



FRONTIERS IN EDUCATION

From: Dr. Russ Meier, IEEE Education Society Vice President of Conferences
Subject: ASEE/IEEE Frontiers in Education (FIE) Conference Statistics
To: Dr. James Sluss, IEEE Education Society 2015 President
cc: FIE Steering Committee, IEEE Education Society Board of Governors

Dear Dr. Sluss:

Each year, I complete a summary of the IEEE Education Society's financially sponsored conference events. I am happy to submit this summary regarding the history, reputation, publication, and registration statistics of the ASEE/IEEE Frontiers in Education Conference to you for your use as IEEE Education Society President.

1. INTRODUCTION AND HISTORICAL SPONSORSHIP

The Frontiers in Education conference (FIE) is a well-respected international conference on electrical engineering and computer science education. The IEEE Education Society founded the conference in 1971. The American Society for Engineering Education joined as a co-sponsor in 1973. For more than two decades, these two sponsoring societies held the conference in various locations around the United States and, occasionally, in international venues. In 1995, the IEEE Computer Society became a sponsor and together these three groups have continued to plan high quality events that provide engineering and computer science educators the opportunity to network and showcase peer-reviewed scholarly contributions in educational research and classroom practice. In 2013, the FIE Steering Committee formed formal policy that places FIE within the continental United States with the possibility of an international location at five year intervals. The first international location chosen was Madrid in 2014. Thus, FIE returns to the United States for 2015-2018 with 2019 as the next potential international date.

The educational research and the educational practice literature generated by FIE is regularly cited in scholarly work and inspired a well-regarded textbook in engineering education written by John Heywood and published by IEEE Press in 2001. Dr. Heywood is currently working on a textbook revision that will update the text to include the most recent FIE reference citations from the years between 2001 and 2014.

2. MISSION AND VISION

The Frontiers in Education conference strives to be the most relevant and respected forum for disseminating innovations that improve computer science, electrical engineering, and technology education. The conference helps engineering and computer science educators learn about innovations in learning theory, educational technology, and classroom techniques.

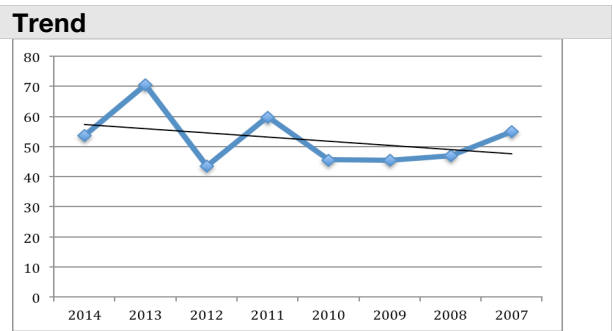
To achieve its mission, Frontiers in Education creates an engaging conference program that relies upon a number of presentation formats and social networking events to bring together a worldwide community of teachers. The conference values diversity and the learning that occurs when ideas are shared and differing opinions reflect multiple viewpoints. The conference envisions a collaborative event where peer-reviewed research results and peer-reviewed classroom practice contributions are both respected and encouraged. These values reflect the conference goal of helping educators continue their own lifelong learning about their profession of teaching.

3. PEER REVIEW PROCESS AND PAPER STATISTICS

FIE uses a two-stage review process that begins with the issuance of a call-for-papers in June of the year preceding the conference. The first stage requires submission of a short abstract that is then peer-reviewed by the technical program committee for appropriateness to the conference, the yearly theme, new and engaging ideas, and so on. Abstracts that are selected are invited to submit full papers and works-in-progress (short papers) for blind peer-review. A blind peer review means that reviewers can see the names of the authors but the authors are not told the names of the reviewers.

Table 1 provides acceptance information for the past seven years. Note that FIE acceptance rate is quoted based on the full two-level peer review of acceptable papers. Thus, in 2014, 895 abstracts were deemed appropriate to move to full-paper creation and peer-review. After peer-review, 480 / 895 = 57% of the original author contacts result in published work. The acceptance rate is also plotted with a trend line. The slight upward trend is caused by the 2013 outlier year. The overall trend line has an upward directional slope but is a nearly horizontal line with an average around 50% when the outlier is removed.

