

# American Rock Mechanics Association's Awards Selection Committee

## Awards Criteria and Operating Procedures

*December 2010*

### 1. Purpose of Awards

*Similar to the objectives and purposes of the International Society for Rock Mechanics, the American Rock Mechanics Association seeks:*

- *to encourage teaching, research, and advancement of knowledge in rock mechanics;*
- *to encourage collaboration and exchange of ideas and information between rock mechanics practitioners;*
- *to promote high standards of professional practice among rock engineers so that civil, mining, and petroleum works might be safer, more economic, and less disruptive to the environment.*

*ARMA seeks to recognize outstanding contributions and careers in the profession of rock mechanics and rock engineering that are of benefit to the United States rock mechanics community.*

### 2. ARMA Awards

*ARMA shall recognize outstanding contributions in naming recipients of the following six awards. Awards may or may not be made every year.*

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

### 3. Award Selection Criteria

*a. Rock Mechanics 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:*

- 1) *Basis of Contribution – Difficulty of problem solved; depth of new idea; quality of explanation of new concept.*
- 2) *Potential Practical Value of Contribution – Possibility for practical applications; value of potential application.*

*b. Applied Rock Mechanics Research Award – This award shall recognize a practical contribution that applies in-depth 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:*

- 1) *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.*
- 2) *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.*

*c. 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:*

- 1) *Basis for Contribution – Quality of application of principles; solution difficulty of practical problem; uniqueness of the practical problem.*
- 2) *Practical Value of Contribution – Immediate value in terms of safety, economics or environment; significance of the solution.*

*d. 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:*

- 1) *Advancement of State-of-the-Art (35%) - Extent and quality of new work; difficulty of problems and extent to which a solution is reached.*
- 2) *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.*
- 3) *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, economies and improved safety in construction, etc.*
- 4) *Quality of Presentation (10%) - Format, use of headings, style, clarity, clarity of introduction and conclusions, etc.*

e. *M.S. Thesis in Rock Mechanics 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.

f. *Outstanding Contributions to Rock Mechanics 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:

- 1) *Theoretical Contributions* – Originality, depth and difficulty; quality of explanations; significance.
- 2) *Applied Contributions* – Elegance of practical solutions; uniqueness of designs; value in safety, economics or environment.
- 3) *Leadership in the Profession* – Significance of role in direction of rock mechanics and rock engineering; influence on other professionals.
- 4) *Service to the Profession* – Organizational roles in the rock mechanics and rock engineering community.

#### **4. 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. ARMA may, at its discretion, encourage the award recipients to present a special lecture on their work at an ARMA conference.

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 prizewinners 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. *The Outstanding Contributions to Rock Mechanics Award* 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.

#### **5. Nominations**

ARMA shall collect award nominations at all times via its website. 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 papers, 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.

Award recipients must have been members of ARMA during the nominating period; (for multi-authored papers, only the first (principal) author must have been a member of ARMA during the nominating period). It is not necessary for a nominator to be a member of ARMA. Those papers receiving the Rock Mechanics Research Award, Applied Rock Mechanics Research Award, and Case History Award must have been published in an ARMA-sponsored symposium.

Nominations for all award categories shall close six (6) months prior to the annual ARMA conference. Nominated papers 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. After a preliminary screening, the Awards Committee may request additional information from the nominator on the nominee's work.

Members of the ARMA-Board-appointed award selection committee may provide nominations as long as no conflict of interest exists, perceived or otherwise as determined by remainder of the Board.

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, place and date 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, place and date 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, place and date 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.*

## **6. Selection Committee and Process**

*An awards selection committee consisting of five ARMA members in good standing appointed by the ARMA Board of Directors shall be formed at each regular annual meeting of the Board. Committee members shall serve no more than three consecutive years.*

*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 criterion, 4) recommend the names of the preferred award recipients to the full ARMA Board. The awards committee shall provide a brief report to the ARMA Board defending its choice of preferred award recipients. The award committee may also elect to submit an alternate name (runner-up) for any award. The awards committee shall make its award recommendations within two months after closing of nominations.*

*Upon review of the award committee recommendations, the ARMA Board shall vote on award recipients by secret ballot. A ballot containing the names of preferred award recipients and, if applicable, those of the runner-up(s) will be sent to each Board member. Each Board member can indicate their first choice on this ballot. The Executive Director shall tally these votes for the Board. The ARMA Board shall approve award recipients within three months after closing of nominations.*

## **7. Conflict of Interest**

*No person shall participate in the selection process if they are related to or have a professional, academic or supervisory connection with one of the candidates. 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. All potential conflicts of interest shall be noted in the award committee report to the ARMA Board.*

## **8. 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.*

## **9. 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.*