

Revised 12/17/12

3rd Annual ASQ Advancing the STEM Agenda Conference

Collaboration with Industry on STEM Education

At Grand Valley State University, Grand Rapids, MI

June 3-4, 2013

Submission of Abstracts and Papers, and Peer-Review Process for Papers

Important Dates:

January 19 Abstracts Due

January 25 Email sent to authors on status of abstract

March 7 Paper Due

April 8 Authors have received an email on status of conference paper

April 19 Final revised version formatted for inclusion in conference proceedings

May 13 Presentation due for conference proceedings (optional)

June 3 and 4 Conference

Conference website: <http://asq.org/conferences/stem-agenda/index.html>

All conference presentations require a paper which may be either a 2-page extended abstract paper for reporting conceptual ideas related to STEM topics, a best practice or an innovative classroom idea for teaching STEM or a work-in-progress; or a full paper (6-12 pages) for reporting on completed work. Papers will be reviewed based on applicability and contribution to the conference theme and call for papers topics as well as a broad appeal to conference participants, paper guidelines adherence, readability and completeness. Approval of an abstract is required prior to submission of a conference paper.

Submissions from anyone involved in STEM education or employment are encouraged: high school teachers, education administrators, university faculty members, government officials, scientists and engineers, and workforce development professionals, managers and executives from manufacturing and industry to share your ideas, research, best practices and passion about your STEM initiatives and collaborations.

Expectations: One author from each paper is expected to attend the conference and present the paper. A reduced conference registration will be given to the primary author of the paper, after the paper is accepted.

All accepted papers will be published in the conference's online proceedings and the papers will be accessible from the ASQ Education Division online library. Presentations will also be included in the online proceedings and library as well.

Abstracts – Due January 19

Submitting an abstract is required prior to the submission of the paper for the peer-review. Abstracts should be 500 words or less. Abstracts will be reviewed by the program co-chairs and authors will receive a notification of the acceptance of their abstract by email by January 25, 2013. The abstracts will be reviewed on the basis of applicability to the conference theme and call for papers topics, a broad appeal to conference participants and readability. Email the abstract to Dr. Cindy Veenstra (Conference@asqedu.org) in a Word or PDF document with the following information:

- Abstract title
- Relevant call for paper focus area
- Authors' names, affiliation, title, email address, and phone numbers
- Willingness to be a reviewer for the conference papers (yes/no)?
- Abstract

Conference Paper- Due March 7

For all accepted abstracts, a full paper or an extended abstract paper is required. A full paper of 6-12 pages is intended for a completed STEM project (including an assessment). An extended abstract paper is intended for a brief paper (2 pages + references) for conceptual ideas related to STEM topics, a best practice or an innovative classroom idea for teaching STEM. Graduate student papers require the supervision of faculty. Please refer to the Appendix for the "Paper Guidelines Template" for formatting the paper and the review criteria. When you are ready to submit a paper, send an email to Dr. Cindy Veenstra at Conference@asqedu.org with the following information:

- Authors' names, affiliations, email addresses, and phone numbers
- Most Relevant Call for Papers Topics
- The conference paper as a Word attachment starting on a separate page

Peer-Review Process- Decision Made by April 8, 2013

The papers will be blind peer-reviewed by 2-3 reviewers. The peer review will include relevancy to the conference theme and topics, guidelines adherence, readability and completeness. For a full paper, an assessment is expected. See the Appendix for the review criteria for a full paper and an extended abstract paper.

Paper Status and Notification of Authors

The authors will be notified of the peer review results by April 8, 2013. A paper may be accepted, accepted with required revisions, or rejected. Any revisions will be due by April 19, 2013.

For accepted papers, instructions will be given for including the authors' names, affiliations, and emails under the title and including a short biography of each author at the end of the paper. The final version of the papers for the online conference proceedings will be due by April 19, 2013. Presentations (handout in PDF format) for the conference proceedings are optional and are due by May 13, 2013. If the presentation handout is not included in the online proceedings, copies of the handouts should be brought to the conference session.

Abstracts, Extended Abstracts and Full Papers

At past conferences, there has been some confusion over the differences between the initial abstract and the extended abstract, the short 2- page peer-reviewed paper. The initial abstract should briefly describe the paper you are proposing to write and explain the significance of the paper. It needs to indicate a relevancy to the conference theme of improving STEM education and a relevancy to one of the call for papers topics. It should indicate if there will be an assessment and one or two sentence on significant results if an assessment has been completed. If there is no assessment, the abstract should clearly communicate the significance of the proposed paper.

Both the extended abstract paper and the full conference paper will have a short abstract at the beginning of the proposed conference paper. Once we are at the paper stage, the abstract in the paper will need to be shorter than the original abstract.

