

Ingo Frommholz

PhD (Dr. rer. nat.), Diplom-Inform., FBCS, FHEA

Personal Information

Current Position Reader (~Associate Professor) in Data Science at the University of Wolverhampton, UK
Adjunct Professor at the Bern University of Applied Sciences, Switzerland
Nationality German

Summary

- Interested in Deep Learning, AI and NLP for human-centred Information Retrieval
- Founder and head of the Data Science and AI Research group at the University of Wolverhampton. Deputy director Digital Innovations and Service Centre (DISC) at the University of Wolverhampton
- PhD in Computer Science (Dr. rer. nat., summa cum laude), University of Duisburg-Essen, Germany
- PI of the EU Horizon Europe MSCA Staff Exchange project OMINO on Information Overload (2023-2027, UKRI guarantee funding, total 1,550,200.00€, own part 253,000€); PI of the EU H2020 ETN QUARTZ on quantum mechanics and information retrieval (2016-2020, total 3,461,495.04€, own part 546,757.76€); PI of the internally funded RIGHT project on deep learning for digital humanities (since 2023, GBP 612,621). PI of further smaller research and knowledge transfer projects.
- Treasurer and Steering Committee Member, The Chartered Institute for IT (BCS) Information Retrieval Specialist Group (BCS-IRSG)
- Senior managing editor of the International Journal on Digital Libraries (Springer)
- General Chair ACM CIKM 2023
- Chair and (senior) programme committee member of several world-leading conferences and journals in Information Retrieval, AI and Digital Libraries
- Organiser of several international workshops (e.g., BIR, BIRNDL, BIRDS, BCS Search Solutions, FDIA) and schools (ESSIR, ASIRF)
- Course and programme co-ordinator for Computer Science, Data Science and Artificial Intelligence undergraduate and postgraduate programmes; module co-ordinator and lecturer in the UK, Germany, Switzerland, Oman and Jordan of several Computer Science topics at undergraduate and postgraduate level, such as: Information Retrieval, Machine Learning and Artificial Intelligence, Data Mining, Data Science, Cybermetrics and Statistics, Data Engineering, Databases and Data Modelling, Programming and Data Structures, Distributed Computing.
- Supervised 8 PhD students to successful completion; examiner for 11 PhD candidates in the UK, Denmark, Finland, The Netherlands, Italy and Germany.
- BCS Fellow (FBCS), ACM Member (SIGIR), Fellow of the Higher Education Academy (FHEA), Fellow of the Higher Education Academy (FHEA)
- External examiner, University of Strathclyde, Glasgow, UK and University of Sheffield UK.

Research Interests

Deep Learning, AI and NLP for human-centred Information Retrieval

- User-oriented Information Retrieval and Access models;
- Deep Learning, Large Language Models & generative AI, Retrieval-Augmented Generation
- Bibliometric-enhanced Information Retrieval and academic search
- Information Retrieval, NLP and AI application, e.g. in: digital humanities, scientometrics, digital libraries, human-computer interaction, recommender systems, data science and big data, cyberstalking detection

Education

2008 **PhD (Dr. rer. nat.) in Computer Science**, *University of Duisburg-Essen*, Duisburg, Germany
Thesis: *A Probabilistic Framework for Information Modelling and Retrieval Based on User Annotations on Digital Objects*. First examiner: Prof. Dr. Norbert Fuhr, 2nd examiner: Prof. Dr. Maristella Agosti. **German highest grade (summa cum laude)**.

- 2001 **Diplom-Informatiker (MSc Computer Science equivalent)**, *University of Dortmund*, Germany
Thesis: *Automatic categorisation of Web documents*. Examiner: Prof. Dr. Norbert Fuhr.
Main courses during studies: Operating Systems, Computer Networks and Distributed Systems, Databases, Information Retrieval, Business Informatics. **German highest grade (1.0).**
- 2012 **Postgraduate Certificate in Academic Practice (PgCAP)**, *University of Bedfordshire*, Luton, UK
60 credit Masters-level programme designed to both support and enhance the engagement of academic staff with their academic responsibilities.
- 2007 **Certificate in professional teaching competence in higher education**, *University of Duisburg-Essen*, Duisburg, Germany
The 200 hours training programme addressed teaching and learning, testing, advising and counselling, evaluating, and innovatively developing study programmes and teaching strategies.

