

Department of Biosciences and Territory

- **Profile:**
one researcher, as specified in article 24.3 a) of law 240/2010 for the Scientific and Disciplinary sector MAT / 09 - Contest Sector 01 / A6 - OPERATIONS RESEARCH in the AREA - 01 - MATHEMATICS AND COMPUTER SCIENCE;
- **Responsibilities related to teaching, student service and research:**
- The teaching activities will relate to Operations Research topics and to foundational Mathematics topics taught in the different scientific programs at the University.
Research will be focused not only on Operations Research topics, which are detailed in the next point, but also on other topics required to collaborate with researchers at the University working in the area 01 (MAT/08 e INF/01);
- **Objectives related to scientific works (publications, conferences, et al.) and quality of results:**
The research activities and deliverables, including publications in journals, patents and participation in national and international conferences, will focus on the following areas:
 - Combinatorial Optimization;
 - Network Optimization;
 - Design and implementation of Branch and Cut/ Branch and Bound algorithms for difficult optimization problems;
 - Design and implementation of meta-heuristics for efficiently solving large instances of difficult problems;
 - Design and implementation of user-friendly software for the implementation of optimization algorithms;
 - Design of advanced mathematical models and implementation through the use of the most popular solvers (Cplex, Gurobi);
- **Job Location:** Pesche (IS) and Campobasso;
- **Maximum number of publications to be included in the application:** twelve;
- **Foreign Language Proficiency Requirement:** English;
- **Means by which researcher's productivity and results will be evaluated, periodically and at the end of the contract:**
Annual reviews.