

CURRICULUM VITAE
MD ZIA ULLAH, PhD, FHEA

Lecturer in Computer Science
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RESEARCH INTERESTS

I am interested in theoretical and practical information retrieval (IR) and natural language processing (NLP) problems, as well as in applied machine learning (ML) or deep learning (DL) for large-scale predictive problems. My research areas are Information retrieval, Natural language processing, Graph mining, Applied machine learning, and Deep learning. My research has focused on adaptive information retrieval, query performance prediction, query understanding and diversification, check-worthiness prediction for fact-checking, Information extraction, Graph mining, and Social media analysis.

TEACHING INTERESTS

I am eager to teach the following graduate- and undergraduate-level courses in Computer Science, Artificial intelligence, and Data science programmes:

- **Graduate-level courses:** Information retrieval (IR), Natural language processing (NLP), Conversational AI, Data analytics, Network analysis, Machine learning, and Deep learning.
- **Undergraduate-level courses:** Algorithms, Data structures, Object-oriented programming (Java), Python programming, C/C++ programming, Graph theory, Machine learning, Data analytics, Deep learning, and Data management and processing.

WORK EXPERIENCES

- **2022/11 – Present, Lecturer in Computer Science**
School of Computing, Engineering & the Built Environment
[Edinburgh Napier University](#), Edinburgh, UK
Responsibility:
 - **Research:** Information retrieval, NLP, Deep learning
 - **Teaching:** Data structures and algorithms, Deep learning, Conversational AI, Data Wrangling
 - **Programme leadership:** MSc Artificial Intelligence and Data Science
- **2022/06 – 2022/10, Postdoctoral Researcher**
[IRIT UMR5505](#), Universite Toulouse II Jean Jaures (UT2), Toulouse, France.
Supervisor: [Professor Josiane Mothe](#)
Responsibility:
 - **Research:** Adaptive Information retrieval, Query performance prediction
 - **Teaching:** Data analytics and Information retrieval
- **2019/09 – 2021/12, Postdoctoral Researcher**
[IRIT UMR5505](#), CNRS, Toulouse, France.
Supervisor: [Professor Josiane Mothe](#)
Responsibility:
 - **Research:** Information retrieval, Machine learning
 - **Project:** EU Horizon 2020 (Keyphrase scoring, Knowledge-base integration, Deliverable writing)
 - **Teaching:** Data analytics and Information retrieval

- **2017/04 – 2019/08, Postdoctoral Researcher**
IRIT UMR5505, Universite Toulouse 3 Paul Sabatier (UT3), Toulouse, France.
Supervisor: **Professor Josiane Mothe**
Responsibility:
- **Research:** Information retrieval, Machine learning, Data analytics
- **Teaching:** Data analytics and Information retrieval

EDUCATION

- **Ph.D. in Computer Science and Engineering, 2013/10 – 2016/12**
Toyohashi University of Technology (TUT), Toyohashi, Aichi, Japan.
Advisor: Professor Masaki Aono
Thesis: "Bipartite Graph-based Ranking Methods for Subtopic Mining and Genetic Disease Prediction"
- **M.Engg. in Computer Science and Engineering, 2011/10 – 2013/09**
Toyohashi University of Technology, Toyohashi, Aichi, Japan.
Advisor: Professor Masaki Aono
- **2005/05 – 2010/03, Bachelor of Science in Computer Science and Engineering, 2005/05 – 2010/03**
University of Chittagong, Chittagong, Bangladesh.

TECHNICAL SKILLS

- **Programming Languages:** Python, JAVA, R, Ruby, C/C++, PHP
- **Search Engine Tools:** Elastic-search, Indri IR, Terrier IR
- **Deep Learning Frameworks:** PyTorch, Tensorflow, Keras

Supervision

- **Katarina Alexandare**, PhD student, ENU, UK, **2023/10 –**
- **Mohammed Abdulhameed**, PhD student, ENU, UK, **2025/07 –**
- **Umme Aymun Siddiqua**, PhD student, ENU, UK, **2025/10 –**
- **Hanh Vo**, PhD student, ENU, UK, **2025/10 –**

RESEARCH GRANTS

- Royal Society of Edinburgh Grant (\$ 20,000) for our project on **False webs: Network to address the misinformation pandemic** from 09/2023 – 08/2025.
- Hori Foundation Research Grant (\$ 5,000) for my project **Search Intent Mining** from 04/2014 – 09/2016.