Professional Experience

- 12/2020–
Present **Reader (Associate Professor equivalent) in Data Science**, *School of Engineering, Computing and Mathematical Sciences, University of Wolverhampton*, UK
- 02/2023–
Present **Adjunct Professor (Lehrbeauftragter)**, *School of Engineering and Computer Science, Bern University of Applied Sciences*, Biel/Bienne, Switzerland
- 02/2011–
11/2020 **Lecturer/Senior Lecturer**, *School of Computer Science and Technology, University of Bedfordshire*, Luton, UK
02/2011-07/2012 Lecturer, appointed Senior Lecturer 08/2012
- 2012–2018 **Search and Data Science Consultant**, *Self Employed*, London, UK
- 11/2008–
01/2011 **Postdoctoral Research Associate**, *Information Retrieval Group, School of Computing Science, University of Glasgow*, Glasgow, Scotland
- 10/2004–
10/2008 **Research Assistant**, *Information Systems Group, Faculty of Engineering Sciences, University of Duisburg-Essen*, Duisburg, Germany
- 3/2006–
4/2006 **Visiting researcher**, *Information Management Systems Research Group, University of Padua*, Italy
- 3/2001–
9/2004 **Research Assistant**, *Fraunhofer Integrated Publication and Information Systems Institute (IPSI)*, Darmstadt, Germany
- 11/1999–
2/2001 **Software Developer**, *adesso GmbH*, Dortmund, Germany
- 5/1998–
10/1999 **Software Developer**, *o.tel.o GmbH*, Düsseldorf, Germany
- 8/1994–
4/1998 **Software Developer**, *Lion Ges. für Systementwicklung mbH*, Bochum, Germany

Research and Industry Grants and Projects

Research Grants

- 2023–2026 **OMINO**, *University of Wolverhampton*, UK
EU Horizon Europe MSCA Staff Exchange project on tackling Information Overload (total worth GBP 1,342,174, own part GBP 218,036). PI.
- 2023–2025 **RIGHT – Responsible Digital Humanities Lab**, *University of Wolverhampton*, UK
Internally funded project for PhD students to work on deep learning for digital humanities (worth GBP 612,621). PI.
- 2023–2025 **LASER**, *University of Wolverhampton*, UK
Internally funded PhD project on large language models in information retrieval (worth GBP 39,000). PI.
- 2016–2020 **QUARTZ**, *University of Bedfordshire*, Luton, UK
EU H2020 Marie Curie ITN European Training Network on quantum-based information access and retrieval (worth GBP 2,996,988, own part GBP 473,387). PI.
- 2012–2013 **Rising Star**, *University of Bedfordshire*, Luton, UK
Internal Research Investment Rising Star Funding on Query Session Processing for Information Seeking and Searching (GBP 6,000). PI

- 2010–2011 **QONTEXT**, *University of Glasgow*, Glasgow, UK
EU Marie Curie FP7-IRSES project on information retrieval and quantum theory. Contributed to the successful research proposal.
- 2004–2006 **CLASSIX**, *University of Duisburg-Essen*, Duisburg, Germany
German Research Foundation (DFG) project on classification and intelligent search on information in XML. PI.

