

PhD courses 2019/2020, FCUL & IST

1st semester

FCUL

- Mathematical Analysis
 - Dynamical Systems (M/D) (Jorge Buescu)
 - Partial Differential Equations (M/D) (Manuel Marques)
- Algebra
 - Representation Theory of Groups (Carlos André)
 - Combinatorics (M/D) (Maria Manuel Torres & Luís Gouveia)
 - Semigroups, Automata and Languages (M/D) (Mário Branco)
- Logic and Computation
 - Mathematical Logic (Mário Edmundo)

IST

- Differential Equations and Dynamical Systems
 - Infinite Dimensional Dynamical Systems (Luís Barreira)
- Algebra and Topology
 - Homotopy Theory (Gustavo Granja)
 - Differential Topology (Leonardo Macarini)
- Geometry
 - Differential Geometry (João Pimentel Nunes)

- Mathematical Physics
 - Feynman Integral and Applications (José Mourão)
 - Conformal Field Theory (Ricardo Schiappa)
- Real Analysis and Functional Analysis
 - Algebras of Operators (Amélia Bastos)
 - Topics in Operator Theory: Riemann-Hilbert problems (Cristina Câmara)
- Numerical Analysis and Applied Analysis
 - Mathematical and Numerical Methods in Fluid Dynamics (Ana Leonor Silvestre)
 - Numerical Methods for Ordinary Differential Equations (Pedro Lima)
- Logic and Computation
 - Functional Logic and Proof Theory (Carlos Caleiro)
 - Computability and Complexity of Learning (José Félix Costa)
 - Modal Logic (João Rasga)
 - Theory of Computability, Complexity and Information (Cristina Sernadas)
 - Advanced Topics in Information Security I (Paulo Mateus)
- Probability and Statistics
 - Advanced Topics in Statistical Inference (Paulo Soares)
 - Advanced Topics in Multivariate Analysis (Rosário Oliveira)

2nd semester

FCUL

- Mathematical Physics
 - Probability in Quantum Mechanics (Jean-Claude Zambrini)
- Mathematical Analysis
 - Ordinary and Functional Differential Equations (Teresa Faria & Carlota Gonçalves)
 - Evolution Problems (José Francisco Rodrigues)
 - Biomathematics (M/D) (Carlota Gonçalves & Alessandro Margheri)
 - Ergodic Theory (M/D) (Pedro Duarte)
- Algebra
 - Rings, Algebras and Representations (M/D) (Carlos André)
- Geometry and Topology
 - Riemann Surfaces and Integrable Models (Davide Masoero)
 - Riemannian Geometry (M/D) (Susana Santos)
 - Algebraic Topology (M/D) (Orlando Neto)

IST

- Differential Equations and Dynamical Systems
 - Calculus of Variations and Partial Differential Equations (José Matias)
 - Discrete Dynamical Systems (João Alves)
 - Ergodic Theory and Hyperbolic Dynamics (Luís Barreira)
 - Harmonic Analysis (Jorge Drumond)
- Geometry
 - Symplectic Geometry (Leonardo Macarini)
 - Advanced Topics in Geometry (José Natário)

- Mathematical Physics
 - Mathematical Relativity (Filipe Mena)
 - String Theory (Gabriel Lopes Cardoso)
- Numerical Analysis and Applied Analysis
 - Inverse Problems for Differential Equations and Medical Imaging (Carlos Alves)
 - Mathematical Methods in Engineering Problems (Carlos Alves)
- Probability and Statistics
 - Advanced Topics in Probabilities and Stochastic Processes (Patrícia Gonçalves)