PUBLICATIONS (Selected)

Patents

- Josiane Mothe and **Md Zia Ullah**, Information Retrieval Device and Method using a Set of Search Configurations Pre-selected using Efficiency and Risk Functions, *European Patent*, 19305984.7, 2019. <https://register.epo.org/application?number=EP19305984>

Book Chapters

- Josiane Mothe, Faneva Ramiandrisoa, **Md Zia Ullah** (2022), Comparison of Machine Learning Models for Early Depression Detection from Users' Posts, ► *Early Detection of Mental Health Disorders by Social Media Monitoring: The First Five Years of the eRisk Project*, Springer International Publishing, 28 pages, pp.111-139, doi: https://doi.org/10.1007/978-3-031-04431-1_5. [Google Scholar citations: 1].

Journal Articles (Peer-Reviewed and Published)

- Abdul Aziz, Md. Akram Hossain, Abu Nowshed Chy, **Md Zia Ullah**, and Masaki Aono (2023), Leveraging contextual representations with BiLSTM-based regressor for lexical complexity prediction, ► *Natural Language Processing Journal*, 16 pages, pp.3:1-3:41, Volume 5, Issue 1, doi: <https://doi.org/10.1016/j.nlp.2023.100039>. [Google Scholar citations: 4]
- Josiane Mothe, **Md Zia Ullah** (2023), Selective Query Processing: A Risk-Sensitive Selection of Search Configurations, ► *ACM Transactions of Information Systems (ACM TOIS)*, 35 pages, pp.3:1-3:41, Volume 42, Issue 1, doi: <https://doi.org/10.1145/3608474>. [Google Scholar citations: 7] IF: 9.1
- Josiane Mothe, **Md Zia Ullah**, Guenter Okon, Thomas Schweer, Alfonso Juršenės, Justina Mandravickaitė (2022), Instruments and Tools to Identify Radical Textual Content, ► *MDPI Information*, 28 pages, pp.1-28, Volume 13, Issue 4, doi: <https://doi.org/10.3390/info13040193>. [Google Scholar citations: 3]
- Romain Deveaud, Josiane Mothe, **Md Zia Ullah**, Jian-Yun Nie (2019), Learning to Adaptively Rank Document Retrieval System Configurations, ► *ACM Transactions of Information Systems (ACM TOIS)*, 41 pages, pp.3:1-3:41, Volume 37, Issue 1, doi: <https://doi.org/10.1145/3231937>. [Google Scholar citations: 34]. IF: 5.6
- Abu Nowshed Chy, **Md Zia Ullah**, and Masaki Aono (2018), Query Expansion for Microblog Retrieval Focusing on an Ensemble of Features, ► *Journal of Information Processing*, 16 pages, pp. 61-76, Volume 27, Issue 4, 2, doi: <https://doi.org/10.2197/ipsjjip.27.61>. [Google Scholar citations: 14]. IF: 0.640
- **Md Zia Ullah** and Masaki Aono (2016), A Bipartite Graph-based Ranking Approach to Query Subtopics Diversification Focused on Word Embedding Features, ► *IEICE Transactions on Information and Systems (IEICE TOIS)*, 11 pages, pp. 3090-3100, Volume E99-D, Issue 12, doi: <https://doi.org/10.1587/transinf.2016EDP7190>. [Google Scholar citations: 2]. IF: 0.92
- **Md Zia Ullah**, Masaki Aono, and Md Hanif Seddiqi (2015), Estimating a Ranked List of Human Genetic Diseases by Associating Phenotype-Gene with Gene-Disease Bipartite Graphs, ► *ACM Transactions on Intelligent System and Technology (ACM TIST)*, 21 pages, pp.56:1-56:21, Volume 6, Issue 4, doi: <https://doi.org/10.1145/2700487>. [Google Scholar citations: 7]. IF: 5.0