KTP and Industry Grants

- 2016–2019 **Drax Technology Ltd**, *University of Bedfordshire*, Luton, UK
Innovate UK Knowledge Transfer Partnership with Drax Technology on Internet of Things, machine learning and intelligent fire alarms (worth GBP 134,752). Lead academic and PI.
- 2012–2018 **NotActivelyLooking.com**
Private consultancy project on the design and implementation of a search engine for executives (in collaboration with industry partners). PI and main software developer.
- 2016–2017 **Wardown Park Talking Objects**, *University of Bedfordshire*, Luton, UK
Digital Humanities KTP project combining augmented reality and conversational information retrieval (Luton Cultural Services Trust, GBP 18,971). PI.
- 2015 **EduVocation**, *University of Bedfordshire*, Luton, UK
Teacher recruitment site and information system based on linked open data (UK Innovation Voucher, GBP 5,000). PI.
- 2013–2015 **Luton Culture World War I project**, *University of Bedfordshire*, Luton, UK
Digital Museum and Linked Data project on World War I in conjunction with Luton Museum (UK Lottery Fund, GBP 16,000, PI).
- 2006 **KIIB**, *University of Duisburg-Essen*, Duisburg, Germany
EU-EUREGIO project on business processes and email classification, in collaboration with d.velop AG, Gescher, Germany. PI.

Research Projects

- 2016–2017 **EDISON**, *University of Bedfordshire*, Luton, UK
EU H2020 Coordination and Support Action to accelerate the creation of Data Science profession.
- 2008–2011 **RENAISSANCE**, *University of Glasgow*, Glasgow, UK
EPSRC project on retrieval models based on the quantum theory framework.
- 2008 **LACOSTIR**, *University of Duisburg-Essen*, Duisburg, Germany
German Research Foundation project on interactive retrieval.
- 2006–2007 **DELOS**, *University of Duisburg-Essen*, Duisburg, Germany
EU-FP6 Network of Excellence on Digital Libraries.
- 2004 **BRICKS**, *Fraunhofer IPSI*, Darmstadt, Germany
EU-FP6 integrated project on distributed resources for integrated cultural knowledge services.
- 2002–2003 **VIP-ADVISOR**, *Fraunhofer IPSI*, Darmstadt, Germany
EU-FP5 project (IST-2001-32440) on a virtual advisor for personal insurance and finance risk management.
- 2001–2003 **COLLATE**, *Fraunhofer IPSI*, Darmstadt, Germany
EU-FP5 project (IST-1999-20882) on the development of a collaboratory for annotation, indexing and retrieval of digitized historical archive material.
- 2001–2003 **SCHOLNET**, *Fraunhofer IPSI*, Darmstadt, Germany
EU-FP5 project (IST-1999-20664) on a digital library infrastructure for supporting communication and collaboration among networked scholarly communities.

KTP Projects

- 2020–2022 **SOLVD**, *University of Wolverhampton*, Wolverhampton, UK
EU European Regional Development Fund to support SMEs in the adoption of digital technologies.
- 2016 **CRASH**, *University of Bedfordshire*, Luton, UK
Comprehensible system for the classification of cyberstalking and harassment cases, in collaboration with Bedfordshire Police (Cyber Risk Assessment of Stalking and Harassment).

Invited Talks and Tutorials

- 2022 **BCS/ISKO Exploring Information Retrieval Lecture Series**, online
Lecture on information retrieval evaluation.
- 2014–2019 **Information Retrieval and Foraging Autumn School**, Germany
Tutorial on information retrieval models.

2015 **CLEF 2015**, *Toulouse, France*

Invited talk about polyrepresentation in complex (book) search tasks at the 6th International Conference of the CLEF Association, Social Book Search Lab.

2012 **Information Retrieval Autumn School**, *Schloss Dagstuhl, Germany*

Tutorial on quantum probabilities and quantum information access and retrieval.

since 2001 **Invited talks at seminars**

Several invited talks at university and industry seminars, e.g.: University of Glasgow; UCL London; Queen Mary, University of London; University of Nottingham; Signal AI, London; Refinitiv, London; London Text Analytics Meetup; University of Cologne; University of Regensburg; University of Southampton; University of Padua; Modul University Vienna.

Managerial, Leadership and Steering Activities

since 2023 **Head of Data Science and AI Research**, *University of Wolverhampton, UK*

Head and founder of Wolverhampton's Data Science and AI Research group.

since 2023 **Deputy Director of Digital Innovation and Services Centre (DISC)**, *University of Wolverhampton, UK*

since 2011 **Treasurer and Steering Committee Member, The Chartered Institute for IT (BCS) Information Retrieval Specialist Group (BCS-IRSG)**

Elected member of the steering committee and treasurer of the BCS-IRSG.

