

MESA REDONDA EM BIOLOGIA-MATEMÁTICA

IMPA, Dia 9 de fevereiro de 2004

No dia 9/2, segunda feira, após a abertura (9h30) do Workshop em Sistemas Dinâmicos Evolucionários e Modelagem Físico-Biológica, será realizada uma mesa-redonda (11h-12h30), sobre aplicações recentes da Biomatemática, em particular em controle epidemiológico e em tratamento individual de infecções virais, especialmente HIV.

Compõem a mesa os professores **Martin Nowak** (Harvard) e **Karl Sigmund** (Viena), **Carlos Morel** (Fiocruz) e **Jerson Lima** (UFRJ).

Após as apresentações, de 10-15 min, haverá um debate de 30 min aberto ao público.

Nowak e Sigmund falarão sobre .os as novas idéias matemáticas para *Dinâmica Viral, Genética do Cancer e Sistemas Dinâmicos Evolucionários* (incluindo *Teoria dos Jogos e Aplicações e Evolução da Linguagem*).

Morel falará sobre os promissores *Avanços em Ciência e Tecnologia para o Controle de Doenças* e sobre *Uma Visão dos Biocientistas Sobre os Novos Recursos em Matemática/Biocomputação*.

Lima falará sobre a *Termodinâmica das Moléculas da Vida e Genômica e Estruturas Proteômicas: Promessas para uma Nova Medicina*.

The thermodynamics of the molecules of life. (Most problems of protein and RNA folding remains unsolved).

Genomics and Structural Proteomics: Promises for a Real New Medicine

Segue abaixo uma breve apresentação dos painelistas estrangeiros:

[Karl Sigmund, Universidade de Viena](http://www.fwf.ac.at/de/press/cv_sigmund.html) e http://www.fwf.ac.at/de/press/cv_sigmund.html

"I started out working on ergodic theory and dynamical systems. Later, I got interested in diverse aspects of biomathematics, especially population dynamics, population ecology and population genetics. Currently my main interests are in game dynamics (replicator dynamics, adaptive dynamics) and in game theoretic models for the evolution of cooperation as well as other aspects of experimental economics."

Desde 2003, Sigmund é vice-presidente dos Wissenschaftsfonds FWF, Austria (equivalente ao CNPq)..

[Martin Nowak \(coorganizador do workshop\) Universidade de Harvard](#)

"Martin Nowak studied biochemistry and mathematics at the University of Vienna, where he received his Ph.D. in 1989. His diploma thesis was with Peter Schuster on quasi-species theory and his Ph.D. thesis with Karl Sigmund on evolution of cooperation. In 1989, he went to the University of Oxford as 'Erwin Schroedinger' scholar to work with Robert May. In 1992, Nowak became a Wellcome Trust Senior Research Fellow, in 1995 he became Head of Mathematical Biology and in 1997 Professor of Mathematical Biology. In 1998 he moved from Oxford to Princeton to establish the first program in Theoretical Biology at the Institute for Advanced Study. In July 2003, Nowak moved to Harvard University as Professor of Mathematics and Biology. He is Director of the newly established Program for Evolutionary Dynamics. Nowak is interested in all aspects of mathematical biology. In particular, he works on the dynamics of infectious diseases, cancer genetics, the evolution of cooperation and human language. He has published more than 200 papers and is on the editorial board of various journals. His first book, 'Virus Dynamics' (together with Robert May) was published by Oxford University Press, 2000. Nowak is a corresponding member of the Austrian academy of sciences. He won the Weldon Memorial Prize, the Albert Wander Prize, the Akira Okubo Prize, the David Starr Jordan Prize and the Henry Dale Prize."