International Conference Papers (Peer-Reviewed and Published)

- Md. Akram Hossain, Abdul Aziz, Muhammad Anwarul Azim, Abu Nowshed Chy, **Md Zia Ullah**, and Mohammad Khairul Islam (2025, September), BiGCAT: A Graph-Based Representation Learning Model with LLM Embeddings for Named Entity Recognition, ► *Proceedings of the International Conference on Recent Advances in Natural Language Processing (RANLP)*, Varna, Bulgaria.
- Adrian-Gabriel Chifu, Sébastien Déjean, Moncef Garouani, Josiane Mothe, Diégo Ortiz, and **Md Zia Ullah** (2024, January), Can we predict QPP? An approach based on multivariate outliers, ► *Proceedings of the 46th European Conference on Information Retrieval (ECIR)*, Glasgow, UK. [Google Scholar citations: 2] Rank: A
- Josiane Mothe and **Md Zia Ullah** (2021, November), Defining an Optimal Configuration Set for Selective Search Strategy – A Risk-Sensitive Approach, ► *Proceedings of the 30th ACM International Conference on Information and Knowledge Management (CIKM 2021)*, Virtual Event, QLD, Australia, doi: <https://doi.org/10.1145/3459637.3482422>. [Google Scholar citations: 8] Rank: A
- Sébastien Dejean, Radu Tudor Ionescu, Josiane Mothe, **Md Zia Ullah** (2020, March), Forward and Backward Feature Selection for Query Performance Prediction, ► *Proceedings of the 35th Annual ACM Symposium on Applied Computing (ACM SAC)*, pp. 690-697, Brno, Czech Republic. doi: <https://doi.org/10.1145/3341105.3373904> [Google Scholar citations: 24] Rank: B
- Cédric Lespagnol, Josiane Mothe, **Md Zia Ullah** (2019, July), Information Nutritional Label and Word Embedding to Estimate Information Check-Worthiness, ► *Proceedings of the 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2019)*, pp. 941–944, Paris, France. doi: https://doi.org/10.1007/978-3-030-28577-7_3. [Google Scholar citations: 26] Rank: A*
- Stefano Mizzaro, Josiane Mothe, Kevin Roitero, and **Md Zia Ullah** (2018, July), Query Performance Prediction and Effectiveness Evaluation Without Relevance Judgments: Two Sides of the Same Coin, ► *The 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018)*, pp. 1233-1236, Ann Arbor, MI, USA. doi: <https://doi.org/10.1145/3209978.3210146>. [Google Scholar citations: 20] Rank: A*
- Adrian-Gabriel Chifu, Léa Laporte, Josiane Mothe, and **Md Zia Ullah** (2018, July), Query Performance Prediction Focused on Summarized Letor Features, ► *The 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018)*, pp. 1177-1180, Ann Arbor, MI, USA. doi: <https://doi.org/10.1145/3209978.3210121>. [Google Scholar citations: 28] Rank: A*

- **Md Zia Ullah**, Abu Nowshed Chy, and Masaki Aono (2016, November), Query Subtopic Mining Exploiting Word Embedding for Search Result Diversification, ► *Twelfth Asia Information Retrieval Societies Conference(AIRS 2016)*, pp. 308-314, Beijing, China. doi: https://doi.org/10.1007/978-3-319-48051-0_24. [Google Scholar citations: 10] **Best Presentation Award Rank: C**
- **Md Zia Ullah**, Masaki Aono, and Md Hanif Seddiqi (2013, July), Estimating a Ranked List of Human Hereditary Diseases for Clinical Phenotypes by Using Weighted Bipartite Networks, ► *35th IEEE International Conference on Engineering in Medicine and Biology Society (EMBS)*, pp. 3475-3478, Osaka, Japan. doi: [10.1109/EMBC.2013.6610290](https://doi.org/10.1109/EMBC.2013.6610290). [Google Scholar citations: 13] **Rank: C**
- Ismat Ara Reshma, **Md Zia Ullah**, and Masaki Aono (2014, September), KDEVIR at ImageCLEF 2014 Scalable Concept Image Annotation Task: Ontology-based Automatic Image Annotation, ► *CLEF 2014 Evaluation Labs and Workshop, Online Working Notes (CEUR)*, CLEF 2014, 9 pages, Sheffield, UK. [Google Scholar citations: 7] **Ranked 1st position**