2008–2018 **Steering Committee Member, German Computing Society Information Retrieval Special Interest Group**

Elected member of the steering committee of the IR Special Interest Group of the German Computing Society (Fachgruppe Information Retrieval der Gesellschaft für Informatik).

2018–2020 **Information and Data Science Subject Cluster Lead**, *University of Bedfordshire, Luton, UK*

Coordinating the Information and Data Science research and teaching activities.

2017–2018 **BCS Accreditation**, *University of Bedfordshire, Luton, UK*

Coordinated the successful BCS accreditation application of undergraduate and postgraduate computer science programmes taught at the University of Bedfordshire.

2016 **VC's Research & Enterprise Sub Group**, *University of Bedfordshire, Luton, UK*

Member of the Vice Chancellor's sub group to shape the university's research and enterprise strategy.

2013–2014 **Data Science Programme Approval**, *University of Bedfordshire, Luton, UK*

Responsible for the design and specification of the successfully approved undergraduate BSc (Hons) Data Science programme at the University of Bedfordshire, including the design and specification of a module on Data Engineering and Retrieval.

2013 – 2015 **Staff Representative**, *University of Bedfordshire, Institute for Research in Applicable Computing (IRAC), Luton, UK*

Elected staff representative in the IRAC steering committee.

2013–2015 **Deputy Head**, *IRAC Centre for Research in Distributed Technologies (CREDIT), University of Bedfordshire, Luton, UK*

Research Related Activities

Evaluator

since 2019 Evaluator for Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)

since 2022 Evaluator for UKRI Engineering and Physical Sciences Research Council (EPSRC)

2024 Evaluator for NGI Search (Next Generation Internet Discovery and Search, EU Horizon Europe RIA Project)

General Chair and Organiser

2022–2023 **CIKM 2023 – ACM International Conference on Information and Knowledge Management**, *October 21–25, 2023, Birmingham, UK*

Main General Chair. Core-A ranked conference with 750 registered delegates, approx. 650 accepted papers from ca. 2500 submissions, and world-leading keynote speakers.

2025 **ESSIR 2025 – European Summer School in Information Retrieval**, *2025, Wolverhampton, UK*

Designated chair.

