

## DOCTORAL SCHOOL IN MATHEMATICS

The courses can be chosen from the following topics, depending on the research interest of the candidate:

Algebra (Group-theory)  
Algebra (Ring Theory)  
Algebra (Universal Algebra)  
Analysis (Complex Functions)  
Analysis (Differential Equations)  
Analysis (Functional Analysis)  
Analysis (Real Functions)  
Applications of Stochastic Processes  
Approximation Algorithms  
Behavior of Independent Random Variables  
Boundary Value Problems  
Calculus of Probability  
Combinatorial Algorithms  
Combinatorial Optimization  
Combinatorial Optimization Structures  
Continuous Optimization  
Decision Theory  
Discrete Mathematics  
Discrete Optimization and its Applications  
Dynamic Programming  
Dynamic Systems and their Applications  
Eigenvalue Problems  
Functional Analysis  
Geometry (Differential Geometry)  
Geometry (Discrete, Combinatorial, Finite and Convex

Geometry)  
Geometry (Topology)  
Independent Increment and Markov Processes  
Integer-valued Programming  
Integral Equations  
Linear Programming  
Mass-service Theory  
Mathematical Models and their Applications  
Mathematical Physics  
Mathematical Statistics  
Multidimensional Methods  
Nonlinear Programming  
Nonparametric Methods  
Number Theory  
Numerical Algebra  
Numerical Solution of Elliptic Problems  
Numerical Solution of Linear Systems  
Numerical Solution of Nonlinear Systems  
Numerical Stability Theory  
Numerical Treatment of Initial Value Problems  
Numerical Treatment of Least Squares Problems  
Optimization of Stochastic Processes  
Ordinary Differential Equations  
Parallel Algorithms  
Partial Differential Equations  
Polyhedron Combinatorics  
Reliability Theory

Scheduling Theory and Production Management

Simulation

Special Numerical Solutions of Equations Important in Applications (Convection-diffusion, Navier-Stokes, Maxwell Equations)

Stability- and Bifurcation Theory

Statistical Analysis of Time Series

Stochastic (Calculus of Probability)

Stochastic (Stochastic Processes)

Stochastic Processes

Stochastic Programming

Storage Theory

Theory of Linear Partial Differential Equations

Theory of Sets and Mathematical Logic

Time Dependent Partial Differential Equations