

# PhD courses 2023/2024, FCUL & IST

## 1st semester

### FCUL

- Mathematical Analysis
  - Applied Functional Analysis (D) (James Kennedy)
- Geometry and Topology
  - Lie Groups and Lie Algebras (D) (Orlando Neto)
- Logic and Computation
  - Computational Complexity (D) (Bruno Loff)

### IST

- Differential Equations and Dynamical Systems
  - Topics in Differential Equations and Dynamical Systems (D) (Simão Correia)
- Geometry
  - Differential Geometry (D) (João Pimentel Nunes)
- Mathematical Physics
  - Conformal Field Theory (D) (Ricardo Schiappa)
- Numerical Analysis and Applied Analysis
  - Numerical Methods for Ordinary Differential Equations (Pedro Lima)
- Probability and Statistics
  - Advanced Topics in Statistical Inference (D) (Manuel Scotto)
  - Advanced Topics in Multivariate Analysis (D) (Rosário Oliveira)
  - Advanced Topics in Probabilities and Stochastic Processes (D) (António Pacheco)

## 2nd semester

### FCUL

- Mathematical Analysis
  - Optimal Transport (D) (Léonard Monsaingeon)
  - Biomathematics (D) (Carlota Rebelo)
  - Operator Semigroups and Evolution Equations (D) (James Kennedy)
  - Partial Differential Equations (D) (José Francisco Rodrigues)
- Algebra
  - Rings, Algebras and Representations (D) (Carlos André)
- Geometry and Topology
  - Advanced Topics in Geometry (D) (Carlos Florentino & Giordano Cotti)

### IST

- Differential Equations and Dynamical Systems
  - Calculus of Variations and Partial Differential Equations (D) (José Matias)
  - Harmonic Analysis (D) (Diogo Silva)
  - Bifurcation Theory in Differential Equations (D) (João Teixeira Pinto)
- Geometry
  - Knot Theory (D) (Pedro Lopes)
  - Advanced Topics in Geometry (D) (Gonçalo Oliveira)
- Mathematical Physics
  - Mathematical Relativity (D) (Pedro Girão)
  - Feynman Integral and Applications (D) (Gonçalo Oliveira)

- Real Analysis and Functional Analysis
  - Topics in Operator Theory: Riemann-Hilbert Problems (D) (Cristina Câmara)
  - Topics in Operator Algebras: Normed Jordan Algebras (D) (Lina Oliveira)
- Numerical Analysis and Applied Analysis
  - Stochastic Differential Equations (D) (Ana Bela Cruzeiro)