Biography

Yuan-Fang Li is a Senior Lecturer in the Department of Data Science & Artificial Intelligence (DS+AI), Faculty of Information Technology, Monash University. Yuan-Fang's research interests include knowledge graphs, ontology reasoning & knowledge representation, natural language processing, representation learning (embedding) of networks/graphs. Some of the research problems he works on include:

Structural & temporal learning for hospital readmission risk prediction.
Question generation from text & knowledge graphs.
Complex question answering over knowledge graphs.
Learning to improve ontology reasoning efficiency.
Intuitive & scalable visualisation of non-hierarchy associations in large ontologies.

Related Links:
More information can be found at Yuan Fang's personal homepage.

Qualifications

Research output

Understanding and improving ontology reasoning efficiency through learning and ranking

OntoPlot: a novel visualisation for non-hierarchical associations in large ontologies

Gaussian embedding of large-scale attributed graphs

A survey on the use of access permission-based specifications for program verification

Vector and line quantization for billion-scale similarity search on GPUs

Difficulty-controllable multi-hop question generation from knowledge graphs

Footprints of fitness functions in Search-Based Software Testing
One network for multi-domains: domain adaptive hashing with intersectant generative adversarial networks

RobustiQ: a robust ANN search method for billion-scale similarity search on GPUs

Simulating exploration versus exploitation in agent foraging under different environment uncertainties

Sip4J: statically inferring access permission contracts for parallelising sequential Java programs

Predicting reasoner performance on ABox intensive OWL 2 EL ontologies

Automating reading comprehension by generating question and answer pairs

Using knowledge graphs to explain entity co-occurrence in Twitter

BioVis Explorer: A visual guide for biological data visualization techniques

Extracting permission-based specifications from a sequential Java program

An information-theoretic predictive model for the accuracy of AI agents adapted from psychometrics

Analyzing the evolution of ontology versioning using metrics
Explicit query interpretation and diversification for context-driven concept search across ontologies

Factors of collective intelligence: How smart are agent collectives?

How can reasoner performance of ABox intensive ontologies be predicted?

Predicting energy consumption of ontology reasoning over mobile devices

The ubiquitous semantic web: Promises, progress and challenges

The ubiquitous semantic web: Promises, progress and challenges

BOWL: augmenting the Semantic Web with beliefs

Capturing researcher expertise through MeSH classification

Context-driven concept search across web ontologies using keyword queries

Event and strategy analytics
FFD-index: An efficient indexing scheme for star subgraph matching on large RDF graphs

Grass: An efficient method for RDF subgraph matching

Observation, communication and intelligence in agent-based systems

R2O2: An efficient ranking-based reasoner for OWL ontologies

A meta-reasoner to rule them all: Automated selection of OWL reasoners based on efficiency

Event analytics

How long will it take? Accurate prediction of ontology reasoning performance

The mobile semantic web

The ubiquitous semantic web: Promises, progress and challenges

Towards a consistent feature model using OWL

Two decades of Web application testing: A survey of recent advances

An ontology-centric architecture for extensible scientific data management systems

Enriching concept search across semantic web ontologies
Visualization of large ontologies with landmarks

A rigorous characterization of classification performance: A tale of four reasoners

Knowledge enrichment analysis for human tissue-specific genes uncover new biological insights

Predicting reasoning performance using ontology metrics

Integrating software engineering data using semantic web technologies

Using semantic web technologies to build a community-driven knowledge curation platform for the skeletal dysplasia domain

Scale-out RDF molecule store for efficient, scalable data integration and querying

Discovering anomalies in semantic web rules

Measuring design complexity of semantic web ontologies

PODD - Towards an extensible, domain-agnostic scientific data management system

PODD: An ontology-driven data repository for collaborative phenomics research

Proceedings of the ACM International Conference on Digital Libraries: Message from the program chairs
Towards a semantic & domain-agnostic scientific data management system

Verifying semistructured data normalization using SWRL

An integrated formal approach to semantic work environments design

Correctness criteria for normalization of semistructured data

Enhancing semantic web services with inheritance

Scalable semantics - The silver lining of cloud computing

Extended abstract: Towards verifying semistructured data

Belief-augmented OWL (BOWL) - Engineering the semantic web with beliefs

Verifying feature models using OWL

A Z approach in validating ORA-SS data models

Reasoning about ORA-SS data models using the semantic web

Research into verifying semistructured data
Semantic web languages - Towards an institutional perspective

Validating semistructured data using OWL

Institution morphisms for relating OWL and Z

TCOZ approach to OWL-s process model design

A tools environment for developing and reasoning about ontologies

Formal semantics and verification for feature modeling

Soundness proof of Z semantics of OWL using institutions

Verify feature models using Protege-OWL

Verifying OWL and ORL ontologies in PVS

Visualizing and simulating semantic web services ontologies

TCOZ approach to semantic web services design

A combined approach to checking web ontologies

Verifying DAML+OIL and beyond in Z/EVES
Prizes

Best Student Paper Award
Yuan-Fang Li (Recipient), Jan 2020

Kurzweil Best Paper Prize
Yuan-Fang Li (Recipient), 2017

President's Graduate Fellowship Scholarship
Yuan-Fang Li (Recipient), 2005

Singapore Millennium Foundation Scholarship
Yuan-Fang Li (Recipient), 2004