Webinars

Welcome!

The program will begin soon.

You will not hear audio until we begin.

SPE International

How to Write a Good Technical Paper

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Webinars

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HOW TO WRITE A GOOD TECHNICAL PAPER

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Agenda

- What makes a technical paper good?
- Why write an SPE technical paper?
- Submission process
- Elements of a paper
- Visibility and promotion
- Tips

What Makes a Technical Paper Good?

- Short, clear title
- Follows a standard outline
- Clear writing style
- Case history
- Good references
- State significant new information

Ask Yourself These Questions

- What lessons have I learned?
- What should the reader understand from my work?
- How does my work differ from similar papers?
- What useful information did I get from the literature survey?
- Who is my target audience?
- Does my paper present the problem, solution and the value?

Why Write SPE Technical Papers?

- Longevity
  - Your paper extends beyond the conference and becomes part of E&P literature
- Legacy
  - A preservation of your work
- Exposure
  - Builds your peer network
  - Adds prestige to a resume
- Prestige
  - Enhances your CV/resume
  - Provides recognition for yourself and your company

A Good Paper Starts with A Good Plan

- Organize your thoughts
- Review the SPE Author Kit (resources, deadlines, template)
- Research existing literature
- Relate the paper to the scope of the meeting
- Explain the methodology
- Present useful, technically sound information
- Support your conclusions with solid evidence

SPE Technical Paper Submission Process

What are the steps?

TECHNICAL PAPER OUTLINE

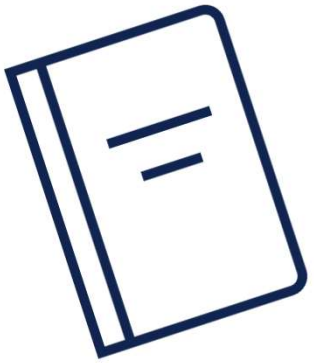
Basic Technical Paper Outline

- Title
- Abstract
- Introduction
- Materials and methods
- Results/data
- Conclusions
- Acknowledgements
- References

Characteristics of a Good Title

- Short and concise
- Should be a description of the content with emphasis on conclusions
- Informative with familiar terms
- Should focus the reader's attention on paper content – be direct
- Necessary for archive searches

- Common issues with titles
  - Too short/long
  - Misleading - does not effectively describe content
  - Uses unfamiliar jargon/abbreviations



Title Examples

- "New Methods and Specialized Techniques Used by Super Oil Co. To Process and Analyze Pressure Data Gathered During the Well-Testing Program at the Heber Geothermal Field"
  - "The Well-Testing Program at the Heber Geothermal Field"
  - "Specialized Well-test Analysis…" or
  - "A Robust Approach to Well Analysis in Geothermal Fields"

- "A Look Ahead: Back to Basics"
  - The Future of Offshore Drilling Contracting Business: Back to Basics?"

Abstract

- An abstract should:
  - State the objectives and scope of the paper
  - Describe the method used
  - Summarize the results
  - State the principal conclusions

- This is a chance to explain why your paper is unique
- Your proposal only has one chance with a program committee – make it count!
- Your abstract from your final paper will show be displayed on *OnePetro*

What Should an Abstract Tell Readers?

- What was done?
- Why it was done?
- How it was done?
- What was learned?

Introduction

- An introduction should:
  - Describe your contribution
  - Clearly present the nature and scope of the problem investigated
  - Briefly review pertinent literature
  - State the method of investigation and justification
  - Give the reader a synopsis of what to expect interpret

Materials and Methods

- Materials and methods section should:
  - Be thorough and provide adequate detail of your work
- For theoretical papers
  - Hypothesis
  - Assumptions
  - Theoretical developments
  - Arguments to demonstrate applicability
- For experimental/case study papers
  - Purpose of experiments/case study
  - Describe apparatus/equipment procedures
  - Present data and observations
  - Inferences

Results

- This should be the core of your paper
  - Include experiment outcomes
  - Explanation of the outcomes and interpretation of results/key findings
- Representative data
- Tables and figures
  - Use tables and figures to display visual representations of key findings
  - Do not turn results of simple calculations into figures, graph data that shows trends
- Avoid:
  - Redundancies
  - Too many tables and figures