- 2015–2024 **BIR/BIRNDL – International Workshop on Bibliometric-enhanced Information Retrieval; The Joint Workshop on Bibliometric-enhanced Information Retrieval and Natural Language Processing for Digital Libraries**
Co-organiser of the workshop series held at ECIR, JCDL and SIGIR conferences 2015–2024. Guest editor of corresponding special issues at IJDL and Scientometrics.
- 2016–2024 **BCS Search Solutions, London, UK**
Co-organiser of the annual BCS Search Solutions Conference on Innovations in Search & Information Retrieval.
- 2020–2021 **BIRDS – International Workshop on Bridging the Gap Between Information Science, Information Retrieval and Data Science**
Co-organiser of the interdisciplinary Information Science, Information Retrieval and Data Science workshop at SIGIR 2020 and CHIIR 2021.
- 2017–2023 **FDIA – Future Directions in Information Access**
Co-organiser of the symposium for PhD students in Information Retrieval. 2017 (Barcelona, Spain), 2018 (Tianjin, China), 2019 (Milan, Italy), 2022 (Lisbon, Portugal), 2023 (Vienna, Austria).
- 2019 **TALMIRI – TALent Meets Information Retrieval Industry, Luton, UK**
Organised a 1-day symposium to bring together academia and industry.
- 2014–2019 **Information Retrieval and Foraging Autumn School, Germany**
Co-organiser of annual one week schools on selected information foraging and retrieval topics (2014, 2016–2019 at Schloß Dagstuhl, Germany, 2015 at Castle Katlenburg, Germany)
- 2006 **Heterogeneous Track at the Initiative for the Evaluation of XML Retrieval**
Co-organiser of the INEX 2006 Heterogeneous Track.
- Chair and Senior PC Member, Mentoring**
- 2023 **ACM SIGIR Asian/Pacific (SIGIR-AP 2023), Beijing, China**
Senior PC Member.
- 2023 **European Conference on Information Retrieval (ECIR 2023), Dublin, Ireland**
Senior PC Member.
- 2022 **ACM/IEEE Joint Conference on Digital Libraries (JCDL 2022), Cologne, Germany**
Senior PC Member and Publicity Chair.
- 2019 **European Conference on Information Retrieval (ECIR 2019), Cologne, Germany**
Publicity Chair.
- 2018 **European Conference on Information Retrieval (ECIR 2018), Grenoble, France**
Publicity Chair.
- 2018 **ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR 2018), Tianjin, China**
Publicity Chair.
- 2016 **ACM/IEEE Joint Conference on Digital Libraries (JCDL 2016), Newark, NJ, USA**
Publicity Chair.
- 2016 **International Conference on Theory and Practice of Digital Libraries (TPDL 2016), Hannover, Germany**
Tutorial chair.
- 2015–2018 **IR workshops at Lernen–Wissen–Adaptivität (LWA-WIR)**
- 2009–2012 Programme chair of the IR workshops held by the IR Special Interest Group of the German Computing Society (GI) in 2009 (Darmstadt), 2010 (Kassel), 2011 (Magdeburg), 2012 (Dortmund), 2015 (Trier), 2016 (Potsdam).
- 2015 **European Conference on Information Retrieval (ECIR 2015), Vienna, Austria**
Student mentor.
- 2015 **ACM/IEEE Joint Conference on Digital Libraries (JCDL 2015), Knoxville, Tennessee, USA**
Senior PC member.
- 2014 **DL2014: ACM/IEEE Joint Conference on Digital Libraries (JCDL 2014) / International Conference on Theory and Practice of Digital Libraries (TPDL2014), London, UK**
Senior PC member and chair of the best student paper committee. In 2014 JCDL and TPDL were held together as the International Digital Libraries Conference (DL2014).
- 2013 **International Conference on Theory and Practice of Digital Libraries (TPDL 2013), Valletta, Malta**
Panel chair.
- 2012 **International Conference on Theory and Practice of Digital Libraries (TPDL 2012), Cyprus**
Member of the metareview committee.

2011 **International Symposium on Quantum Interaction (QI 2011)**, *Aberdeen, Scotland*
Proceedings chair.

2010 **European Conference on Research and Advanced Technology for Digital Libraries (ECDL 2010)**,
Glasgow, Scotland
Local chair.

Editorial Board, Managing Editor and Guest Editor

since 2001 **Senior Managing Editor and Editorial Board Member, International Journal on Digital Libraries (IJDL, Springer)**

since 2009 **Editorial Board Member, Datenbank-Spektrum Journal (Springer)**

2024 **Guest Editor IJDL Special Issue on Scholarly AI and Large Language Models**

2011 **Guest Editor IJDL Focussed Issue on ECDL 2010**

2017 **Guest Editor IJDL Focussed Issue on Bibliometrics and Information Retrieval**

2018–2020 **Guest Editor of several Scientometrics Special Issues on Bibliometrics and Information Retrieval**

Programme Committee and Reviewer

since 2004 Member of the programme committee and reviewer at the following conferences and workshops: ACM SIGIR, ACM CIKM, ACM/IEEE JCDL, ACM ICTIR, ACM CHIIR, ACL, WWW, ECIR, ECDL/TPDL, IliX, Russian IR Summer School, Quantum Interaction, TIR, KDIR, LWA, LSHC, AIRS, HPCS.

Reviewer for several journals such as ACM Transactions on Information Systems (TOIS), Elsevier Information Systems, Elsevier Information Processing & Management (IP&M), The Journal of the American Society for Information Science and Technology (JASIST), The Information Retrieval Journal (Springer), The Computer Journal, PLOS ONE, Theoretical Computer Science (Elsevier), Scientometrics (Springer) and The International Journal on Digital Libraries (Springer).

PhD Supervision and Examination

Ongoing **Current PhD Supervision**, *University of Wolverhampton*, Currently supervising 6 PhD theses on information retrieval, deep learning for digital humanities, large language models and machine translation as Director of Studies.

