

Ingo Frommholz

Reader in Data Science
PhD (Dr. rer. nat.)
Diplom-Informatiker
FBCS, FHEA

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Personal Information

Position	Reader (~ Associate Professor) in Data Science at the University of Wolverhampton, UK; Adjunct Professor at the Bern University of Applied Sciences, Switzerland
Date and Place of Birth	June 29, 1969 in Bochum-Wattenscheid, Germany
Nationality	German
Home Page	http://www.frommholz.org/
Google Scholar	https://scholar.google.co.uk/citations?user=QhqtmmroAAAAJ
Zotero	https://www.zotero.org/ifromm
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Summary

- Founder and head DAIREL Data Science and AI Research Group at the University of Wolverhampton. Deputy head 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
- Interested in Deep Learning, AI and NLP for human-centred Information Retrieval
- General Chair ACM CIKM 2023
- 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)
- Senior managing editor of the International Journal on Digital Libraries (Springer)
- Course and programme co-ordinator for Computer Science, Data Science and Artificial Intelligence undergraduate and postgraduate programmes
- Supervised 8 PhD students to successful completion; examiner for 11 PhD candidates
- Please see the list of publications at the end of the CV.

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
- Interdisciplinary Information Retrieval, NLP and AI, 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 (Dozent)**, *School of Engineering and Computer Science, Bern University of Applied Sciences*, Biel/Bienne, Switzerland.
Part-time.
- 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 Consultancy Projects

- 2023–2027 **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 216,451). 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). Co-PI.
- 2023–2025 **LASER**, *University of Wolverhampton*, UK.
Internally funded PhD project on large language models in information retrieval (worth GBP 39,000). PI.
- 2020–2022 **SOLVD**, *University of Wolverhampton*, Wolverhampton, UK.
EU European Regional Development Fund to support SMEs in the adoption of digital technologies.
- 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.
- 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.
- 2016–2017 **EDISON**, *University of Bedfordshire*, Luton, UK.
EU H2020 Coordination and Support Action with the purpose of accelerating the creation of the Data Science profession. UoB participated as Data Science Champion University, which I initiated.
- 2012–2018 **NotActivelyLooking.com**.
Consultancy project on the design and implementation of a search engine for executives (in collaboration with industry partners). Principle investigator 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 (with Luton Culture). PI.
- 2015 **EduVocation**, *University of Bedfordshire*, Luton, UK.
Teacher recruitment site and information system based on linked open data (UK Innovation Voucher). 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, PI).
- 2008–2011 **RENAISSANCE**, *University of Glasgow*, Glasgow, UK.
EPSRC project on retrieval models based on the quantum theory framework. Main task: evaluation and further extension of an interactive retrieval framework inspired by quantum mechanics.
- 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.
- 2008 **LACOSTIR**, *University of Duisburg-Essen*, Duisburg, Germany.
German Research Foundation project on interactive retrieval. Main tasks: specification of a model for interactive retrieval.
- 2006–2007 **DELOS**, *University of Duisburg-Essen*, Duisburg, Germany.
EU-FP6 Network of Excellence on Digital Libraries. Main task: design and integration of annotation services into the agent-based Daffodil framework.
- 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. Main task: knowledge transfer, development of a study on email classification in a helpdesk scenario. Main contributor 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. Main task: specification and implementation of an annotation-based retrieval framework for structured documents based on probabilistic logics.

- 2004 **BRICKS**, *Fraunhofer IPSI*, Darmstadt, Germany.
EU-FP6 integrated project on distributed resources for integrated cultural knowledge services.
Main task: specification of annotation 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. Main task: integration of case-based retrieval services for advisory dialogues.
- 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. Main task: design and implementation of context-based retrieval methods based on user annotations, of retrieval Web services and of research prototypes.
- 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. Main task: design and implementation of search user interfaces.

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.

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.

