

# **American Rock Mechanics Association's Awards Selection Committee**

## **Awards Criteria and Operating Procedures**

**2021**

### **1. ARMA Awards**

ARMA seeks to recognize outstanding contributions and careers of its members in rock mechanics and rock engineering that are of benefit to the geoengineering community. It does so in part by naming recipients of the following awards. Awards are given for work described in papers presented at ARMA Symposia or ARMA-sponsored Conferences or for graduate-level theses in Rock Mechanics and Geomechanics. Awards may or may not be made every year.

- a. ARMA Research Award
- b. ARMA Applied Research Award
- c. ARMA Case History Award
- d. Dr. N.G.W. Cook Ph.D. Dissertation Award
- e. ARMA M.S. Thesis Award
- f. ARMA Outstanding Contributions Award

This document concerns selection criteria and procedures for these six awards. Procedures for the ARMA Early Career awards and the ARMA Fellows are not addressed by this document, nor are symposium awards for best paper/poster.

### **2. Award Selection Criteria**

Award recipients must have been members of ARMA during the nominating period; for multi-authored contributions, only the first (principal) author must have been a member of ARMA during the nominating period. A nominator does not have to be a member of ARMA.

Nominated papers, or a major portion thereof, must have been completed and presented at an ARMA-sponsored conference within three (3) years of the nomination closing date. Nominated dissertations and theses must have been approved by the award-granting institution within three (3) years of the nomination closing date.

Selection criteria specific to each award follow:

- a. **ARMA Research Award** – This award shall recognize an original contribution that advances the theoretical or fundamental aspects of rock mechanics and rock engineering. The contribution should provide new concepts that may alter the direction of rock mechanics science in the near future. The awards committee shall consider the following criteria:
  - i. Basis of Contribution – Difficulty of problem solved; depth of new idea; quality of explanation of new concept.
  - ii. Potential Practical Value of Contribution – Possibility for practical applications; value of potential application.
  
- b. **ARMA Applied Research Award** – This award shall recognize a practical contribution that applies rock mechanics and rock engineering principles toward innovative, safer, more economic or environmentally sound solutions in engineering design. The contribution should have immediate value to the practicing rock mechanics professional. The awards committee shall consider the following criteria:
  - i. Basis for Contribution – Quality and depth of new ideas; difficulty of development, quality of application of principles; solution difficulty of practical problem; elegance and uniqueness of design.
  - ii. Practical Value of Contribution – Value in terms of safety, economics or environment; significance of practical application; applicability to other practical problems; value toward other practical solutions.

- b. **ARMA Case History Award** – This award shall recognize a practical contribution from rock mechanics professionals in industry who apply sound rock mechanics and rock engineering principles toward the solution of a specific engineering problem. The contribution must demonstrate immediate value to industry. The awards committee shall consider the following criteria:
- i. Basis for Contribution – Quality of application of principles; solution difficulty of practical problem; uniqueness of the practical problem.
  - ii. Practical Value of Contribution – Immediate value in terms of safety, economics or environment; significance of the solution.
- c. **Dr. N.G.W. Cook Ph.D. Dissertation Award** - This award shall be for an outstanding doctoral dissertation in rock mechanics or rock engineering. The recipient of the Dr. N.G.W. Cook Ph.D. Dissertation Award may also be nominated for the ISRM Rocha Medal; therefore, selection criteria similar to those of the Rocha Medal are applied. The awards committee shall consider the following criteria and weightings:
- i. Advancement of State-of-the-Art (35%) - Extent and quality of new work; difficulty of problems and extent to which a solution is reached.
  - ii. Appreciation of State-of-the-Art (20%) - Quality of literature review and bibliography; awareness of pertinent previous research; ability to convey concisely the state-of-the-art, and insight, etc.
  - iii. Practical Application and Usefulness (35%) - Benefit to humankind in short and medium term, particularly in applied rock engineering, e.g. civil, mining and petroleum engineering; avoidance of natural hazards, economics and improved safety in construction, etc.
  - iv. Quality of Presentation (10%) - Format, use of headings, style, clarity, clarity of introduction and conclusions, etc.

- d. **ARMA M.S. Thesis Award** – This award shall be for an outstanding Masters-level thesis in rock mechanics or rock engineering. This award seeks to encourage promising young professionals to continue their development in rock mechanics or rock engineering. Similar selection criteria to those for the Ph.D. thesis will apply.
  
- e. **ARMA Outstanding Contributions Award** – This award shall recognize an individual whose career achievements have provided outstanding contributions to the profession of rock mechanics and rock engineering. The awards committee shall consider the following criteria:
  - i. Theoretical Contributions – Originality, depth and difficulty; quality of explanations; significance.
  - ii. Applied Contributions – Elegance of practical solutions; uniqueness of designs; value in safety, economics or environment.
  - iii. Leadership in the Profession – Significance of role in direction of rock mechanics and rock engineering; influence on other professionals.
  - iv. Service to the Profession – Organizational roles in the rock mechanics and rock engineering community.

### **3. Nature of the Awards**

- a. The Rock Mechanics Research, Applied Rock Mechanics Research, and Case History Awards shall be award plaques or certificates naming the recipients, the title of their contribution and its reference.
  