Successful PhD and MSc by Research Completions

2012–2021 **AQUACOLD: Aggregated Query Understanding And Construction Over Linked Data**, *University of Bedfordshire, UK*

Director of studies of the successful PhD thesis of Dr Nick Collis (part time).

2012–2020 **A Conceptual Framework to Support Cross-cultural User Experience Design for Web Search**, *University of Bedfordshire, UK*

Director of Studies of the successful PhD thesis of Dr Karen Chessum (part time).

2011–2015 **A Probabilistic Approach for Cluster Based Interactive Information Retrieval**, *University of Bedfordshire, UK*

Director of studies of the successful PhD thesis of Dr Kamran Abbasi.

2013–2017 **A Methodology for Contextual Recommendation using Artificial Neural Networks**, *University of Bedfordshire, UK*

Director of studies of the successful PhD thesis of Dr Mustafa Ghulam.

2011–2015 **A Framework for e-Government Success from the User's Perspective**, *University of Bedfordshire, UK*

2nd supervisor of the successful PhD thesis of Dr Obaid Almalki.

2012–2018 **A Computer Assisted Analysis of Literary Text: From Feature Analysis To Judgements of Literary Merit**, *University of Bedfordshire, UK*

2nd supervisor of the successful PhD thesis of Dr Tess Crosbie.

2018–2023 **Investigation of Quantum-inspired Modelling in Interactive Search based on Information Foraging Theory**, *University of Bedfordshire, UK*

2nd supervisor of the successful PhD thesis of Dr Amit Kumar Jaiswal.

2017–2022 **A Theory-based Content-based Image Retrieval Approach for Capturing User Preferences during Query Formulation**, *University of Bedfordshire, UK*

2nd supervisor of the successful PhD thesis of Dr Mohammed Mahmoud Artemi.

- 2017–2018 **Developing and Evaluating a Cost-effective Solution for Augmented Reality Conversational Agents for Museums**, *University of Bedfordshire*, UK
Director of studies of the successful MSc by Research project of MSc Sebastian Grygiel.
- 2017–2020 **Use of machine learning to reduce false fire alarms**, *University of Bedfordshire*, UK
Director of studies of the MSc by Research project of MSc Usman Ali.
- 2011–2012 **Balancing Exploration and Exploitation in Learning to Rank Online**, *University of Amsterdam*, The Netherlands
In the context of the ECIR 2011 student mentoring program I was appointed the mentor of Dr Katja Hofmann's successful PhD thesis.
- 2010–2011 **Human Information Processing Based Information Retrieval**, *University of Glasgow*, Glasgow, UK
I have been assisting in supervising the successful PhD of Prof. Dr. Erik Graf about human information processing and information retrieval (supervisor: M. Lalmas).

PhD and MSc by Research Examiner

- 2023 **External examiner Ph.D Thesis “Logic Based Models for Information Retrieval in Social Media Context” by Firas Sabbah**, *University of Duisburg-Essen*, Duisburg, Germany
- 2022 **External examiner Ph.D Thesis “Semantic-aware Retrieval Standards based on Dirichlet Compound Model to Rank Notifications by Level of Urgency” by Mohammad Bahrani**, *Queen Mary, University of London*, UK
- 2022 **External examiner Ph.D Thesis “Understanding Novice Programmer Behavior on Introductory Courses – Learning Analytics Approach” by Erno Lekkila**, *University of Turku*, Finland
- 2022 **Internal examiner Ph.D Thesis “Modified mean and quantile regression models for citation analysis” by Marzieh Shahmandi**, *University of Wolverhampton*, UK
- 2021 **External examiner Ph.D Thesis “Semantic Classification and Evaluation” by Lukas Chaves Lima**, *University of Copenhagen*, Copenhagen, Denmark
- 2021 **External examiner Ph.D Thesis “Binary Classifier Inspired by Quantum Detection Theory” by Prayag Tiwari**, *University of Padua*, Padua, Italy
- 2020 **Internal examiner Ph.D Thesis “Energy Efficient Technique for Hadoop MapReduce Cluster Management” by Manal Alalawi**, *University of Bedfordshire*, Luton, UK
- 2019 **External examiner Ph.D Thesis “Language-Independent Methods for Identifying Cross-Lingual Similarity in Wikipedia” by Monica Paramita**, *University of Sheffield*, Sheffield, UK
- 2016 **Internal examiner Ph.D Thesis “Using Social Media for Supporting Decision-Making in Managing Public Relations: The Case of Abu Dhabi Police” by Mansour Alkhyeli**, *University of Bedfordshire*, Luton, UK
- 2015 **External examiner Ph.D Thesis “Co-occurrence Rate Networks – An alternative theory for undirected graphical models” by Zheming Zhu**, *University of Twente*, Enschede, The Netherlands
- 2015 **External reviewer Ph.D Thesis “Semantic Models for Question Answering” by Piero Molino**, *Dipartimento di Informatica, Università Degli Studi Di Bari Aldo Moro*, Bari, Italy
- 2018 **External examiner MRes “User Engagement with Generous Interfaces for Digital Cultural Heritage” by Rob Speakman**, *Edge Hill University*, Ormskirk, UK