Research Related and Managerial Activities

Examiner

- since 2019 Examiner for Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)
since 2022 Examiner for UKRI Engineering and Physical Sciences Research Council (EPSRC)

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.
- 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.
- 2016–2023 **BCS Search Solutions**, *London, UK*.
Co-organiser of the annual BCS Search Solutions Conference on Innovations in Search & Information Retrieval.
- 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 (IC-TIR 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 **International Journal on Digital Libraries (IJDL, Springer)**.
Senior managing editor and member of the editorial board of IJDL.
- since 2009 **Datenbank-Spektrum Journal**.
Member of the editorial board of Datenbank-Spektrum, the joint journal of the German special interest groups on databases resp. information retrieval (Springer).
- 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).

Managerial, Leadership and Steering Activities

- since 2023 **Head of DAIREL Data Science and AI Research Group**, *University of Wolverhampton*, UK.
Head and founder of DAIREL.
- since 2023 **Deputy Head 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.

Professional Bodies

- since 2014 **BCS Fellow (FBCS)**.
- since 2016 **ACM Member (ACM SIGIR)**.
- since 2012 **Fellow of the Higher Education Academy (FHEA)**.
- since 2016 **Member of the Engineering Professors' Council (EPC)**.

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 , <i>University of Wolverhampton</i> , UK.
2016–2020	BSc (Hons) Information and Data Systems , <i>University of Bedfordshire</i> , Luton, UK.
2014–2019	BSc (Sons) Computing and Data Science , <i>University of Bedfordshire</i> , Luton, UK.
2011–2014	BSc (Hons) Information Systems , <i>University of Bedfordshire</i> , Luton, UK.
2011–2014	BSc (Hons) Business Information Systems , <i>University of Bedfordshire</i> , Luton, UK.

Module Co-ordinator and Lecturer

Module co-ordinator and lecturer of several Computer Science topics at undergraduate and postgraduate level, such as

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

Technical Skills

Platforms	macOS, Linux, Solaris, Windows, MS-DOS, AIX, AmigaOS	Programming Languages	Java, Python, R, Perl, PHP, C, Unix Shell, Prolog, SQL, PL/SQL, Scheme, Modula 2, Assembler (M6510 (C64), MC68000 (Amiga)), Basic
Databases	MySQL, Oracle, Informix	Markup	HTML, JSON, XML, XML schema, RDF(S), OWL
Information Retrieval	MG4J, HySpirit, probabilistic Datalog, Elasticsearch/Solr/Lucene, Terrier	Tools	Hadoop, J2EE, Eclipse, Jetty, Apache Tomcat, Apache Web server, Oracle Forms, Cyrus IMAP server, L ^A T _E X, CVS, SVN, GIT, Maven, Protégé, Microsoft Office, Open Office, Inkscape

Own Software Projects

POLAR	Prototype of an object-oriented logic-based probabilistic framework for annotation-based document retrieval and discussion search, based on probabilistic Datalog.
JaySpirit	Java API for the HySpirit retrieval framework (which is written in Perl and C). Available at https://github.com/iformm/jayspirit .
Executive Search	Java implementation (Web service, middleware) of a search engine for executives, combining database and retrieval technology.
Daffodil	I was responsible for the annotation services in the Daffodil system.
COLLATE	I designed and implemented the search and retrieval module in the COLLATE prototype.
Further Projects	During my time as a software developer I was responsible for the design and implementation of several software modules in different projects. In my consultancy projects I develop advanced search services.

Languages

German	native
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Publications

Conference and Journal Publications

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.

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 *Proceedings ACM/IEEE Joint Conference on Digital Libraries (JCDL 2023)*, pages 319–320. IEEE, 2023.

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. Springer Nature Switzerland, 2023.

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. Springer Nature Switzerland, 2023.

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. CEUR-WS.org, 2023.

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, 2023.

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)*, October 2022.

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.

Nicholas Collis and Ingo Frommholz. AQUACOLD: A Novel Crowdsourced Linked Data Question Answering System. In *Proceedings Second Workshop on Bridging the Gap between Information Science, Information Retrieval and Data Science (BIRDS 2021)*, 2021.

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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