

Rubrics for Research Category Submissions

RESEARCH category submissions (Abstracts, Full Papers and Work In Progress Papers) should position the current research in relation to related and prior work, showing the need for a new or enhanced approach. A high impact paper in this category is one that has a sound theoretical and empirical structure in terms of identification of the problem, design of solution/investigation, methods used during data collection, and an empirically-based final analysis. The criteria for papers in the research category are the following:

- To what extent are the practices described in the paper extensible, innovative or impactful translations of pedagogical research to educational practice?
- Does the work demonstrate knowledge of related work and discuss the relevance of the submission's contribution in the context of the prior literature in the field and other relevant areas?
- What is the breadth of the audience that will be interested in the subject of the paper?
- To what extent is the paper professionally written? All papers must be submitted in English.

Abstract Review Criteria and Rubric

Excellent Research Category Abstracts are well situated in prior literature on teaching and learning, and outline research methods and findings of value and interest to engineering and/or computing educators.

Abstracts should be 300-500 words and should clearly present the paper's research contribution and its relevance to engineering and/or computing education. All author and institutional identifying information must be removed from the abstract due to the double-blind review process. Each abstract must state the specific research contribution of the paper. Contributions may be made in various forms, and should include the research questions addressed, methods used and results found, and a description of how the results build on prior research. Abstracts must provide a summary of the research contribution/expected results and brief statement of the implications for educational practice with a focus on action. **The phrases "Full Paper" or "Work In Progress" as well as "Research Category" must be the first sentence of the abstract.**

	5	3	1
Research Contribution: <i>Rate how this submission makes a contribution to engineering/computing education</i>	Described specifically, supported well by proposed data	Research contribution is modest or not fully supported by suggested data	Not described
Relevance: <i>Rate how the submission is relevant to engineering/computing education</i>	Highly relevant to engineering/computing education	Reasonably well focused in engineering/computing education	Not relevant to engineering/computing education
Track accuracy: <i>Rate how well the submission meets the track criteria of full vs. Work In Progress</i>	Paper appears to be in proper track	Paper could be in either track	Paper appears to be in wrong track

Research Category Review Criteria



Full Paper Review Criteria and Rubric

Full papers are expected to present some relevant aspects of learning theory and show how these are applied in educational practice. Full papers should demonstrate scholarly quality as evaluated on the strength of the methodology used, the quality/depth of the theoretical foundation, and the quality/depth of the analysis and related discussion. In addition, these should maintain a high level of scholarly quality, reflecting on how this work extends/is distinguished from other work attempted in similar areas. **The phrases "Full Paper" and "Research Category" must be the first sentence of the abstract.**

	5	4	3	2	1
Theoretical Framework: <i>Rate and summarize how this submission describes the theoretical framework relative to its contribution to engineering education.</i>	Complete, accurate and useful description of relevant pedagogical theories	Accurate and worthwhile description of relevant pedagogical theories	Some useful description of relevant pedagogical theories	Incomplete, vague or unsupported description of the relevant pedagogical theories	Very limited description of the relevant pedagogical theories
Research Contribution: <i>Rate and summarize how this submission describes the research contribution relative to engineering education.</i>	Novel and specific description of pedagogical research.	Somewhat novel and/or practical extension of pedagogical research.	A distinct, if somewhat minor addition to pedagogical research.	Limited description of pedagogical research; not very original, extensible or novel.	Incomplete or very limited description of pedagogical research.
Significance: <i>Rate and summarize how this submission is important and makes an important contribution to engineering education.</i>	Very important; of broad and/or significant impact	Of measurable impact and/or significance	Some impact and/or significance	Limited; Some interesting points	Very limited contribution
Relevance: <i>Rate how and explain how the work advances frontiers in education within the context of FIE.</i>	Highly relevant	Clearly appropriate and well focused	Appropriate and reasonably focused	Somewhat relevant, but not focused	Not relevant
Language and Expression: <i>Rate and assess the organization, language and English expression used in the submission.</i>	Excellent, exemplary use of language enhancing the quality of the submission	Good, appropriate as is	Reasonable, may need some revision	Poor language, unlikely that it can be sufficiently improved	Very difficult to understand
Context: <i>Rate the effectiveness of relating this work in demonstrating a strong knowledge of related and prior work. Rate and include specific suggestions of missing literature.</i>	Excellent knowledge of related work that effectively relates to the contribution	Good, reasonably complete knowledge of related work; related to the contribution	Incomplete, but useful references to related work; reasonably connected to the contribution	Incomplete references and/or connection to the submission's contribution	Little or no reference to related work and/or context is disconnected to the submission's contribution

