



Dalibor Fiala (*curriculum vitae*)

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Education:

- 2014, Doc. (associate professor) in the field of *Computer Science and Engineering* at the **University of West Bohemia** (UWB) in Pilsen, Czech Republic
- 2007, Ph.D. under joint supervision in the field of *Computer Science and Engineering* at **Louis Pasteur University** in Strasbourg, France and at UWB
- 2003, Ing. (MSc.) in the field of *Computer Science and Engineering - Software Engineering* at UWB
- state language examination in German (1997), English (2001), and French (2006)

Professional experience:

- since 2024: **IT Consultant**
- since 2014: **Associate Professor** at the University of West Bohemia
- 2009 – 2014: assistant professor, project manager, and researcher at UWB
- 2007 – 2009: software engineer with **Gefasoft AG** in Munich (Germany)
- 2006 – 2007: assistant prof. at **Marc Bloch University** in Strasbourg, France

Research grants:

- 2018 – 2021: **Interreg Danube DTP2-076-1.1 KnowING IPR** (principal co-investigator), on innovation support through knowledge engineering, funded by the European Union
- 2014 – 2015: **MŠMT MOBILITY 7AMB14SK090** (principal investigator), on modern informetric methods of research evaluation, funded by the Ministry of Education, Youth and Sports of the Czech Republic
- 2006, 2009 – 2010: **2C06009 COT-SEWing** (project participant), on methods of natural language processing and semantic web, funded by the Ministry of Education, Youth and Sports of the Czech Republic
- 2005: **FRVŠ 1347/2005/G1** (principal investigator), on knowledge extraction from World Wide Web content and topology, funded by the Ministry of Education, Youth and Sports of the Czech Republic

- 2004 – 2005: **RNTL Paploo** (project participant), on electronic re-edition, funded by the Ministry of Education of the French Republic

Research and teaching experience:

- 57 publications in total on data mining, Web mining, information retrieval, information science, and informetrics from which there are 33 journal articles, 19 conference proceedings papers, 3 theses, 1 monograph, and 1 technical report; 35 of the publications are in the Web of Science database
- Research interests: data mining, information retrieval, information science, informetrics, scientometrics, research evaluation, artificial intelligence, machine learning, digital libraries, cybersecurity
- Courses taught: information retrieval, Web applications, database models and methods, programming structures, user interfaces, data processing programming techniques, foundations of information technologies + supervising bachelor's and master's theses and doctoral dissertations

Reviewing and other activities:

- Conference programme committee member of 7 conferences (*IEEE Eighth International Conference on Research Challenges in Information Science* 2014), *Znalosti* (2014), and *Data a znalosti* (2015, 2016, 2017, 2018, 2019)
- Reviewer of articles from 21 journals (*Applied Sciences*, *Artificial Intelligence Review*, *Austrian Journal of Statistics*, *Computers and Electrical Engineering*, *Expert Systems with Applications*, *Information Development*, *Information Processing and Management*, *International Journal of Information System Modeling and Design*, *IEEE Computational Intelligence Magazine*, *IETE Technical Review*, *Journal of Basic and Applied Research International*, *Journal of Information Science*, *Journal of Informetrics*, *Journal of the Association for Information Science and Technology*, *Journal of Scientific Research and Reports*, *Kuwait Journal of Science*, *Physica A*, *Publications*, *Science Innovation*, *Scientometrics*, *Social Network Analysis and Mining*, and *Webology*)
- Reviewer of papers for conferences *DATAKON* (2012), *Electronic Publishing* (2012), and *Text, Speech and Dialogue* (2013, 2015)
- Reviewer of the **Ministry of Education, Youth and Sports of the Czech Republic** in the programme *VES15 COST CZ (The European Cooperation in Science and Technology)*, external referee of the **Romanian National Research Council** in the programmes *Exploratory Research Projects (PCE2012)*, *Postdoctoral Research Projects (PD2012)*, and *Young Research Teams (RUTE2014)*, independent expert of the **Bulgarian National Science Fund** in the *Competition for Financial Support for Basic Research Projects – 2020*, reviewer and panel member (Physical Sciences and Engineering, and Natural and Technical Sciences, respectively) of the **Research Council of Lithuania** in the *Polish-Lithuanian Funding Initiative (DAINA 2) Call for Proposals 2020*, *Postdoctoral Fellowships Programme Call 2023*, *Impact-Driven Programme “Information Technologies for the Development of Science and Knowledge Society” Call 2024*, and *Postdoctoral Fellowships Programme Call 2024*, reviewer and rapporteur of **The National Centre for Research and Development (Poland)** in the *Small Grant Scheme 2020 Call of the Applied Research Programme* and *SPPW Call 2024 of the Programme Research and Innovation - Applied Research (Swiss-Polish Cooperation Programme)*, reviewer of the **Engineering and Physical Sciences Research Council (United Kingdom)** in the call *EPSRC Fellowship – Early Career (2020)*, reviewer of the **Italian Ministry for University and Research**

