

## **Chern Medal Award**

### **New prize in science promotes mathematics**

**Professor Dr Martin Grötschel\***

The International Mathematical Union (IMU) and the Chern Medal Foundation (CMF) are launching a major new prize in mathematics: the Chern Medal Award. The Award is established in memory of the outstanding mathematician Shiing-Shen Chern (1911, Jiaxing, China – 2004, Tianjin, China).

Professor Chern devoted his life to mathematics, both in active research and education, and in nurturing the field whenever the opportunity arose. He obtained fundamental results in all the major aspects of modern geometry and founded the area of global differential geometry. Chern exhibited keen aesthetic tastes in his selection of problems, and the breadth of his work deepened the connections of modern geometry with different areas of mathematics.



Professor Shiing-Shen Chern

The Medal is to be awarded to an individual whose lifelong outstanding achievements in the field of mathematics warrant the highest level of recognition. The Award consists of a medal and a monetary award of US\$500 000. There is a requirement that half of the award shall be donated to organisations of the recipient's choice to support research, education, outreach or other activities to promote mathematics. Professor Chern was generous during his lifetime in his personal

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support of the field and it is hoped that this philanthropy requirement for the promotion of mathematics will set the stage and the standard for mathematicians to continue this generosity on a personal level. The laureate will be chosen by a Prize Committee appointed by the IMU and the CMF.

The IMU has been awarding the Fields Medals — generally considered the ‘Nobel Prize for mathematics’ — since 1936, the Nevanlinna Prize in the field of theoretical computer science since 1982, and the Gauss Prize for applied mathematical work since 2006. The Fields Medals and the Nevanlinna Prize are given to young researchers below 40 years of age, in recognition of specific path breaking results. The Gauss Prize recognises mathematical results that have opened new areas of practical applications.

With the Chern Medal Award, the IMU is broadening the range of its awards, now including long-term work with outstanding theoretical consequences.

The Nevanlinna Prize, Gauss Prize, and up to four Fields Medals are awarded every four years at the opening ceremony of the International Congress of Mathematicians. The Chern Medal Award will be awarded in the same manner, for the first time at ICM 2010 in Hyderabad, India on 19 August 2010. The award ceremony will include an overview of the achievements of the prize-winner. The presentation of the mathematical work will be addressed to the general public as well as journalists, so that all may appreciate the vitality of mathematics in our times.

### **Chern Medal, program guidelines**

*I. Selection of Medalists.* The Medal is to be awarded to an individual whose accomplishments warrant the highest level of recognition for outstanding achievements in the field of mathematics.

All living, natural persons, regardless of age or vocation, shall be eligible for the Medal. Additional qualifying or disqualifying criteria may be imposed consistent with IMU policies.

*II. Selection Committee.* Each Medalist shall be selected by a Selection Committee consisting of five members.

A new Selection Committee shall be formed at least two years in advance of each award ceremony, for the purpose of identifying that Medalist.

The IMU shall appoint four members of each Selection Committee, and CMF shall appoint the fifth.

At the outset of each award cycle, the IMU shall nominate one of the five members of the Selection Committee as Chair of the Committee, subject to approval by CMF.

*III. The Awards.* A. Each Medalist shall receive a cash prize of \$250 000.

B. In addition, each Medalist may nominate one or more organisations to receive funding totaling \$250 000, for the support of research, education or other outreach programs in the field of mathematics (the ‘Organisation Awards’).

C. Each Medalist’s nominees for Organisational Awards are subject to approval by FIMU, which shall grant such approval so long as the proposed awards:

- will be qualifying, charitable distributions within the meaning of US tax law; and
- will substantially further the purposes of CMF, FIMU and the Grant.

*IV. Other terms and conditions.* The identity of each Medalist will be kept strictly confidential until the time at which that Medalist is honoured.

CMF retains the right to enjoin any ancillary usage of any name or mark associated with the Program if, in CMF’s sole discretion, such use does not appropriately reflect on or advance the interests of the Program.

#### **Nominations for the Chern Medal Award**

The International Mathematical Union (IMU) and the Chern Medal Foundation (CMF) have, following the guidelines above, appointed a Selection Committee consisting of five members. This committee is chaired by the former IMU Secretary and the Past Director of the Institute for Advanced Study in Princeton Phillip A. Griffiths.

Nominations should ideally be sent by 15 December 2009 to the following address electronically or on paper:

Phillip A. Griffiths

Institute for Advanced Study Einstein Drive Princeton, N.J. 08540 USA.

E-mail: [pg@ias.edu](mailto:pg@ias.edu)

Nominations must include:

- name and affiliation of candidate;
- a description of the work that qualifies the candidate for the award, written in terms that are accessible to mathematicians of different backgrounds, including references to the candidate’s important papers;
- nominations are confidential, and must not be disclosed to the candidate.