Jiaul Hoque Paik

Assistant Professor, IIT Kharagpur : Since 2016
Postdoctoral Research Associate, University of Maryland, College Park, USA : 2013 – 2016
PhD in Computer Science, ISI Kolkata : 2013

Awards

1. Research Excellence in Academia, Google USA, 2013
2. Best Research paper award, ACM SIGIR Theories in Information Retrieval, Delaware, USA, 2016

Research Interests

Machine Learning, AI, NLP, Search Engines, Big Data

Passion as an Academic

1) Building Mathematical and Computational models on data that are simple, stands on comprehensible theoretical foundation and withstand the test of rigorous experimental evaluation.
2) Writing non-trivial and efficient computer programs for large data.
3) Teaching a complex subject matter as intuitively as possible.

Selected Publications

1. **Jiaul Paik**, Yash Agrawal, Sahil Rishi, Vaishal Shah; Truncated Models for Probabilistic Retrieval, ***ACM Transactions on Information Systems***, To appear.

2. Sudeshna Das, **Jiaul Paik**; Context-sensitive gender inference of named entities in text, ***Information Processing and Management, Elsevier***, 2021

3. Nasreen, S., Roy, A. K., Joshi, P., Singh, N., Guha, R., **Jiaul Paik**. Assessment of Complexity Level in Decision Making: An Eye-Tracking Study. ***IEEE EMBC***, 2019

4. **Jiaul Paik**; Parameterized Decay Model for Information Retrieval; ***ACM Transactions on Intelligent Systems and Technology***, 2016.

5. **Jiaul Paik**, Jimmy Lin; Retrievability in API-Based "Evaluation as a Service"; ***ACM Conf. on Theories of Information Retrieval, Delaware, USA,*** 2016.

6. **Jiaul Paik**; A Probabilistic Model for Information Retrieval Based on Maximum Value Distribution; ***ACM SIGIR***, 2015.

7. Ronan Cummins, **Jiaul Paik**, Yuanhua Lv; A Pólya Urn Document Language Model for Improved Information Retrieval*;* ***ACM Transactions on Information Systems***, 2015.

8. **Jiaul Paik**, Doug Oard; A Fixed-Point Method for Weighting Terms in Verbose Informational Queries*;* ***ACM CIKM***, 2014.

9. **Jiaul Paik**, Dipasree Pal, Swapan Parui; Incremental blind feedback: An effective approach to automatic query expansion; ***ACM Transactions on Asian Language Information Processing***, 2014.

10. **Jiaul Paik**, Swapan Parui, Dipasree Pal, Stephen Robertson; Effective and Robust Query-Based Stemming; ***ACM Transactions on Information Systems***, 2013.

11. **Jiaul Paik**, A novel TF-IDF weighting scheme for effective ranking; ***ACM SIGIR***, 2013.

12. **Jiaul Paik**, Mandar Mitra, Swapan Parui, Kalervo Jarvelin; GRAS: An effective and efficient stemming algorithm for information retrieval; ***ACM Transactions on Information Systems***, 2011.

13. **Jiaul Paik**, Dipasree Pal, Swapan Parui; A novel corpus-based stemming algorithm using co-occurrence statistics; ***ACM SIGIR***, 2011.

14. **Jiaul Paik,** Swapan Parui; A Fast Corpus Based Stemmer; ACM Transactions on Asian Language Information Processing, 2011.

Teaching

1. Information Retrieval Systems, University of Maryland (**Sole course instructor**).
2. Machine Learning Foundations and Applications, IIT Kharagpur
3. Big Data Processing, IIT Kharagpur
4. Large Scale Search Engines, IIT Kharagpur
5. Educational Data Analytics, IIT Kharagpur
6. Knowledge Modelling and Sematic Technologies, IIT Kharagpur

Projects

1. Behavior Modeling in Multi-Sensor Environments-Integrating Environment Sensing, Human and Social Sensing for Rich Insights - Smart Classroom: Tata Consultancy Services Limited **(PI) (47 lacs)**

2. Integrated Information System and Knowledge Discovery Platform for ONGC : ONGC **(PI) (3.5 crore)**

3. Efficient Selective Search Architecture for Large Data (ISIRD) : IIT Kragapur **(PI) (27 lacs)**

4. Direct-To-Home (DTH) SWAYAM Prabha: Channel 13 (Computer Science & Engg.) : MHRD, Department of Higher Education, NMEICT, New Delhi **(PI, 2017-2021) (1.1 crores)**

5. Structural Utility of Migrant Labor Network: Analyzing COVID Disrupted Labor Market Network in the Informal Sector : CISCO University Research Program Fund **(Co-PI) (60 lacs)**

6. AWS:NAIRP : Creating a Collateral for Supporting Popular ML Applications on AWS Infrastructure through National AI Resource Platform Amazon Web Services, Inc : **(Co-PI) (95 lacs)**

7. Development of a Suite of Indigenous Assistive Systems and Tools for the Disabled Community in India, Dept of Energy and MHRD **(Co-PI) (1.4 crores)**

8. Enhancing User Experience in Digital Library with Metadata Knowledge Graph, IBM India **(Co-PI) (27 lacs)**

9. Automated Evaluation and Feedback Generation for Personalized Learning, MHRD **(Co-PI) (70 lacs)**

10. Setting-up of Teaching Learning Centre for Pedagogy Design & Research : MHRD **(Co-PI) (5.8 crores)**

Notable Collaborators

I had the privilege and good fortune to work with the following two pioneers and Gerard Salton award winner (the highest international award in search engine) in search engine research.

- Stephen Robertson, Microsoft Research Cambridge (now retired)
- Kalervo Jarvelin, University of Tampere, Finland

Program Committee Member

ACM SIGIR, ACM CIKM, World Wide Web Conf., AAAI