**Title: Distributed Rule-Based Ontology Reasoning**

Speaker: Dr.

Raghava Mutharaju

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**Abstract:** The vision of the Semantic Web is to provide structure and meaning to the data on the Web. Knowledge representation and reasoning plays a crucial role in accomplishing this vision. OWL (Web Ontology Language), a W3C standard, is used for representing knowledge. Reasoning over the ontologies is used to derive logical consequences. All the existing reasoners run on a single machine, possibly using multiple cores. The amount of available data is increasing at a rapid rate and single machine reasoners will not be able to keep up with this growth rate. They are constrained by the memory and computing resources available on a single machine. In this talk, I will describe my work on distributed ontology reasoning on a tractable profile of OWL with a polynomial reasoning time, called OWL 2 EL. I will also discuss my future research plan and the courses that I would be interested in teaching.

**Bio:** Raghava Mutharaju is a Research Scientist in the AI & Machine Learning Systems division of GE Global Research in Niskayuna, NY, USA. He received his Ph.D from Wright State University, Dayton, OH, USA working under the supervision of Prof. Pascal Hitzler. At GE Global Research, his work involves building knowledge graphs from unstructured and semi-structured data, along with using them for predictive analytics. His research interests are in ontology modeling and reasoning, scalable SPARQL query processing, Semantic Web, and Big Data. He has published at venues such as ISWC, ESWC, ECAI, and WISE. He co-organized workshops at WebSci 2017, ISWC 2015 and tutorials at IJCAI 2016, AAAI 2015 and ISWC 2014. More information is available on his homepage at <http://raghavam.github.io/>