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

Computer Science, Doctor of Philosophy, National University of Singapore
Award Date: 18 Dec 2006

Computer Science, Bachelor of Computing (Honours), National University of Singapore
Award Date: 7 Aug 2002

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

Robust Attribute and Structure preserving graph Embedding

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
Hartig, O., Maleshko, M., Svátek, V., Cruz, I., Hogan, A., Song, J., Lefrançois, M. & Gandon, F. (eds.). Cham

Footprints of fitness functions in Search-Based Software Testing
Oliveira, C., Li, Y. F., Aleti, A. & Abdelrazek, M., 2019, Proceedings of the 2019 Genetic and Evolutionary Computation
9 p.

One network for multi-domains: domain adaptive hashing with intersectant generative adversarial networks
He, T., Li, Y. F., Gao, L., Zhang, D. & Song, J., 2019, Proceedings of the Twenty-Eighth International Joint Conference on
Artificial Intelligence. Kraus, S. (ed.). Marina del Rey CA USA: Association for the Advancement of Artificial Intelligence

ParaQG: a system for generating questions and answers from paragraphs
Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing:

Putting the horse before the cart: a generator-evaluator framework for question generation from text
Kumar, V. S., Ramakrishnan, G. & Li, Y-F., 2019, CoNLL 2019, The 23rd Conference on Computational Natural Language

RobustiQ: a robust ANN search method for billion-scale similarity search on GPUs
Chen, W., Chen, J., Zou, F., Li, Y-F., Lu, P. & Zhao, W., 2019, Proceedings of the 2019 on International Conference on

Simulating exploration versus exploitation in agent foraging under different environment uncertainties

Sip4J: statically inferring access permission contracts for parallelising sequential Java programs
Electrical and Electronics Engineers, p. 1098-1101 4 p. 8952453

Structured two–stream attention network for video question answering
conference on Artificial Intelligence. Van Hentenryck, P. & Zhou, Z-H. (eds.). Palo Alto CA USA: Association for the
Intelligence; vol. 33, no. 1).

Predicting reasoner performance on ABox intensive OWL 2 EL ontologies
Pan, J. Z., Bobed, C., Guclu, I., Bobillo, F., Kollingbaum, M., Mena, E. & Li, Y. F., 1 Jan 2018, In : International Journal on

Automating reading comprehension by generating question and answer pairs
Kumar, V., Boorla, K., Meena, Y., Ramakrishnan, G. & Li, Y. F., 2018, Advances in Knowledge Discovery and Data Mining :
22nd Pacific-Asia Conference, PAKDD 2018 Melbourne, VIC, Australia, June 3–6, 2018 Proceedings, Part III. Phung, D.,
Notes in Computer Science ; vol. 10839 ).
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

ICECCS 2015 preface

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

XML-based static type checking and dynamic visualization for TCOZ

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

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

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

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