The presence of an assessment or data analysis determines whether an extended paper or full conference paper will be written. When there is a survey or assessment that has been completed, a full conference paper needs to be written, not a 2 page extended abstract. Extended abstracts are sometimes called "Work in Progress" paper, and are intended to be conceptual papers or papers that indicate an interesting STEM project or practice that is still being evaluated.

With the submission of the abstract, suggestions may be made back to the authors especially if it looks like the abstract is a weak one. All papers should include a discussion of published papers that support the authors' ideas in the conference paper, even if it is a short section.

Contact Dr. Cindy Veenstra at Conference@asqedu.org if you have questions

Appendix

A. Paper Guidelines Template

B. Review Criteria for Full Conference Paper

C. Review Criteria for Extended Abstract

Appendix A: Paper Guidelines Template

The Title Should Be Centered Times New Roman-18 pt., and Maximum of Two Lines

FORMATTING OF PAPER

Margins, Paper Size and Spacing

This is an instructional guide to format your paper for consideration of acceptance for the *2013 Advancing the STEM Agenda for Education, the Workplace and Society Conference*. This guide will ensure consistency, quality and readability of the conference papers and at the same time will allow for considerable flexibility in the development of your conference paper. You may use the format in this document as a template.

The paper should be produced with one-inch margins all around with Word's one-column format, justified (aligning text to both the left and right margins), on 8 ½" x 11" pages.

A maximum of 12 pages is desired for a full paper, and 3 pages for an extended abstract. The 3-page extended abstract is ideal for a short paper that documents a best practice in STEM recruitment, outreach or retention. When an assessment has been completed, a full paper format must be used.

Use single (1.0) line spacing. All pages should be numbered. The footer is already set up for numbered pages. Use the same headers and footers as are in this document. If a new section begins at the bottom of the page, transfer the heading to the top of the next page.

Please do not include authors' names and university in your paper since this is a double blind peer-review. For accepted papers, you will be asked to include the authors' names and affiliation and a section on Authors Information in the final paper.

Fonts

The paper title should use 18 point Times New Roman. The abstract and body of this paper should use 12-point Times New Roman. Section headings should be in bold, 12-point Times New Roman and may use the "small caps" font. The sub-headings should be in bold 12-point Times New Roman font. The table and figure captions should be in bold 12-point Times New Roman font. In this document, "Formatting of Paper is a Section Heading and "Fonts" is a sub-heading.

Section Headings

The Section Headings should be centered, in bold 12-point Times New Roman (14 point small caps effect optional). The first Section Heading will be Abstract. The other major Section Headings typically will be Introduction, Literature Review or Background, Methodology, Findings, Summary, Suggestions for Best Practices, Conclusions, and Future Work/Research. The last Section Heading will be References. The actual headings will depend on the focus of your paper.

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Subheadings should be left-justified with the first letter of each word capitalized and in bold, 12 point Times New Roman. Numbering of headings is optional.

TEXT

This section discusses the parts of a paper that are usually included in the text with guidelines for these sections.

Abstract

A short abstract of 200 words or less should describe the paper, including the research questions or focus of the paper, how it addresses one of the conference STEM topics, significant findings or results, and conclusions. This abstract may need to be shortened compared to the original abstract submitted to the conference. The abstract should be in the first paragraph under the title of the paper.

This should not be confused with the short 2-page paper which is called an extended abstract. Both the “extended abstract” paper and longer 10 page conference paper should have an abstract. For the “extended abstract” papers, the abstract section will be shorter by necessity of space.

Keywords

The use of the current keywords in the ASQ Education Division library improves accessibility by internet search engines. Therefore, at the end of your abstract, begin a line

Keywords: STEM, Conference Proceedings

Add up to two more keywords. The current keywords used by the division are listed in the column “Browse by topics” at <http://asq.org/edu/quality-information/library/> . Most popular keywords are Student Retention, Partnering, Teaching Quality, PDSA, and K-12 Outreach.

Tables

Tables should be high quality images and usually will be directly generated in Word or Excel. They should be placed as close to where they are referenced in the text as possible. They should be centered left to right on the page. The text should not wrap around the table on the sides. All tables should be clearly displayed by leaving at least a single line of spacing above and below them.

Table captions should be centered above the table and include a Table number reference, e.g. Table 1: Distribution of STEM Enrollment

Figures

Figures should be of high quality. If you are using Word shapes to make a diagram, insert a text box first and include the components of the diagram in the text box; if a diagram was created in PowerPoint, save it as a jpg file for the paper. Figures should be placed as close to where they are referenced in the text as possible. They should be centered left to right on the page. Always insert your figure caption separately from your figure as text. Figure captions should be numbered consecutively with the title centered below the figure, e.g. Figure 3: Histogram of Calculus I Grades.

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You may include both line art such as line graphs, bar graphs, etc., and photo images. Any figures taken from another source will require the permission of that source (they will hold the copyright to the figure). It is the authors' responsibility to obtain these permissions.

Any scanned figures should be at a high enough resolution to be easily read. Check that all type in graphs and figures is large enough to read and understand.

