ASA 2018 Fellow Nomination Form

I. Nominee

ASA ID	060513
First Name	Milo
Middle Name	
Last Name	Schield
Current Title	Professor Business Administration
Current Employer	Augsburg University
Mailing Address	150 Front Street N
	Unit 411
City, State Zip	Prescott, WI 54021-1756
Country	United States
Phone	(612) 554-2602
Email	Schield@Augsburg.edu

Gender	Male
Sector employed in	Academe

II. Nominator

ASA ID	009934
First Name	Carl
Middle Name	
Last Name	Lee
Current Title	Professor
Current Employer	Central Michigan University

Mailing Address	Pearce Hall # 109, Department of Mathematics
	Central Michigan University
City, State Zip	Mount Pleasant, MI 48859
Country	United States
Phone	(989) 774-3555
Email	carl.lee@cmich.edu

III. Letters of Support

Name of Person Supplying Letter of Support	Affiliation	Email Address	ASA Member	ASA Fellow	Attached PDF
1. Herbert I. Weisberg	Causalytics LLC.	hweisberg@causalytics.com	Yes	Herbert I. Weisberg	Preview
2. Jeff Witmer	Oberlin College	jeff.witmer@oberlin.edu	Yes	Jeffrey A. Witmer	Preview
3. Chris Wild	The University of Auckland	c.wild@auckland.ac.nz	Yes	Christopher John Wild	Preview
4. John Bailer	Miami University, Oxford, OH	baileraj@miamioh.edu	Yes	John Bailer	Preview

IV. Nominee's Education And Degrees

BS Physics. 1962 Iowa State University. Ames, Iowa.

MS Physics. 1965 University of Illinois Champaign-Urbana, Illinois.

PhD Space Physics. 1968 Rice University. Houston, Texas.

V. Nominee's Present Position(s), Title(s), Affiliation(s)

Professor Business Administration, Augsburg College. (1985-present; tenured full professor 2000)

Vice President of the National Numeracy Network (NNN): 2009-2012 and 2015-Present.

Co-organizer of the NNN national meetings for 2017 (Baruch College) and 2018 (Michigan State).

US Representative of the International Statistical Literacy Project. (2010 – Present)

Elected member of the International Statistical Institute (2011)

Editor and webmaster of www.StatLit.org (2003-present): the #1 website dedicated to statistical literacy

VI. Listing of Significant Former Position(s)

2011-2014: President, Twin-Cities Chapter, American Statistical Association, Minneapolis, MN

2001-2005: Principal Investigator, W. M. Keck Foundation Statistical Literacy project at Augsburg College.

1992-2000: Assoc. Professor Business Administration, Augsburg College, Minneapolis Mn. Chair of Business Department 1995-1998. 12 full-time faculty, 21 adjuncts.

1985-1992: Assistant Professor Business Administration, Augsburg College, Minneapolis MN

1978-1995: Senior Operations Research Analyst. St. Paul Fire & Marine Insurance. St. Paul MN

1975-1978: Senior Consultant, Fox & Co., CPA Minneapolis MN (Now part of Grant-Thorton, CPA)

1972-1975: President, Bantam Data. Ames, IA

1968-1970: Instructor, Univ. Iowa. Dept. of Physics. Iowa City, IA

VII. Draft Citation to Appear in the Awards Ceremony Booklet if the Candidate is Chosen

For his outstanding contributions to -- and his unrelenting support of -- statistical literacy: statistics for consumers and decision makers. Specifically, his entrepreneurial focus on critical thinking, observational studies, confounding and the use of ordinary English; and for his international outreach through his website: www.StatLit.org

VIII. List of Major Publications Containing Statistical Content

1. Schield, M. (1999). Statistical Literacy: Thinking Critically about Statistics. "Of Significance". Assoc, of Public Data Users. Invited and reviewed. See www.StatLit.org/pdf

/1999SchieldAPDU.pdf [Google Scholar Citations (GSC): 50]

2. Schield, M. (1999). Common Errors in Forming Arithmetic Comparisons. In "Of Significance". Assoc, of Public Data Users. Invited and reviewed. At www.StatLit.org/pdf /1999SchieldAPDU2.pdf [GSC 6]

3. Schield, M. (2004a). Statistical Literacy and Liberal Education at Augsburg College. "Peer Review". American Association of Colleges and Universities. Sept. 2004, 7-14. Invited and reviewed. At www.StatLit.org/pdf/2004SchieldAACU.pdf. [GSC 23]

4. Schield, M. (2004b). Statistical Literacy Curriculum Design. International Association for Statistical Education: "IASE Curricular Development in Statistics Education Roundtable", 54-74. Invited and reviewed. See www.stat.auckland.ac.nz/~iase/publications/rt04/2.4_Schield.pdf [GSC 36]

