Dipartimento di
Informatica, Sistemistica
e Comunicazione

ReGAInS

SEMINAR ANNOUNCEMENT

Tuesday November 17th, 2026
at 04:00 pm
Room "Sala Seminari" - Abacus Building (U14)
Speaker Oshani Seneviratne

Knowledge Graphs That Grow: Scalable Entity Integration and Bottom-Up Knowledge Construction

Abstract
How can knowledge graphs continuously evolve as new entities, relationships, and concepts emerge, without expensive retraining or manual curation? In this talk, I will present two complementary approaches from the BRAINS group: **SNAP-KG**, which enables scalable integration of previously unseen entities through multi-view relational clustering and inductive projection, reducing the search space for entity resolution and link prediction; and **GrOIL**, which uses graph-grounded, LLM-assisted bottom-up ontology induction to construct expressive, auditable ontologies from unstructured documents. Together, these approaches explore how knowledge graphs can evolve at both the instance and schema levels through scalable, adaptive, and semantically grounded knowledge integration.

Short bio
Oshani Seneviratne is an Assistant Professor of Computer Science at Rensselaer Polytechnic Institute, where she leads the BRAINS (Bridging Resilient, Accountable, Intelligent Networked Systems) group. Her research brings together knowledge graphs, Semantic Web technologies, and decentralized AI to advance accountable intelligent systems, with applications in healthcare and finance. She earned her Ph.D. in Computer Science at MIT under the supervision of Sir Tim Berners-Lee. More information about her is available here: https://oshani.info.

For more information about the BRAINS research group, please visit https://brains.cs.rpi.edu.

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