

# THE DIMITRIS N. CHORAFAS FOUNDATION

awards the Year 2008 Prize

to

***Peter NEMES***

in recognition of his work:

*"Ion Chemistry and In Vivo Ion Sources Using Electrosprays"*

Luzern, Switzerland, July 30, 2008

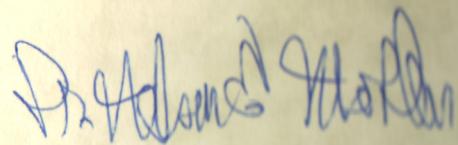
The Board of the Foundation



Dr. Dimitris N. Chorafas



Dr. Heinrich Steinmann



Dr. Nelson E. Mohler



## **Chorafas Prize**

### **1. The Years of Association with the Academy of Sciences (1992-95)**

The Dimitris N. Chorafas Foundation was established in March 1992 in collaboration with the Swiss Academy of Engineering Sciences, Swiss Academy of Humanities and Social Sciences, Swiss Academy of Medical Sciences, and Swiss Academy of Natural Sciences.

In its first years of operation, the Foundation awarded two annual prizes, each in an amount of 100'000 Swiss Francs, for outstanding applied research. The focus of the prizes has been on nature, man and his responsibilities. The awards were given in collaboration with the four Swiss Academies of Sciences, in four different scientific fields, without regard to gender, religious beliefs or nationality.

More precisely, the Foundations awards targeted extraordinary scientific achievements in computers and communications technology, knowledge engineering, free-market financial products, risk management, the promotion of understanding between different cultures and societies, the control of population growth the prevention of mental and physical disabilities, the long-term preservation of natural resources, and environmental protection.

This emphasis was chosen in appreciation of the fact that high technology, family planning and the preservation of nature have become key areas of scientific research. At the same time, attention has been paid to the equally important concept that researchers must continually confront the consequences of their work on man and nature.

Efforts to contain environmental damage, conquer hunger and disease and promote understanding between cultures originate at the point where all sciences intersect. Against this background, interdisciplinary research is the key to future developments. Based on such premises, in accord with the four Swiss Academies of Sciences, the Foundation made high scientific and ethical demands for its awards. Not only should work to be awarded be original and of an outstanding quality, but also prize winners must prove that:

1. They are aware of the consequences of their work for man and his environment, and
2. They are ready to assume personal responsibility for what they are doing.

Willingness to accept the moral obligations of being a scientist has been a feature that made the prizes unique. For this reason, as a rule, the prizes were primarily awarded to individuals. The international perspective of these prizes and their multidisciplinary character were the reasons why the Chorafas Foundation worked in partnership with the Conference of the Swiss Scientific Academies.

The Academy of Engineering Sciences, the Academy of Humanities and Social Sciences, the Academy of Medical Sciences and the Academy of Natural Sciences undertook a strict selection process. From 1992 to 1995, the Conference of the four Academies administered the prize competition throughout the world, and run the Foundation's secretariat.

Selection committees nominated by the Swiss Academies of Sciences examined candidates and their work in each prize category. Prize winners were selected by the Board of the Chorafas Foundation based on the proposition made by the Conference of the Swiss Scientific Academies.

## **2. The Years of Independence (1996-)**

Since 1996, the awards of the Chorafas Foundation are granted directly to prize winners selected by partner Universities in Europe, North America, the Middle East and Asia. These awards target the best doctorate students chosen by each partner University and confirmed by the Board of the Foundation.

Each award is of USD 4'000, unless the partner University chooses to split the prize between two students. Selection is made among a statistically valid sample of candidates. There have been 20 to 30 prizes per year, the exact number depending on the candidates retained for the prizes by the partner Universities. As of today, there are 26 partner Universities in 15 countries. In alphabetic order:

- City University London, United Kingdom
- Columbia University, USA
- Ecole Normale Supérieure, France
- Ecole Polytechnique Fédérale, Lausanne, Switzerland
- Erasmus University Rotterdam, Netherlands
- George Washington University, United States
- Hebrew University of Jerusalem, Israel
- Hiroshima university, Japan
- Karolinska Institute, Sweden
- London Business School, United Kingdom
- Massachusetts Institute of Technology, USA
- National Technical University, Athens, Greece
- Politecnico di Milano, Italy
- Purdue University, United States
- Swiss Federal Institute of Technology, Zurich, Switzerland
- Technical University of Berlin, Germany
- Technical University of Budapest, Hungary
- Technical University of Munich, Germany
- Technical University of Vienna, Austria
- Tokyo Institute of Technology, Japan
- University of California, Los Angeles, USA
- University of Fribourg, Switzerland
- University of Latvia, Latvia
- University of Ottawa, Canada
- University of Toronto, Canada
- Weizmann Institute of Science, Israel

In continuation of the fields of scientific work to which the Foundation devoted itself in 1992, in 1996 the annual prizes were divided into three groups of equal weight:

- Systems Engineering and Information Technology
- Finance, Risk Management and Rocket Science
- Environmental Protection and Birth Control

For the engineering prize, doctorate students have been typically selected from suitable candidates in computer science, with emphasis on the design of complex systems, imaginative projects in new technology, database mining, sophisticated software for networks, and intelligent software (agents, expert systems).