Conclusions

- Conclusions should:
  - State the conclusions/outcomes of the paper as clearly as possible
  - Summarize how information provided supports claims made in the introduction
  - Numbered conclusions supported by evidence in paper
  - State the implications of new information
  - Be consistent with the abstract

Acknowledgements

- This section is not required and you may not need one
- It is a good place to acknowledge outside resources for allowing use of specific data
- Often used to acknowledge a research grant or government funding

References

- Should be relevant and referenced in the paper
- Direct readers to further information on the subject
- Allows the author to compare and contrast present work with existing work
- List only references available to readers. Personal communications, unpublished company reports, etc. should be cited as footnotes
- Should be listed alphabetically and have DOI numbers if possible

Where to Start Writing

- Start with your conclusions
  - Focus on what you learned
  - It is easier to work backward from the known
- Use simple sentences and common terminology
- Avoid commercialism

Evaluate Your Manuscript

- Is it thorough?
- Have a colleague who did not work on the project read it
- Have a colleague who worked on the project review it
- Edit several times
- Fill in any remaining sections except for the Abstract
- Edit for clarity
- Delete extraneous information

If English is Not Your First Language

- Have a native or experienced English speaker read your paper
- Look into a fee-based service that can assist
- Ensure that you balance the clarity and technical content of your paper

Plagiarism

- Use short quotes with citations – no long passages
- Cite your sources
- Cite and previous personal work, DO NOT copy and paste words from an older paper
  - This is known as text recycling or self-plagiarism
- Paraphrase in a style consistent with the rest of your work
- SPE utilizes a plagiarism checking software
  - Overt plagiarism will result in removal of the paper

AI-Generated Content

- AI-language tools (such as ChatGPT) can be an excellent tool to aid in the research and writing process, but the following guidelines should be considered:
  - AI-language tools cannot be listed as a co-author.
  - Any use of AI-language tools should be clearly stated in the methodology or acknowledgements section. It should be treated like any other software tool that is used for research. Not disclosing this information could be grounds for rejection of your paper.
  - It is the author's responsibility to verify any information from an AI-language tool. These tools are generally reliable, but they have been known to share incorrect, misleading, biased content; and even completely fabricated data and references. Any information gathered from AI-language tools should be thoroughly fact checked.
  - Anecdotally, we have found AI-language tools work best for brainstorming new ideas, synthesizing information, and polishing your writing, but still have a long way to go before being used as a reliable research aid.

VISIBILITY

ORCID iD

- Beginning January 2023, SPE Board has stipulated that all authors and co-authors for SPE conference and journal articles must have an ORCID iD. If a co-author refuses to provide their ORCID iD, they will be dropped as an author on that publication.

- What is an ORCID iD?
  - ORCID iD or “Open Researcher and Contributor ID” is a widely accepted/used unique author identifier. It is a simple numerical identifier which is unique to an author and will stay the same over time.
  - Registration for an ORCID iD can be done at https://orcid.org/register

ORCID iD

- An ORCID iD on each paper for every author enables SPE to create disambiguation between two authors with the same name ensuring all credit for publication is given to the correct author.

- Why is it important?
  - Distinguishes you and ensures your work is attributed back to you
  - Reliably and easily connects you with your contributions and affiliations
  - Reduces form-filling (enter data once, re-use often)
  - Improves recognition and discoverability for you and your research outputs
  - Interoperable (many institutions, funder, publisher already use it)
  - It is enduring

How to Improve Your Paper's Visibility

- Utilize keywords that are relevant to your paper
  - Think search engines – what words would people search to find your paper?
- Promote yourself!
  - Utilize social media platforms to share your findings (Twitter, LinkedIn, Kudos)
  - Be brief and to the point in a way that peaks people's interest
  - Tag the publisher, society, your company, co-authors, etc.
  - Utilize hashtags
  - Engage in the comment sections
- Consider expanding your co-author base

Tips

- Support your arguments with references
- Always think of your audience
- Read your paper aloud to yourself and listen for clarity
- Proofread
- Follow submission deadlines and instructions
- Do not wait until the last minute to log in to submit your paper

QUESTIONS?