Use of color: Color graphics are preferred for the proceedings.

Equations

Equations should be centered and numbered consecutively. Place the equation number in parentheses flush with the right-hand margin and level with the last line of the equation. However, simple expressions should remain in the text, written on one line.

Abbreviations

All abbreviations should be spelled out in full on first appearance. For example, STEM (science, technology, engineering and mathematics)

Acknowledgments, Appendices and References

Acknowledgments, including funding sources, should be placed in the Acknowledgments section before the Reference section. The order should be: Acknowledgments, Appendices and then References.

Citations and References

Citations and references should use the (author's last name, year of publication) notation in a citation in the text and use the APA style.

The reference section should be headed with the section heading of "References" and all references are to be listed alphabetically by the first author's last name. Each reference should list all authors. List the online URL with a hyperlink. Retrieved date is not needed. Here are some examples:

Book examples:

Veenstra, C., Padró, F., & Furst-Bowe, J. (eds). (2012). *Advancing the STEM agenda: Quality Improvement Supports STEM*. Milwaukee, WI: ASQ Quality Press.

Sorensen, C.W., Furst-Bowe, J. A., & Moen, D. M. 2005. *Quality and performance excellence in higher education*. Bolton, MA: Anken Publishing Company, Inc.

Journal article examples

Dew, J. (2009, April). Quality issues in higher education, *Journal for Quality and Participation* 32(1), 4-9. Retrieved from <http://asq.org/pub/jqp/past/2009/april/index.html>

Reference example:

National Science Board. 2012. *Science and engineering indicators 2012*. Arlington, VA:

National Science Foundation. Retrieved from <http://www.nsf.gov/statistics/seind10/>

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NOTE ON BLIND PEER-REVIEW: DO NOT CITE AUTHORS' NAMES OR THEIR UNIVERSITIES OR SCHOOLS

All papers will be included in a double blind peer-review. Therefore, throughout the paper, there should be no identification of the authors or their university or school, including no listing of the authors at the beginning of the paper. If the STEM research or practice was conducted at the authors' institution, the word "University" or "School" should be substituted for the name of the university or school; likewise if the authors cite a paper they wrote and it would be clear who wrote it if the author is listed in the references, the citation and reference should state "Authors" and "Institution" or "School."

SUBMISSION OF THE PAPER

The Word document of the paper should be sent as an attachment in an email to Conference@asqedu.org by March 7, 2012. Since the authors' names are not in the paper, please include in your email, all the authors' names and affiliations and contact emails (only one author need send in the paper); and most relevant call for paper topic.

For accepted papers, further instructions will be given for including the authors' names and affiliations under the title and including a short biography of each author at the end of the paper with contact information.

MISCELLANEOUS

Authors of accepted papers will be asked to provide a Word document of the final paper. The session number will be inserted and a PDF document created for the online conference proceedings and as an article in the ASQ Education Division online library.

The authors will be requested to sign a copyright agreement at the time of final submission of the accepted paper to allow the conference papers to be posted on an online proceedings website and in the ASQ Education Division library. This copyright agreement will not limit your use of your paper.

If you have any questions, contact the technical committee chair, Cindy Veenstra at Conference@asqedu.org

Appendix B: Review Criteria for Full Conference Paper

Review of Full Papers Form

2013 Advancing the STEM Agenda Conference at Grand Valley State University
Grand Rapids, Michigan

Paper ID _____

CRITERIA	Reviewer's Score (1-5, 5 best)	Reviewer's Comments
Is the paper relevant to the conference theme and addresses at least one of the Call for Paper topics		
Contribution to knowledge for STEM Education or practice-Do the author(s) present innovative ideas, quality in education concepts or relevant research for the practice of STEM education or the STEM Agenda?		
Overall organization of paper?		
Readability (spelling, grammar and clarity)		
Is the literature review adequate for the topic (taking into account the length of the paper)		
Do the conclusions follow logically from the literature review, assessment and knowledge presented?		
Completeness of assessment (design, analysis and interpretation)		
Was the Paper Guidelines for formatting the paper followed? (limited to 12 pages including references)		
Total Score		

Appendix C: Review Criteria for Extended Abstract

Review of Extended Abstract (Short Paper) Form 2013 Advancing the STEM Agenda Conference at Grand Valley State University Grand Rapids, Michigan

Paper ID _____

CRITERIA	Reviewer's Score (1-5, 5 best)	Reviewer's Comments
Is the paper relevant to the conference theme and addresses at least one of the Call for Paper topics		
Contribution to knowledge for STEM education or practice-Do the author(s) present innovative ideas, quality in education concepts or relevant research for the practice of STEM education or the STEM Agenda?		
Overall organization of paper?		
Do the conclusions follow logically from the knowledge presented?		
Readability (spelling, grammar and clarity)		
Was the template for formatting the paper followed? (paper limited to three pages including references)		
Total Score		