



Shaping New Directions in  
Mathematics for Science and  
Society



SIXTH FRAMEWORK PROGRAMME

For further information:  
[www.mathfss.org](http://www.mathfss.org)  
[mathfss@crm.es](mailto:mathfss@crm.es)

# M A T H F S S

(2005 - 2007)



[www.crm.es](http://www.crm.es)



[www.cs.biu.ac.il/~eni](http://www.cs.biu.ac.il/~eni)

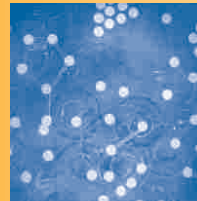


[www.eurandom.nl](http://www.eurandom.nl)



[www.ihes.fr](http://www.ihes.fr)

Source: [www.confla.ku.nor.se/acton\\_base.htm](http://www.confla.ku.nor.se/acton_base.htm)



## Participating Institutes

**CRM**  
Centre de Recerca Matemàtica, Bellaterra, Spain  
(co-ordinator)

**ENI**  
Emmy Noether Research Institute for Mathematics,  
Ramat-Gan, Israel

**EURANDOM**  
European Institute for Statistics, Probability and  
Operations Research, Eindhoven, The Netherlands

**IHÉS**  
Institut des Hautes Études Scientifiques,  
Bures-sur-Yvette, France

3A - JIMSEVY GMBH

## What is the NEST Programme?

NEST (New and Emerging Science and Technology) is a new activity in the Sixth Framework Programme of the European Union. It aims to promote innovative research with the potential to open new fields for European science and technology, as well as giving support to research on problems as yet uncovered by science.

In addition to developing new scientific understanding and capabilities, and opening new fields, NEST activities aim to consolidate European efforts in emerging ambits of research and to assist in planning future activities in support of a European Research Area. Such activities will help to foster themes that require larger-scale sponsorship in future European research programmes.

NEST involves three complementary lines of action, termed Adventure, Insight and Pathfinder, and also includes Support Actions such as methodological studies or activities to promote interaction within the research community on relevant scientific and technological advances.

## Topics in MATHFSS

The project entitled Shaping New Directions in Mathematics for Science and Society (MATHFSS) is one of the Support Actions approved in the NEST programme. It is a result of collaboration between four research institutes within the framework of ERCOM, a committee of the European Mathematical Society.

The duration of the project is two years, which began in December 2005. It aims to facilitate the engagement of collaborative international research and to foster the design of training curricula in Mathematics, particularly those linked with the following topics:

- Systems Biology
- Risk Assessment
- Mathematical Neuroscience
- Digital Content Security

## Planned Activities

- Risk Measures and Risk Management for High-Frequency Data  
EURANDOM, Eindhoven, 6-8 March 2006  
Co-ordinator: Jef Teugels
- Shaping New Directions in Mathematics for Science and Society  
Round Table at ICM 2006  
Madrid, 24 August 2006  
Co-ordinator: Carles Casacuberta
- Mathematical Neuroscience  
Universitat d'Andorra, 1-4 September 2006  
Co-ordinator: Antoni Guillamon
- Systems Biology from a Truly Interdisciplinary Point of View with a Mathematical Twist  
IHÉS, Bures-sur-Yvette, Fall 2006 and Fall 2007  
Co-ordinator: Mikhail Gromov
- Compositionality and Synchronization  
Accademia dei Lincei, Roma, 9-11 October 2006  
Co-ordinator: Mina Teicher
- Medical Applications of Neuromathematics  
Emmy Noether Institute, Bar-Ilan, February 2007  
Co-ordinator: Mina Teicher
- Mathematical Methodologies for Operational Risk  
EURANDOM, Eindhoven, March 2007  
Co-ordinator: Henry Wynn
- Cryptography and Digital Content Security  
CRM, Bellaterra, June 2007  
Co-ordinator: Enric Nart

Some of these events will be complemented with round-table discussions or other scientific activities. The project's follow-up, its conclusions and the corresponding recommendations will be the responsibility of specialist groups within the various topics.