



波尔多大学数学与计算机科学博士学院

Research themes 研究方向

Mathematics - IMB

<http://www.math.u-bordeaux1.fr/maths/>

Number theory and algorithmics

Algebraic number theory - Analytic number theory, diophantine equations and diophantine approximation - Computational number theory - Arithmetic and algebraic geometry - Lattices, codes and cryptography.

Analysis and Geometry

Complex analysis - Operator theory, harmonic analysis - Functional analysis and spectral theory - Modélisation, signal - Differential geometry - Analytic and algebraic geometry - Dynamical systems, geometric function theory.

Applied Mathematics

Compressible fluid mechanics, kinetic methods and hyperbolic problems - Operational research - Modelling, computations, control and stability - Modelling, mathematical analysis and numerical simulations for population dynamics - Stochastic processes and statistics - General relativity, spectral analysis and scattering.

数论与算法

代数数论；解析数论；丢番图方程和丢番图逼近；计算数论；算数代数几何；格，密码与编码。

分析和几何

复分析；算子理论；调和分析；泛函分析和谱理论；模型化与信号；微分几何；分析与代数几何；动力系统和几何函数论。

应用数学

压缩流体力学；运动力学方法和双曲线问题；算子研究；模拟，计算，控制和稳定性；建模，数学分析和人口动态数据模拟；随即过程和统计；广义相对论，谱分析和散射。

Computer Science - LaBRI

<http://www.labri.fr>

Combinatorics and Algorithmics

Enumerative and algebraic combinatorics - Graphs and applications - Distributed Algorithms.

Formal Methods

Modelling and verification - Logics, graphs and languages - Computational linguistics.

Image and Sound

Image Structuring and Analysis - 3D modelling, visualization and interaction - Sound and music modelling - Video Analysis and Indexing.

Algorithms and Runtime Systems for High Performance Computing

Algorithms and methods for grand challenge applications - High performance runtime systems for parallel architectures.

Languages, Systems and Networks

QoS and security of the next generation networks (NN) - Modelling and testing of complex systems - Distributed systems and objects - Technologies of languages for communication services.

Models and Algorithms for Bio-informatics and Information Visualization

Algorithms dedicated to the analysis of biological structures - Comparative genomics, modelling, analysis of biological Data - Visualization of massive datasets.

组合数学与算法

枚举和代数组合；图像与应用；分布算法。

形式化方法

建模与验证；逻辑，图形与语言；计算语言学。

图像与声音

图像结构与分析；3D建模，可视化和互动；声音和音乐模拟；视频分析和索引。

高性能计算的算法和运行时系统

高挑战性运用的算法和方法；并行体系结构的高性能运行时系统。

语言，系统与网络

QoS 和下代网络安全性；复杂系统的建模与测试；分布系统和对象；通讯服务的语言技术。

模型和有关生物信息与信息可视化的算法

分析生物结构的算法；染色体对比，模拟与生物数据分析；大量数据的可视化。