Judgment Basis Definitions

Quality of data and validity of analytical techniques

- Is the paper technically sound?
- Does the paper evaluate the strengths and limitations of the work described?
- Are performance metrics clearly stated?
- Are results clearly described?
- Is relevant previous research discussed adequately?
- Are all assumptions referenced by previous proven works?

Long-term reference value

- Would this paper's content still be relevant and likely to be cited in future work?
- Are the results and interpretation of lasting scientific value?
- Is the topic important to the field?
- Does the paper strengthen or extend the state of the art?

Technically new, innovative, or a constructive review

- Does the subject matter have an interested audience today?
- Are ideas/information and methods worthwhile, new, or creative?
- Is the author the source of new information?
- Are analytical, numerical, or experimental results and interpretation original?
- Is the impact of the results clearly stated?

Professional integrity

- Is the paper free from commercialism?
- Is the paper free from personalities and bias?
- Is the paper clear and balanced?
- Is prior work of others adequately credited?
- If author claims first use of technology, is claim valid?
- Does the author avoid disparaging competitive methods or products?
- Are references to previous work presented constructively, in a fair and balanced manner?

Clear presentation

- Does the introductory section explain motivation and orient the reader?
- Does the paper describe what was done, how it was done, and the key results?
- Does the paper stay focused on its subject?
- Are tables and figures clear, relevant and correct?
- Are the concepts clearly presented?
- Is the paper logically organized?
- Are titles and keywords used appropriately?
- Is the paper's length appropriate to its scope?
- Does the author demonstrate knowledge of basic composition skills, including word choice, sentence structure, paragraph development, grammar, punctuation, spelling, and citation of references?

Soundness of conclusions

- Are the claims of the paper firmly established?
- Are conclusions sound theoretically or experimentally?
- Are conclusions supported by the facts presented?

Numeric Scoring Guidelines

Reviewers are encouraged to apply the following guidelines when scoring each of the SAE Judgment Bases, with the desired outcome of reducing variability in scores among reviewers for a given paper, while spreading out scores for papers of varying quality across the full 10-point scale.

Note that reviewer is expected to reassess and reassign scores once the author modifies and resubmits a revised manuscript. Therefore, an initial score of say, 6, does not necessarily preclude Journal publication since that score may improve upon re-review.

Score	Guidelines
9 – 10	No significant weaknesses; Suggested revisions are primarily optional; Questions posed in Judgment Bases addressed in manner consistent with ratings of “Approved” and “Recommended for Journal Publication”.
7 – 8	A few minor weaknesses; Several revisions recommended or required; Questions posed in Judgment Bases addressed well and sufficient for rating of “Approved”, potentially subject to minor revision; Revisions required to be consistent with Journal recommendation.
5 – 6	Many minor weaknesses and/or one major weakness; Moderate-to-substantial revisions are required; Questions posed in Judgment Bases addressed moderately but revisions are required to be consistent with rating of “Approved”; Quality insufficient for Journal publication.
3 – 4	Multiple major weaknesses; Extensive revision required to make paper acceptable; Not Journal quality.
1 – 2	Many major weaknesses; Questions posed in Judgment Bases are inadequately addressed; Required level of revision is likely too substantial to overcome; Not Journal quality; This score also applies if text lacks sufficient clarity to score Judgment Bases.