Table 1: Eight Years of FIE Acceptance Rate Data

Year	Accept Rate	Abstracts	Published	Trend
2014	57%	895	507	
2013	70%	609	429	
2012	43%	690	300	
2011	60%	736	440	
2010	45%	833	379	
2009	45%	783	355	
2008	47%	876	411	
2007	55%	734	403	

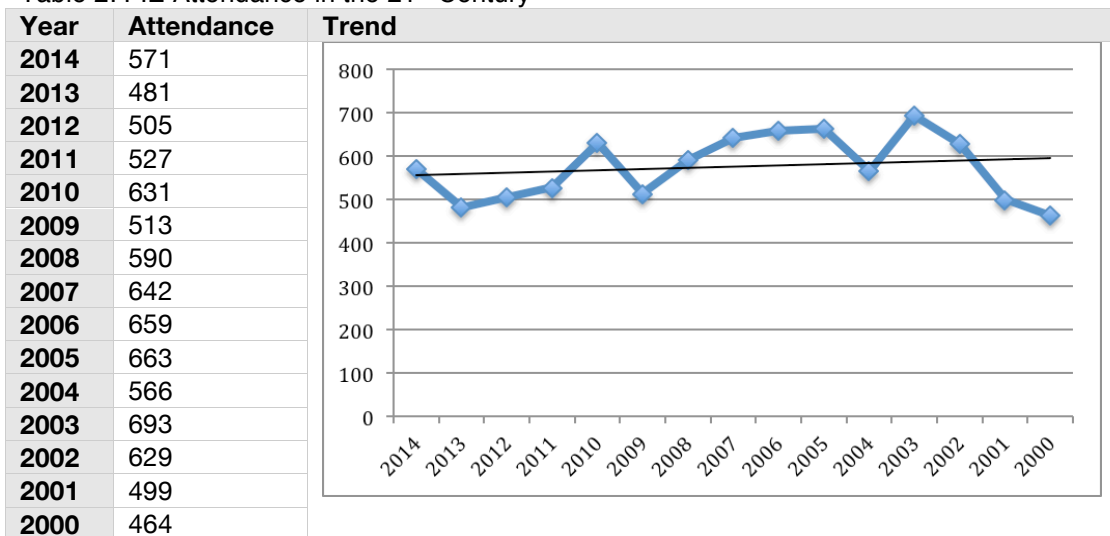


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4. ATTENDANCE STATISTICS

The Frontiers in Education Conference is one of the world’s premier conference events covering the areas of electrical engineering, computer engineering, software engineering, and computer science education. It has a loyal author and attendee base. Registrations have remained relatively constant over the past fifteen years. This is remarkable when the worldwide economic recession is considered. The reason is the sense of community that FIE provides to attendees: the high quality technical papers consistently provide state-of-the-art conversation in education, the registration fee has remained relatively affordable, and registration pays for an opening reception, three breakfasts, three lunches, all coffee and refreshment breaks, as well as the conference bag, the proceedings, an exhibit hall, free wireless internet, and other similar amenities. Registrants consistently compliment FIE on the common food functions that foster a sense of camaraderie and provide ample opportunity for participant networking. Table 2 provides the statistical summary of FIE registration in the 21st century. The trend line is nearly horizontal with an average attendance of 576 people.

Table 2: FIE Attendance in the 21st Century





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5. INDEXING SERVICE STATISTICS

Authors and grant writers often want to know the impact factor statistics for the Frontiers in Education Conference. I have included five measures that are easily identified using the Internet. The FIE Steering Committee has a strategic goal of increasing the impact factor of FIE over the next five years through systematic refinement of the type and quality of papers submitted to the conference. I have included five impact factor ratings in Table 3.

- The Computing Research and Education Association of Australia ranks conference proceedings using a four-level scale: A* = flagship conference and a leading venue in the discipline, A = excellent conference and highly respected in the discipline, B = good conference that is well regarded in the discipline, C = meets minimum standards
- The Excellence in Research for Australia report ranks conferences using a three-level scale: A = best conference (top 20% of conferences in the discipline), B, and C.
- Google Scholar h5-index: This measure reports paper citations over the past five years (h5). The h-index is the largest number h such that h articles published in the last five years have at least h citations each.
- Scopus SCImago Journal h-index is that largest number h such that h articles published in the included years have at least h citations each.

Overall, the conference has a good reputation and achieves ratings higher than or consistent with other conferences in the engineering education field. I have included four other conferences in Table 3 for comparison: the IEEE Global Engineering Education Conference (EDUCON), the ASEE National Conference and Exhibition (ASEE), the ACM Technical Symposium on Computer Science Education (SIGCSE), and the IEEE Conference on Software Engineering Education and Training. This data is used by the FIE Steering Committee to set strategic direction for calls-for-papers, instructions to authors, and peer-reviewers.

Table 3: FIE Relevance and Impact Statistics

Measure	FIE	EDUCON	ASEE	SIGCSE	CSEET
Computing Research and Education (CORE2014)	B	no rating	B	A	C
Excellence in Research for Australia (ERA2010)	A	no rating	B	A	C
Google Metrics h5-index	14	15	no rating	27	11
SCImago Journal h-index	12	6	5	11 (5 yrs.)	3 (5 yrs.)

I hope this information proves useful to you and I send my warmest regards.

Sincerely,

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