MSc and BSc project supervision

- Ongoing Supervised several MSc and BSc projects on machine learning, information retrieval, natural language processing, cybersecurity, high-throughput computing, personal digital assistants, business information systems, distributed systems and computer networks.

Professional Bodies

- since 2014 **BCS Fellow (FBCS)**
- since 2016 **ACM Member (ACM SIGIR)**
- since 2012 **Fellow of the Higher Education Academy (FHEA)**
- since 2016 **Fellow of the Higher Education Academy (FHEA)**

Teaching Experience

External Examiner

- since 2020 **External Examiner MSc Information Management and MSc Software Development**, *University of Strathclyde*, Glasgow, UK
- since 2023 **External Examiner BSc Data Science**, *University of Sheffield*, Sheffield, UK
- Course/Programme Co-ordinator**
- since 2021 **MSc Computer Science and Data Science / MSc Computer Science and Artificial Intelligence**, *University of Wolverhampton*, UK
- 2016–2020 **BSc (Hons) Information and Data Systems**, *University of Bedfordshire*, Luton, UK
- 2014–2019 **BSc (Hons) Computing and Data Science**, *University of Bedfordshire*, Luton, UK
- 2011–2014 **BSc (Hons) Information Systems**, *University of Bedfordshire*, Luton, UK
- 2011–2014 **BSc (Hons) Business Information Systems**, *University of Bedfordshire*, Luton, UK

Module Co-ordinator and Lecturer

Module co-ordinator and lecturer of several Computer Science topics at undergraduate and postgraduate level in the UK, Germany, Switzerland, Oman and Jordan, such as

- Information Retrieval
- Machine Learning and Artificial Intelligence
- Data Mining
- Big Data and Data Science
- Cybermetrics and Statistics
- Information and Data Engineering
- Databases and Data Modelling
- Programming and Data Structures
- Distributed Computing