- b. The Dr. N.G.W. Cook Ph.D. Dissertation and M.S. Thesis in Rock Mechanics Awards shall be an award plaque or certificate naming the recipients, the title of their work, and his/her University. ARMA, at its discretion, may pay for the travel and registration fee of the prize winners to the Rock Mechanics symposium at which the awards are presented. ARMA, at its discretion, may encourage the awards recipients to publish and present their work at an ARMA conference.

- c. Other awards shall be an award plaque or certificate naming the recipient and award title. ARMA, at its discretion, may encourage the award recipient to present a special lecture on his/her work at an ARMA conference.

#### **4. Nominations**

ARMA shall collect award nominations at all times via its website. However, the annual nomination cycle for all award categories shall close six (6) months prior to the annual ARMA conference. Each award nomination must present the following information:

- a. Award category
- b. Full name and contact information of nominator.
- c. Author(s), title, and reference information for the nominated work. For multi-authored contributions, the full name and contact information of the first (principal) author must be included
- d. Abstract of the nominee's contribution (up to 250 words)
- e. Significance of the nominee's contribution (up to 500 words). The nominator should explain the significance in terms of the award selection criteria.

Members of the ARMA-Board-appointed award selection committee may provide nominations. However, no member of the Awards Selection Committee shall participate in the selection process for an award category if they are related to or have a close professional, academic or supervisory connection with one of the candidates in that award category. If a thesis or published contribution is submitted causing such conflict of interest, the person concerned is to bring this conflict to the attention of the awards committee chair, who will take appropriate action. Specifically, no member of the award selection committee can be a recipient of an award. All potential conflicts of interest shall be noted in the award committee report to the ARMA Board.

After a preliminary screening, the Awards Committee may request additional information from the nominator on the nominee's work. For the Dr. N.G.W. Cook Ph.D. Dissertation Award additional information will include 1) a one page curriculum vitae, which is to include the name, nationality, and place of birth of the nominee, together with position held, postal address, telephone and email, 2) a copy of the complete dissertation, 3) a copy of the doctoral degree certificate and 4) a letter of copyright release, allowing ARMA to copy the dissertation for purposes of review and selection only. Ph.D. dissertations considered for the ARMA Dr. N.G.W. Cook Ph.D. Dissertation Award may also be considered by ISRM for the Rocha Medal.

For the M.S. Thesis in Rock Mechanics Award additional information will include 1) a one page curriculum vitae, which is to include the name, nationality, and place of birth of the nominee, together with position held, postal address, telephone and email, 2) a copy of the complete thesis, 3) a copy of the masters degree certificate and 4) a letter of copyright release, allowing ARMA to copy the thesis for purposes of review and selection only.

For the Outstanding Contributions to Rock Mechanics Award, the additional information will include 1) a two page curriculum vitae, which is to include the name, nationality, and place of birth of the nominee, together with positions held, postal address, telephone and email, 2) a summary of up to 1,000 words describing the nominee's achievements and contributions and 3) a list of the nominee's publications. Persons considered for the ARMA Outstanding Contributions in Rock Mechanics Award may also be considered by ISRM for the Muller Award.

## **5. Selection Committee and Process**

An awards selection committee consisting of ARMA members in good standing, selected by the committee chair and approved by the ARMA Board of Directors, shall be formed at each regular annual meeting of the Board. The committee chair will be appointed by the Board of Directors and shall serve as chair for no more than two years and will have been a member of the committee for at least one year prior. Each new awards selection committee will attempt to preserve approximately 2/3 of its membership from one year to

the next such that the committee maintains some continuity and committee members shall serve no more than three consecutive years (with the exception of the committee chair who may serve up to four consecutive years). Attempts shall be made to include:

- At least one previous award recipient and/or ARMA fellow.
- Diversity of institutional representation including national laboratories, industry, and academia
- Diversity of discipline, including petroleum, civil, mining, and interdisciplinary
- All members of the committee shall be recognized leaders in their fields

The committee shall not include:

- More than one individual from any given institution

The Executive Director of ARMA shall distribute full details of nominations in each award category to each committee member within two weeks after closing of nominations.

The awards committee shall 1) review the nominees, 2) request additional information as needed, 3) compare nominations to selection criteria, 4) recommend the names of the preferred award recipients to the full ARMA Board. The awards committee shall make its award recommendations to the ARMA Board for ratification within two months after closing of nominations.

Upon review of the award committee recommendations, the ARMA Board shall ratify the individual award selections. In the event that an award selection is not ratified, the ARMA Board may, at its discretion, request another recommendation from the Awards election Committee else no award will be made in that specific category for that award cycle. The ARMA Board shall ratify or decline to ratify initially recommended award recipients within three months after closing of nominations, and shall ratify all recommendations not later than two months prior to the ARMA Symposium.

## **6. Confidentiality**

The awards committee report and recommendations, including identity of all nominees, shall remain confidential. The identity of award recipients shall remain confidential until approval is given by the ARMA Board and the award recipients have been notified.

## **7. Conferring the Awards**

The award recipients shall be notified immediately after ARMA Board approval, which is about three months after closing of nominations and three months before the next ARMA conference. The President of ARMA shall confer the awards at that ARMA conference.