Teaching and Research in Artificial Intelligence
Department of Informatics and Telecommunications
University of Athens

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Presenter: Manolis Koubarakis
Outline

• Faculty
• Teaching
• Current research highlights
• European projects
• Possible collaborations with INRIA
Faculty (Computer Systems Division)

- **Izambo Karali** (Assistant Professor)
  - knowledge representation, semantic web, logic programming

- **Manolis Koubarakis** (Professor)
  - knowledge representation, semantic web, linked data, constraint satisfaction, databases, distributed systems, information retrieval, requirements modeling

- **Takis Stamatopoulos** (Assistant Professor)
  - search, constraint satisfaction, operations research, logic programming, knowledge representation, natural language processing, machine learning

- Other faculty members also study/use AI techniques in their area (Hadjiefthymiades, Gunopulos, Manolakos, Achlioptas, Koutsoupias, Theodoridis)
• **Artificial Intelligence** (1\textsuperscript{st} semester, 3\textsuperscript{rd} year)
  – Topics: introduction, rational agents, search, constraint satisfaction, knowledge representation

• **Artificial Intelligence II** (2nd semester, 3\textsuperscript{rd} year)
  – Topics: planning, advanced knowledge representation, ontologies, uncertainty, probabilistic reasoning, applications

• **Logic programming** (2nd semester, 3\textsuperscript{rd} year)
  – Topics: Prolog, logic programming, constraint logic programming.
• **Advanced Artificial Intelligence**
  - Topics: planning, machine learning, natural language processing, constraint satisfaction

• **Knowledge Technologies**
  - Topics: semantic web and linked data, RDF, SPARQL, description logics, OWL 2, rules, ontology engineering, applications.
Current Research Highlights

• **Semantic web and linked data**
  – Scalable management of linked data in P2P and cloud-based systems
  – Development of P2P system Atlas (http://atlas.di.uoa.gr/)
  – Applications: distributed digital libraries, web service registries
  – 2 recent Ph.D. theses
    • Zoi Kaoudi (currently at INRIA/LRI Leo team)
    • Iris Miliaraki (currently at MPI Saarbrucken)
Current Research (cont’d)

• Linked geospatial data
  – stRDF/stSPARQL: extensions of RDF and SPARQL with geospatial data that change over time
  – Development of system Strabon (http://www.strabon.di.uoa.gr/)
  – Applications: open government data, satellite image annotation, sensor web registries etc.
  – 2 Ph.D. theses (expected) and 4 M.Sc. theses (some completed)
• Constraint satisfaction
  – Temporal and spatial constraints
  – Constraint logic programming
  – Constraint satisfaction for operations research problems
  – Development of the Naxos constraint solver (http://cgi.di.uoa.gr/~pothitos/naxos/)
  – 1 Ph.D. thesis (expected)