5. Schield, M. (2005). Information Literacy, Statistical Literacy & Data Literacy. IASSIST "Information Quarterly", 7-14. Invited and reviewed. www.StatLit.org/pdf /2005SchieldIASSIST.pdf [GSC 100]

6. Schield, M. (2006). Understanding Confounding from Lurking Variables using Graphs. In "STATS" magazine. American Statistical Association. Fall 2006. pp. 14-18. Invited and reviewed. Copy at www.StatLit.org/pdf/2006SchieldStats.pdf. [GSC 26]

7. Schield, M. (2008). Quantitative Literacy and School Mathematics: Percentages and Fraction. In "Calculation vs. Context: Quantitative Literacy and Its Implications for Teacher Education". Edited by Lynn Steen and Bernard Madison, 2008 Mathematical Association of America. P. 87-107. Invited and reviewed. Copy at www.statlit.org/pdf/2008SchieldMAA.pdf. [GSC 24]

8. Schield, M. (2009). Resolving Three Key Problems in the Humanities. In "New Directions in the Humanities" (NDIH). Prato, Italy. Peer-reviewed. www.statlit.org/pdf/2004SchieldNDIH.pdf [GSC 1]

9. Schield, M. (2010). Assessing Statistical Literacy: Take CARE. In "Assessment Methods in Statistical Education: An International Perspective". Edited by P. Bidgood, N. Hunt and F. Joliffe. Wiley Publishers, Ch. 11, p, 133-152. Invited and reviewed. Excerpts at www.statlit.org/pdf /2010SchieldExcerptsAssessingStatisticalLiteracy.pdf. [GSC 39]

10. Schield, M. (2011). Statistical Literacy: A New Mission for Data Producers in the "Statistical Journal of the International Association of Official Statistics (SJIAOS)" 27 (2011) 173-183. Edited by N. Davies and J. Ridgway. Invited and reviewed. Copy at www.statlit.org/pdf /2011schieldsjiaos.pdf. [GSC 14]

11. Schield, M. (2016). Offering STAT 102: Social Statistics for Decision Makers. In "Promoting understanding of statistics about society. Proceedings of the Roundtable Conference of the International Association of Statistics Education (IASE)." Berlin. Edited by J. Engle. Invited and reviewed. Copy at www.statlit.org/pdf/2016-Schield-IASE.pdf [GSC 0]

12. Schield, M. (2017). GAISE 2016 Promotes Statistical Literacy. IASE "Statistics Education Research Journal (SERJ)". 16(1), 46-50. Special Issue on Statistical Literacy. Invited and reviewed. Copy at https://iase-web.org/documents/SERJ/SERJ16(1)_Schield.pdf [GSC 0]

IX. Supporting Statements

A. Statistical applications, data collection, and statistical consultation: <u>Effectiveness and results</u>

    No information has been entered.

B. Statistical applications, data collection, and statistical consultation: <u>Processes and methods</u>

    No information has been entered.

C. Administration of statistical activities

    Throughout his career, Milo has made significant contributions to the statistics profession through his dedication and hard work in promoting statistical literacy. Let me begin by quoting the statement from the letter by Prof. Wild "Promoting and increasing statistical literacy and capability, especially amongst decision leaders in the wider society, is statistics' single most important "missionary" activity. Milo has been our most indefatigable worker for the cause of statistical literacy for many years. He began writing on and promoting statistical literacy in about 1998."

    The significant impact of his administration of statistical activities can be easily justified by the most visited statistical literacy web site Milo created at www.statlit.org since 2003. Every reference points out the highly regarded web site and his many important innovative activities to convey important and subtle fundamental statistical concepts. It is clear that this statistical literacy site is the most complete and most accessed site related to statistical literacy.

    Here are some incredible numbers on the status and impact of this statistical literacy web site. (1) A google search of 'statistical literacy', it describes this site as follows: "www.statlit.org: The #1 website dedicated exclusively to statistical literacy: the study of everyday statistics." (2) Wikipedia article on Statistical Literacy lists this site as one of the four external links on statistical literacy, along with the ISLP project, the ASA's GAISE and Berlin Numeracy Test. (https://en.wikipedia.org

/wiki/Statistical_literacy#References). (3) As of 12/2017, this website has had more than 2 million downloads, 1.7 million visits and 1.2 million page views. Just for 2017 alone, there were 386K downloads, 284K site visits and 182 K page views, and 77 K index views. (4) This website clearly has significant international impact. Of the visitors from a known location in 2017, at least a third were located outside North America.