Research Category Review Criteria



Full Paper Review Criteria and Rubric Continued

<i>Rate and summarize how the submission demonstrates appropriate rigor and reflective depth when outlining the novel practice at their and other institutions. A high impact paper in this category is one that develops new and intriguing insights in the context of ongoing research, and/or presents preliminary analysis of empirical data.</i>	The research is methodologically strong, theoretical foundation is good, and analysis/discussion are of high quality	Relevant theory and method are applied with some limitations	The submission uses theory and analysis methods though details are unclear in places	Theoretical underpinnings are weak and there are flaws in argument/analysis	The research appears to be poorly structured and the analysis/argument is hard to interpret
REVIEWER'S CONFIDENCE: <i>Please indicate your level of expertise related to the content of this submission.</i>	Expert	High	Medium	Low	None
OVERALL EVALUATION: <i>This should reflect the combination of the individual section's evaluations.</i>	Accept		Accept with revisions		Reject

Research Category Review Criteria



Work In Progress Review Criteria and Rubric for Research Category Submissions

Work-in-Progress (WIP) Research category submissions should focus on the methodology used, potential hypotheses, and what remains to be done. WIP papers should introduce new ideas and encourage a discourse that can potentially advance the field in some way. **The phrases "Research Category" and "Work in Progress:" must be the first sentence of the abstract.**

	5	4	3	2	1
Theoretical Framework: <i>Rate and summarize how this submission describes the theoretical framework relative to its contribution to engineering education.</i>	Complete, accurate and useful description of relevant pedagogical theories	Accurate and worthwhile description of relevant pedagogical theories	Some useful description of relevant pedagogical theories	Incomplete, vague or unsupported description of the relevant pedagogical theories	Very limited description of the relevant pedagogical theories
Research Contribution: <i>Rate and summarize how this submission describes the research contribution relative to engineering education.</i>	Novel and specific description of pedagogical research.	Somewhat novel and/or practical extension of pedagogical research.	A distinct, if somewhat minor addition to pedagogical research.	Limited description of pedagogical research; not very original, extensible or novel.	Incomplete or very limited description of pedagogical research.
Significance: <i>Rate and summarize how this submission is important and makes an important contribution to engineering education.</i>	Very important; of broad and/or significant impact	Of measurable impact and/or significance	Some impact and/or significance	Limited; Some interesting points	Very limited contribution
Relevance: <i>Rate how and explain how the work advances frontiers in education within the context of FIE.</i>	Highly relevant	Clearly appropriate and well focused	Appropriate and reasonably focused	Somewhat relevant, but not focused	Not relevant
Language and Expression: <i>Rate and assess the organization, language and English expression used in the submission.</i>	Excellent, exemplary use of language enhancing the quality of the submission	Good, appropriate as is	Reasonable, may need some revision	Poor language, unlikely that it can be sufficiently improved	Very difficult to understand
Context: <i>Rate and summarize the effectiveness of relating the contribution of the work to salient related and/or prior work. Include specific suggestions of missing literature.</i>	Excellent knowledge of salient related work that effectively relates to the contribution	Sufficient knowledge of salient related work that relates to the contribution	Incomplete, but useful references to salient related work; reasonably connected to the contribution	Incomplete references to salient literature; weakly connection to the contribution	Inaccurate or no reference to salient work and/or context is disconnected to the submission's contribution
REVIEWER'S CONFIDENCE: <i>Please indicate your level of expertise related to the content of this</i>	Expert	High	Medium	Low	None

Research Category Review Criteria



<i>submission.</i>					
OVERALL EVALUATION: <i>This should reflect the combination of the individual section's evaluations.</i>	Accept		Accept with revisions		Reject

Research Category Abstract Review Criteria (2016)

The research category is for scholarly proposals that outline contributions to research in the area of engineering and/or computing education. Excellent proposals are well situated in prior literature on teaching and learning, and outlines research methods and findings of value and interest to engineering and/or computing educators.

Abstracts: Research Abstracts should be 300-500 words and should clearly present the paper's research contribution and its relevance to engineering and/or computing education. In addition, each abstract should be identified as a "Full" or "Short" paper track proposal, and must define at least one topic keyword.

Each abstract must state the specific research contribution of the paper. Contributions may be made in various forms, and should include the research questions addressed, methods used and results found, and a description of how the results build on prior research. Abstracts must provide a summary of the research contribution/expected results and brief statement of the implications for educational practice with a focus on action.

Rubric for Research Abstracts

	5	3	1
Research Contribution: <i>Rate how this submission makes a contribution to engineering/computing education</i>	Described specifically, supported well by proposed data	Research contribution is modest or not fully supported by suggested data	Not described
Relevance: <i>Rate how the submission is relevant to engineering/computing education</i>	Highly relevant to engineering/computing education	Reasonably well focused in engineering/computing education	Not relevant to engineering/computing education
Track accuracy: <i>Rate how well the submission meets the full/short paper track criteria</i>	Paper appears to be in proper track	Paper could be in either track	Paper appears to be in wrong track