Languages

German native
English fluent

Publications

Conference and Journal Publications

- [1] Janusz A. Hołyst, Philipp Mayr, Michael Thelwall, Ingo Frommholz, Shlomo Havlin, Alon Sela, Yoed N. Kenett, Denis Helic, Aljoša Rehar, Sebastijan R. Maček, Przemysław Kazienko, Tomasz Kajdanowicz, Przemysław Biecek, Bolesław K. Szymanski, and Julian Sienkiewicz. Protect our environment from information overload. *Nature Human Behaviour*, pages 1–2, February 2024.
- [2] Julius Odede and Ingo Frommholz. JayBot – Aiding University Students and Admission with an LLM-based Chatbot. In *Proceedings ACM SIGIR Conference on Human Information Interaction And Retrieval (CHIIR 2024)*. ACM, 2024.
- [3] Hamed Alhoori, Edward A. Fox, Ingo Frommholz, Haiming Liu, Corinna Coupette, Bastian A. Rieck, Tirthankar Ghosal, and Jian Wu. Who can Submit an Excellent Review for this Manuscript in the Next 30 Days? - Peer Reviewing in the Age of Overload. In *2023 ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pages 319–320, Santa Fe, NM, USA, June 2023. IEEE.
- [4] Ingo Frommholz, Philipp Mayr, Guillaume Cabanac, Suzan Verberne, and Jordan Brennan. Preface to the 13th Workshop on Bibliometric-enhanced Information Retrieval at ECIR 2023. In Ingo Frommholz, Philipp Mayr, Guillaume Cabanac, Suzan Verberne, and Jordan Brennan, editors, *Proceedings of the 13th International Workshop on Bibliometric-enhanced Information Retrieval*, volume 3617 of *CEUR Workshop Proceedings*, pages 1–3, Dublin, Ireland, April 2023. CEUR.
- [5] Patrick Steinert, Stefan Wagenpfeil, Paul Mc Kevitt, Ingo Frommholz, and Matthias Hemmje. Parallelization Strategies for Graph-Code-Based Similarity Search. *Big Data and Cognitive Computing*, 7(2):70, April 2023.
- [6] Karen Chessum, Haiming Liu, and Ingo Frommholz. An Extended Study of Search User Interface Design Focused on Hofstede's Cultural Dimensions. In Andreas Holzinger, Hugo Plácido Da Silva, Jean Vanderdonckt, and Larry Constantine, editors, *Computer-Human Interaction Research and Applications*, volume 1882, pages 130–152, Cham, 2023. Springer Nature Switzerland.
- [7] Ingo Frommholz, Philipp Mayr, Guillaume Cabanac, and Suzan Verberne. Bibliometric-enhanced information retrieval: 13th international BIR workshop (BIR 2023). In Jaap Kamps, Lorraine Goeuriot, Fabio Crestani, Maria Maistro, Hideo Joho, Brian Davis, Cathal Gurrin, Udo Kruschwitz, and Annalina Caputo, editors, *Advances in Information Retrieval*, pages 392–397, Cham, 2023. Springer Nature Switzerland.
- [8] Kanishka Silva and Ingo Frommholz. What if ChatGPT wrote the Abstract? - Explainable Multi-Authorship Attribution with a Data Augmentation Strategy. In *Proceedings of the IACT - The 1st International Workshop on Implicit Author*

Characterization from Texts for Search and Retrieval (IACT@SIGIR 2023), pages 38–48, Taipei, Taiwan, 2023. CEUR-WS.org.

- [9] Patrick Steinert, Stefan Wagenpfeil, Ingo Frommholz, and Matthias L. Hemmje. Towards the Integration of Metaverse and Multimedia Information Retrieval. In *2023 IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (MetroXRaine)*, pages 581–586. IEEE, 2023.
- [10] Karen Chessum, Haiming Liu, and Ingo Frommholz. A Study of Search User Interface Design Based on Hofstede's Six Cultural Dimensions. In *Proceedings 6th International Conference on Computer-Human Interaction Research and Applications (CHIRA 2022)*, pages 145–154, Valetta, Malta, October 2022. SciTePress.
- [11] Ingo Frommholz, Philipp Mayr, Guillaume Cabanac, and Suzan Verberne. Bibliometric-enhanced Information Retrieval: 12th International BIR Workshop (BIR 2022). In *Proceedings European Conference on Information Retrieval (ECIR 2022)*. Springer, 2022.
- [12] Sérgio Nunes, Suzanne Little, Sumit Bhatia, Ludovico Boratto, Guillaume Cabanac, Ricardo Campos, Francisco M. Couto, Stefano Faralli, Ingo Frommholz, Adam Jatowt, Alípio Jorge, Mirko Marras, Philipp Mayr, and Giovanni Stilo. ECIR 2020 workshops: Assessing the impact of going online. *ACM SIGIR Forum*, 54(1):7:1–7:11, February 2021.
- [13] Nicholas Collis and Ingo Frommholz. Crowdsourced Linked Data Question Answering with AQUACOLD. In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL 2021)*. ACM, 2021.
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