Milo's dedication and tireless efforts to promote statistical education and literacy is incredible, especially viewing that he is a full-time professor teaching at a liberal art college, which usually requires over 12 hours of teaching load per semester. An important contribution by Milo through his StatLit site is the unconditionally unselfish promotion and sharing of many educators' works. Many of the posted articles related to statistical literacy are highly downloaded and cited, which has certainly helped to promote statistics education and literacy and their respective authors.

After 15 years since it launched, the site is getting even more popular. The evidence is clear that Milo's creation of StatLit.org website will continue to be the #1 site and will continue to have a very significant impact on statistical literacy. Besides promoting statistical literacy, Milo has also been promoting numeracy for many years and is now promoting data literacy. This indicates that Milo is a visionary pioneer in quantitative literacy.

D. Teaching and dissemination of statistical knowledge

Milo's life-long dedication and contributions to statistical profession is about teaching and dissemination of statistical knowledge, especially in the area of statistical literacy. His academic background was in Physics. Throughout his teaching career, however, it is all about teaching quantitative and statistical related subjects in the Business Department at Augsburg University starting in 1985. During the years of teaching students in the Business Department, he noticed the serious gap between classroom learning and real world use of statistical concepts and started his journey in researching and promoting statistical literacy in mid-1990s.

Milo's pioneering work began with the creation of a course on Statistical Literacy in 1998. Many of the contents Milo developed in this course were hands-on and very innovative. For example, his article on lurking variables and confounding effects (Understanding Confounding from Lurking Variables using Graphs. STATS magazine, 2006) has been used by many instructors and high school teachers worldwide (over 18,000 downloads). After many years of working on and promoting statistical literacy, Milo published a unique textbook on "Statistical Literacy – seeing the story behind the statistics", for students in non-quantitative majors.

Milo's dedication to promote the teaching and learning of statistical literacy

motivated him to create the number # 1 website on statistical literacy at www.statlit.org . As described in the Section C, this site is now the most popular site dedicated to statistical literacy. Milo focuses not only on statistical literacy, but also quantitative numeracy and, now, on data literacy based on the evidence presented on his website. His dedication and tireless effort to promote statistical literacy has clear impact on the development of statistical literacy curriculum in almost all universities and colleges in US and worldwide. In fact, when my university decided to make quantitative literacy as a general education requirement in 2010, the first expert that I consulted with was Milo and his StatLit.org website.

Milo did not stop refining and updating the curriculum to help make statistical literacy meet the needs of students. He created a second course "Statistical Literacy for Managers". Data Science nowadays is becoming more important due to the demand of dealing with different types of data and real-time data collection in many industries and business. As a consequence, data literacy is receiving great deal of attention. Milo has indeed been posting data literacy related publications on his StatLit.org site. I expect that this one-stop statistical literacy site will continue to be the number 1 site for all types of quantitative literacy that will be very beneficial to not only instructors, but also to citizens in the modern society. Besides his pioneering development in statistical literacy curriculum design and promotion, Milo is also an outstanding mentor to educators beyond his institution. He has been a regular invited/contributed presenter as well as session organizer in conferences worldwide to provide advice on the development of statistical literacy course contents and designs.

Due to his long time dedication and contribution to statistical education, Milo was nominated for the Lifetime Achievement Award in Statistical Education given by the Consortium on the Undergraduate Statistical Education (CAUSE.ORG) in 2015. I was one of the educators who were asked to write a paragraph on his life-long contributions to statistical profession. In the nomination package, I had the opportunity to read the writing by many well-known non-statistical educators and came to have a much greater understanding on the extraordinary contributions Milo has done and how much people appreciate his mentorships that have made a great differences to many people. The following examples are three quotes from some of the write-ups by those who were not statisticians by training (the nomination package can be found at http://www.statlit.org/pdf/2015-USCOTS-Schield-Lifetime-Nomination-Packet.pdf):

Neil Lutsky: "… Carleton College, was developing an initiative to address quantitative reasoning in our educational program. ….We invited Milo to campus and he met with us. What he had to say was pivotal in our framing of our initiative, which became known as QuIRK. … I appreciate deeply Milo's efforts to encourage and cultivate my own work in this field. He has been a mentor.… I respect most highly Milo's lifelong contributions to our common educational aspirations." Maura B. Mast: "….As a mark of Milo's influence and reputation, he was one of a select group invited to attend a workshop entitled "Quantitative Literacy and its

Implications" and to write a reflection on the link between teacher education and quantitative literacy education. …. His piece showed a clear grasp of the deep fissures in today's K – 6 mathematics education and articulated the disconnect between what students learn and what they are expected to do in the next stage of education and in life." Bernie Madison: "During all my work in quantitative literacy and reasoning over the past 15 years, no one in statistics (save perhaps Dick Scheaffer) has been more influential than you in statistics education from my perspective."

