Hello

• Prof. Dr. Heiko Paulheim
• Assistant Professor
• Research Interests:
  – Semantic Web and Linked Open Data
  – Data Mining with Linked Open Data
  – Ontology Matching
  – Data Quality and Data Cleaning
  – Outlier Detection
• Room: B6 – C1.09
• Consultation: by appointment
• Heiko will teach the lectures
Hello

• André Melo
• Researcher
• Research Interests:
  – Semantic Web Mining
  – Hierarchical Classification
  – Frequent Itemset Mining
• Room: B6 – C1.06
• Consultation: by appointment
• André will teach the exercises
Hello

- Dr. Anna Lisa Gentile
- Postdoctoral Research Scientist
- Research Interests:
  - Information Extraction
  - Semantic Web
  - Linked Data
- Room: B6 – C1.08
- Consultation: by appointment
- Anna Lisa will co-teach the exercises
Introduction and Course Outline

• Administration
• Introduction
  – Vision of the Semantic Web
  – Building blocks of the Semantic Web
  – Technical foundations
Course Organization

• Lecture
  – Semantic Web standards and languages
  – Programming for the semantic web
  – Creating semantic web data

• Exercise
  – Understand semantic web principles, play with real data

• Project Work
  – teams of three students build a Semantic Web application
  – teams may choose their own data sets and tasks
    (in addition, we will propose some pointers for ideas)
  – write summary about project, present project results

• Final exam
  – 50 % written exam
  – 50 % project work
Waiting List

• Please register via ILIAS
  – if you've not yet done so
• This year, there is a waiting list
• Maximum participants: 30
• We apply a three-strikes-out rule
  – People not showing up in the first three lectures are assumed not to take part
  – We will reassign places after three weeks
• If you know you will not be attending (or just attending to listen)
  – please let us know
Course Contents and Schedule

• Today: Introduction
• 13.09.16: Knowledge Representation with RDF
• 20.09.16: Simple ontologies with RDF Schema
• 27.09.16: Linked Open Data, Programming the Semantic Web
• 04.10.16: Querying the Semantic Web with SPARQL
• 11.10.16: Complex ontologies with OWL
• 18.10.16: Work on Project Proposals
• 25.10.16: Reasoning with complex ontologies
• 01.11.16: Ontology engineering, top level ontologies
• 08.11.16 – 29.11.16: Project work, no lectures, no exercises
• 06.12.16: Final project presentation
Deadlines

• Submission of project work proposal
  – Friday, October 21\textsuperscript{st}, 23:59

• Submission of final project work report
  – Friday, December 2\textsuperscript{nd}, 23:59
Course Organization

- Lecture Webpage: Slides, Announcements, Web Links
  - hint: look at version tags!

- Additional Material
  - ILIAS eLearning System, https://ilias.uni-mannheim.de/

- Time and Location
  - Lecture: Tuesday, 13.45 - 15.15, Room B6 A1.01
  - Exercise: Friday, 12.00 - 13.30, Room B6 A2.04 (starting next week!)
Further Reading and Software

• Follow the links on the website
  – Most material is available online

• Programming environment
  – Eclipse (Java)
  – JENA framework (introduction will be given in the lecture)

• Ontology engineering environment
  – Protégé
  – http://protege.stanford.edu/
Warning

• This lecture contains
  – cartoons
  – interactive teaching elements
  – Java code
  – some weird philosophy

• ...have fun! :-)

09/05/16  Heiko Paulheim
Questions?