposals for sponsored government, academic, or industry programs.</p>	<ul style="list-style-type: none"> • Since 2003, invited to 21 (and served as panelist or Co-Chair for 19) grant or proposal reviews for large-scale research facilities and organizations ranging from \$2M to \$115M by multiple National Science Foundation (NSF) directorates and Federally Funded Research and Development Corporations (FFRDCs)
<p>Criteria for Excellent Rating</p>	
<p>a. Demonstrated contribution to knowledge through a focused, goal directed program of research or other scholarly activity.</p>	<ul style="list-style-type: none"> • Developed focused research program on quality, innovation, and transformational experience that is fully described in Scholarship §2.A, Goal-Directed Research • Since January 2012, I have been blogging for the American Society for Quality as one of their Influential Voices at http://qualityandinnovation.com
<p>b. Receipt of professional achievement awards, or other evidence that demonstrates external recognition of individual professional achievement.</p>	<ul style="list-style-type: none"> • Designated as an ASQ Fellow in 2012, the highest mark of distinction bestowed by the Society • Named one of the ASQ's "New Voices of Quality" in 2011 (a once-a-decade designation) • Selected as one the ASQ's "Influential Voices" bloggers in 2012 • Inducted into Epsilon Pi Tau national technology honor society in 2009 • Team recipient of one of Vice President Al Gore's

	<p>Hammer Awards in 1999 for "contributions to a government that works better and costs less"</p>
<p>c. Invited lectures and/or publication in the proceedings of national or international conference.</p>	<ul style="list-style-type: none"> • 10 invited talks • 32 national/international conference presentations • 12 of the above published in proceedings
<p>d. Publication of book reviews, discussions, and technical reports in one's professional area.</p>	<ul style="list-style-type: none"> • Book Review Editor for the <i>Quality Management Journal</i> since April 2013 (I also supervise one Associate Editor in Brazil) • 16 book reviews prepared for the <i>Quality Management Journal</i> since July 2013 • 5 internally published technical reports for the National Radio Astronomy Observatory • 2 internally published technical reports/whitepapers for Nortel Networks
<p>e. Publication of books or monographs in one's professional area.</p>	<ul style="list-style-type: none"> • 6 book chapters • 4 technical encyclopedia articles
<p>f. Service as editor of a national or international journal or referee of papers for such a journal.</p>	<ul style="list-style-type: none"> • Associate Editor for <i>Journal of Astronomical Telescopes, Instruments and Systems (JATIS)</i> • Book Review Editor for <i>Quality Management Journal</i> • Editorial Review Board for 4 international journals
<p>g. Recipient of government or foundation grants, awards, or contracts.</p>	<ul style="list-style-type: none"> • Received conference grants from Business Innovation Factory (BIF) in 2013 and 2014 (\$2K ea.) • Received conference registration and travel grants from ASQ for 6 professional meetings from 2008 to 2012
<p>h. Active research involving students and demonstrable through presentation or publication in a professional forum.</p>	<ul style="list-style-type: none"> • Work done by 7 of my honors students and 1 of my senior capstone students at JMU has been presented at national/international meetings • Work done by 2 senior capstone projects has resulted in submissions to academic journals (<i>Journal of the Institute of Brewing</i> and <i>Journal of Quality Technology</i>) • Supported 1 REU student presenting at an international meeting (SPIE 2006)
<p>i. Publication of ongoing research and other scholarly activity in refereed national or international professional journals or serving as editor of a scholarly volume in one's field.</p>	<ul style="list-style-type: none"> • Published 2 peer-reviewed articles in the A-journal in my field (<i>Quality Management Journal</i>) • Published 6 other peer-reviewed articles in national or international professional publications • Had 1 article translated into Chinese • Editor for <i>Software and Cyberinfrastructure for Astronomy</i> proceedings (2008, 2010, 2012, and 2014)
<p>j. Presentation of papers at national or international professional meetings.</p>	<ul style="list-style-type: none"> • Represented 32 times at national and international professional meetings since 1999: <ul style="list-style-type: none"> ○ 11 on quality issues in software development and management

	<ul style="list-style-type: none"> ○ 8 on quality management ○ 5 on quality informatics ○ 4 on simulation and modeling ○ 4 on education and pedagogy
k. Initiating a successful grant proposal for external funding and/or directing the resulting project.	<ul style="list-style-type: none"> ● Received \$4K SAGE grant from JMU Office of International Programs to explore general education science and technology offerings in Iceland; conducted reconnaissance trip in May 2013 with ISAT Graduate Mandy Jenkins ● Participated in writing and successfully securing an NSF SoCS grant through NJIT for \$249,168 in 2010 that I was not required to work on personally.
l. Authoring textbooks or teaching materials.	<ul style="list-style-type: none"> ● Authored 30 chapter Test Bank for Macmillan/ W.H. Freeman's <i>Statistics in Practice</i> in 2013 ● Edited 4 chapters of Macmillan/ W.H. Freeman's <i>Statistics in Practice</i> in 2013 ● Engaged in revisions for the 2nd edition of <i>Machine Learning with R</i> by Brett Lantz (also the textbook I use for ISAT/CS 344)
m. Professional consulting which reflects recognition of the individual's expertise.	<ul style="list-style-type: none"> ● Received consulting contracts from National Ecological Observatory Network (NEON) and Associated Universities, Inc. (AUI) for organizational and cyberinfrastructure strategic plan and proposal development
n. Other scholarly achievement, recognition, or professional qualification which the PAC deems exceptional.	<ul style="list-style-type: none"> ● Broad, international recognition from the American Society for Quality (ASQ) as Fellow, New Voice of Quality, and Influential Voice blogger ● Co-author of one academic software package (GBTIDL) published by the Astrophysics Source Code Library at Harvard (ascl:1303.019) ● Contributor to ISO 26000 Guidance on Social Responsibility, published in 2010 ● ASQ-certified Manager of Quality and Organizational Excellence (CMQ/OE) #9583 since 2005 ● ASQ-certified Six Sigma Black Belt (CSSBB) #11952 since 2011