These quotes from non-statisticians who have made contacts with Milo are strong evidence that Milo's contributions in teaching and disseminating statistical knowledge go far beyond the field of statistics. All four supporting letters point out the extraordinary contributions Milo has accomplished in promoting and disseminating statistical literacy. Let me quote the statement by Prof. Witmer in his letter: "Milo always has something thought provoking to say. …. Milo gets people thinking about how to teach, and more importantly what to teach. …He adds to the list of ideas we should consider… and comes up with new ways to present …."

E. Statistical research

Unlike most statistical research on methodology, Milo's research mainly focuses on teaching and learning related to statistical literacy. Being a professor in a liberal art college with teaching load 12 hours per semester and with his dedication to teaching and learning of statistics, it makes a good sense that his research activities are related to teaching and learning on statistical concepts. Milo has published over 75 articles in peer-reviewed proceedings and journals or in non-refereed proceeding such as JSM Annual Conference Proceedings.

According to Google Scholar Citation, some of Milo's publications are quite highly cited. The paper "Information literacy, statistical literacy and data literacy" was cited 100 times; "Statistical literacy: Thinking critically about statistics" was cited 55 times; "Statistical literacy survey results: Reading graphs and tables of rates and percentages" was cited 52 times; "Assessing statistical literacy: take CARE" was cited 40 times, and "Statistical literacy curriculum design" was cited 36 times.

Generally speaking, the intended readers for Milo's articles are statistics college instructors and high school teachers, who would like to learn about how to design a statistical literacy course or different approaches to teaching difficult concepts in their basic statistics courses. Therefore, in my opinion, to measure the impact of teaching and learning of statistical literacy, one should focus more on the number of downloads and viewers, less on the number of citations by other researchers. The following numbers are evidence that Milo's publications are having a significant impact on the statistical profession in the teaching and learning of statistical concepts and literacy. • 2006 JSM: Percentage Graphs in USA Today. 100,000 downloads • 2006 STATS magazine: "Beware the Lurking Variable". 18,000

downloads • 2011 SJIAOS: Statistical Literacy: A New Mission for Data Producers":10,000 downloads • 2014 Excel instructions for creating a log-normal distribution: 37,000 downloads • 2014 Excel instructions for generating a logistic regression: 8,000 downloads.

These numbers are stunning. The educators and instructors who downloaded these papers were clearly not citing his work, but wanted to apply his ideas to their courses to improve the student learning. They influence the learning and understanding of statistical concepts among the younger generation in their daily use of statistical concepts. In my opinion, this type of impact is as significant as the number of citations in methodological research articles.

Milo's reference Dr. Weisberg said it well: "Most ASA Fellows have traditionally been selected for technical achievements in academic, … Individuals whose careers fall outside these areas have a much lower chance of coming to the attention of current ASA Fellows. However, precisely because they work outside the mainstream, such folks may have unique contributions with powerful impacts on our profession and society." I totally agree with Dr. Weisberg. Milo is one of those individuals who have been overlooked and who deserve recognition of an ASA Fellow.

F. Activities related only to the American Statistical Association (local and national service)

Milo is a loyal member of ASA since 1992 (24 years) and a member of the ASA Section on Statistical Education since 1995. He has attended and he has given a paper at every JSM since 1994. His involvement with ASA is extensive. For example, in 2011, Milo organized a late-breaking session on a recent Supreme Court decision that involved using the lack of statistical significance as a defense. Milo has organized 17 topic-contributed sessions on statistical literacy at the ASA-JSM, a number that may be a record. He invited over 50 speakers: most from outside statistics. For a full list, see www.statlit.org/pdf/Schield-JSM-Sessions-Statistical-Literacy.pdf.

In 2011, Milo was elected President of the Twin Cities Chapter of the American Statistical Association (2011-2014). During the period when he was the Chapter President, he reached out to various non-statistician groups that have helped to promote the statistical profession. For example, he used his term in office to pay tribute to one of the most outstanding statistical educators from Minnesota: Victor Cohn – originally a journalist with the Minneapolis Star and Tribune newspaper. Milo held a special meeting of the local chapter titled Victor Cohn (1919-2000): A Retrospective.

Milo has reviewed articles on statistical literacy for ASA publications such as Chance magazine and The American Statistician. In addition to professional activities with ASA, Milo has also made a significant contribution in the leadership of statistical literacy beyond statistical profession, such as the Vice President of the

National Numeracy Network (NNN) in 2009 and now the US Representative of the International Statistical Literacy Project (ISLP). These professional leadership positions have a much broader impact beyond the statistical profession.

G. Other (any topic not covered elsewhere including non-ASA professional service)

No information has been entered.

X. Curriculum Vitae (CV)

📄 Preview

Edit Nomination

Nomination is Still in Progress   Nomination is Complete