SCHOLARSHIPS

- **Japanese Student Services Organization (JASSO) Scholarship** awarded from April 2016 – December 2016 for demonstrating excellent academic and personal records at University.
- **Amano Institute of Technology Scholarship** awarded from April 2015 – March 2016 for achieving excellent publications as a 2nd year Ph.D. student.
- **Japanese Student Services Organization (JASSO) Scholarship** awarded from April 2014 – March 2015 for demonstrating excellent academic and personal records at University.
- **Japanese Ministry of Education, Culture, Sports, Science, and Technology (MEXT) Scholarship** awarded from October 2011 – September 2013 for achieving outstanding CGPA in undergraduate study.

AWARDS

- **Best Presentation Award** at the 12th Asia Information Retrieval Societies Conference (AIRS 2016).
- **SIGIR Student Travel Grant** for the 12th Asia Information Retrieval Societies Conference (AIRS 2016).
- **Best Paper Award** at International Conference on Advanced Informatics: Concepts, Theory and Applications, ICAICTA 2015, Chomburi, Thailand, August 19-22th, 2015.
- **Best Paper Award** at International Conference on Advanced Informatics: Concepts, Theory and Applications, ICAICTA 2014, Bandung, Indonesia, August 20-21th, 2014.

INTERNATIONAL COLLABORATION

| Co-authors | Affiliation | Country |
|-------------------------|---|------------|
| Prof Josiane Mothe | Université de Toulouse | France |
| Prof Masaki Aono | Toyohashi University of Technology | Japan |
| Prof Jian-Yun Nie | University of Montreal | Canada |
| Dr Debasis Ganguly | University of Glasgow | UK |
| Prof Stefano Mizzaro | University of Udine | Italy |
| Prof Sébastien Dejean | Université Toulouse III – Paul Sabatier | France |
| Prof Radu Tudor Ionescu | University of Bucharest | Romania |
| Dr Adrian-Gabriel Chifu | Aix-Marseille Université | France |
| Dr Abu Nowshed Chy | University of Chittagong | Bangladesh |
| Dr Kevin Roitero | University of Udine | Italy |
| Dr Winner Marina | Edinburgh Napier University | UK |

PROFESSIONAL ACTIVITIES

Editorial Members:

- Information Retrieval Research Journal.

Journal Reviewers:

- ACM Transactions on Information Systems.

- Information Retrieval Research Journal.
- Information Processing and Management.
- Open Computer Science Journal.

Program Committee Members (Conference (Rank) Year):

- **ACM SIGIR (A*)** 2019 – 2025
- **ACM WSDM (A*)** 2021 – 2025
- **ACM KDD (A*)** 2021 – 2025
- **ACM CIKM (A)** 2020 – 2025
- **ECIR (A)** 2019 – 2025
- **CLEF (-)** 2017 – 2023

Organizing Committee Chair:

- Joint Conference of the Information Retrieval Communities in Europe (CIRCLE 2020, 2022), Toulouse, France.

PROFESSIONAL MEMBERSHIPS

- | | |
|---|-----------------------|
| • ACM Special Interest Group on Information Retrieval (SIGIR) | 2018 – Present |
| • ACM Special Interest Group on Applied Computing (SIGAPP) | 2017 – 2018 |
| • IEEE Engineering in Medicine and Biology Society (EMBS) | 2012 – 2014 |

REFEREES

Available on request