The birth control prize has been extended to include all aspects of environmental protection. The prize on interactive computational finance covered the design of new financial instruments, internal control and novel solutions to risk management. Engineering and other studies focusing on costing and rigorous evaluation of investments have also been classified under finance.

From 1996 to 2005, the aforementioned fields of study and research have evolved to include research and development activities in many fields:

- More engineering Disciplines
- Research and Application in Physics
- Nanotechnology
- Biological Computing
- Bioengineering
- Information Systems for Medical Science
- Applied Mathematics, including artificial intelligence
- Interactive Computational Finance
- Biological and Environmental Protection

### **3. Goals of the Foundation's Prizes and Selection Procedures**

Over the years, partner universities have asked for guidelines regarding the selection of candidates for the Foundation's prizes. For instance: Age limit, area of specialization, specific goal of the prizes. In regard to the age query, in principle he or she should be younger than 30 years and well advanced in doctoral studies. As for specific objectives:

- The No. 1 goal of the prizes is to reward exceptional performance.
- The No. 2 aim is to encourage significant future contributions to science and technology.
- The No. 3 is to help in completing a higher degree and/or significant research project.

The candidate should be a student in the partner University, but he or she could also be junior faculty, like teaching assistant or research assistant. By contrast, given the outlined objectives of the Foundation's awards, full-time faculty members (including Assistant Professors) do not qualify for the prizes. In response to queries posed by partner universities, the Board of the Foundation has debated whether students who finalized their study and are currently employed in industry qualify. The answer is that they don't. Current students who have found full-time employment do not qualify for the Foundation's prize either.

Regarding selection procedures, the sample from which the prize winner is chosen should be statistically valid, to bring in the element of competition. How a statistically significant sample can be obtained among the graduate university students is an issue concerning the partner organization. The competition for the Foundation's awards repeats itself every year. Though there is no need for a special reminder, the Foundation communicates with its letter covering the checks for the prizes, awards certificates and list of prize winners, a call for next year's prizes.

Most partner universities announce the prize to their students and then screen the applicants on the basis of their accomplishments. Some universities use the classical information boards to announce next year's prize(s). Others use electronic mail, or the Campus newspaper. Still others use all three media, which is a more effective solution. The best results are obtained when the call for candidates is done in September of the year preceding the final selection.

The partnership with selected Universities is a long term proposition. The Dimitris N. Chorafas Foundation is appropriately endowed. Looking into the future, there is no time limit to the prizes as long as there are people to be awarded for distinction in their field of activity.

**For more information for applications from researchers  
at the University of Fribourg, please contact**

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Tel +41 (0)26 300 73 30 — Fax +41 (0)26 300 97 28  
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#### **4. Ausschreibung für den Chorafas – Preis 2008**

Der wissenschaftliche Wettbewerb der Stiftung Chorafas ist mit einem Preis in Höhe von USD 4'000 dotiert.

Er richtet sich an Student/innen und Doktorand/innen, die ihre Diplom- oder Doktorarbeit zwischen dem 1. September 2007 und dem 31. Dezember 2008 (!) abgeschlossen haben, die jünger als 30 Jahre alt und nicht voll berufstätig sind.

Die eingereichte Arbeit muss in einem der folgenden Gebiete

- Engineering and Physics
- Life Sciences
- Internet and Information Science
- Computational Finance
- Biotechnology
- Environmental Protection
- Medical Science

Abgefasst sein und ein ausgezeichnetes wissenschaftliches Niveau besitzen.

Es dürfen auch Arbeiten bzw. deren Zusammenfassung eingereicht werden, die noch nicht vollständig abgeschlossen sind.

Die Unterlagen für die Kandidatur müssen ein CV des/ der Kandidat/in, ein Abstract der Arbeit und ein Empfehlungsschreiben des/ der Doktorvaters/-mutter enthalten und sind bis 13. März 2008 zu senden an die folgende Adresse:

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