(MUR) in the *2020 PRIN* call, (lead) reviewer of the **Science Fund of the Republic of Serbia** in the *IDEAS (2020)* and *PROMIS 2023* programme calls, external reviewer of **The Research Council (Oman)** in the *Block Funding Program 2022*, expert and panel member (Committee of Natural and Technical Sciences) of the **Research Council of Lithuania** in the *Comparative Expert Assessment 2023*, reviewer and rapporteur of the **Slovenian Research Agency** within the *Public call for the (co-)financing of research projects in 2023* and *Public call for the (co-)financing of research projects in 2024*, and expert evaluator of the **Cyprus Research and Innovation Foundation** in the *RESTART 2016-2020 Programmes for Research, Technological Development and Innovation (2023)*, reviewer of the **Slovak Research and Development Agency** in the *Grant APVV 2023* call, reviewer of the **Eureka Association** in the *Eurostars 3 - Call 6 (2024)* programme call, reviewer of the **Qatar Research, Development, and Innovation Council** in the *Academic Research Grant (ARG-02)* programme call (2024), and evaluator of the **Innovation Fund Denmark** in the *Grand Solutions 2024 (Digitalization, technology and innovation)* call.

- Invited talks at foreign institutions: **State Agency on Intellectual Property** (Moldova, online 2020), **Patent- und Markenzentrum Baden-Württemberg** (Germany, 2019), **Budapest Chamber of Commerce and Industry** (Hungary, 2019), **Max-Planck-Gesellschaft** (2018), **Technische Hochschule Deggendorf** (Germany, 2017), **Faculty of Information Studies in Novo mesto** (Slovenia, 2017 and 10th International Conference on Information Technologies and Information Society ITIS 2018), **Eidgenössische Technische Hochschule Zürich** (Switzerland, 2016), **University of Wolverhampton** (United Kingdom, 2016), **Friedrich-Alexander-Universität Erlangen-Nürnberg** (Germany, 2015), **University of Sheffield** (United Kingdom, 2014), **Technische Universität Chemnitz** (Germany, 2013), **Univerza v Ljubljani** (Slovenia, 2013), **Royal Holloway, University of London** (United Kingdom, 2012), **Hochschule Regensburg** (Germany 2012 and 2013) a **Technická univerzita v Košiciach** (Slovakia, 2013, 2014, and 2015)
- Professional member of the Association for Computing Machinery (ACM) from 2013 to 2019
- Editorial board member of *Journal of Informetrics* (since 2022), *Acta Electrotechnica et Informatica* (since 2021), and *SAIEE Africa Research Journal* (section editor since 2020)

Articles published in journals with Impact Factor

- Fiala, D., & Maltseva, D. (2024). Analysis of Cited References in Russian Publications on Web of Science. *Journal of Scientometric Research*, 13(1), 93-102.
- Fiala, D., & Maltseva, D. (2023). Russian Publications in Web of Science: A Bibliometric Study. *Collnet Journal of Scientometrics and Information Management*, 17(2), 217-245.
- Heigl, M., Weigelt, E., Fiala, D., & Schramm, M. (2021). Unsupervised feature selection for outlier detection on streaming data to enhance network security. *Applied Sciences*, 11(24), art. no. 12073.
- Heigl, M., Weigelt, E., Urmann, A., Fiala, D., & Schramm, M. (2021). Exploiting the outcome of outlier detection for novel attack pattern recognition on streaming data. *Electronics*, 10(17), art. no. 2160.
- Heigl, M., Anand, K. A., Urmann, A., Fiala, D., Schramm, M., & Hable, R. (2021). On the improvement of the isolation forest algorithm for outlier detection with streaming data. *Electronics*, 10(13), art. no. 1534.
- Fiala, D., & Bornmann, L. (2020). Reference publication year spectroscopy (RPYS) of computer science papers from Eastern Europe. *Aslib Journal of Information Management*, 72(3), 305-319.
- Heigl, M., Doerr, L., Tiefnig, N., Fiala, D., & Schramm, M. (2019). A resource-preserving self-regulating Uncoupled MAC algorithm to be applied in incident detection. *Computers & Security*, 85, 270-287.
- Šubelj, L., Fiala, D., Ciglarič, T., & Kronegger, L. (2019). Convexity in scientific collaboration networks. *Journal of Informetrics*, 13(1), 10-31.
- Fiala, D., & Tutoky, G. (2017). PageRank-based prediction of award-winning researchers and the impact of citations. *Journal of Informetrics*, 11(4), 1044-1068.
- Šubelj, L., & Fiala, D. (2017). Publication boost in Web of Science journals and its effect on citation distributions. *Journal of the Association for Information Science and Technology*, 68(4), 1018-1023.
- Fiala, D., & Ho, Y.-S. (2016). Comparison of Czech and Slovak independent research in the 21st century. *Current Science*, 110(8), 1524-1531.
- Fiala, D., Tutoky, G., Koncz, P., & Paralič, J. (2015). Ageing of Edges in Collaboration Networks and its Effect on Author Rankings. *Acta Polytechnica Hungarica*, 12(6), 149-160.
- Fiala, D., & Willett, P. (2015). Computer science in Eastern Europe 1989-2014: a bibliometric study. *Aslib Journal of Information Management*, 67(5), 526-541.
- Fiala, D., & Ho, Y.-S. (2015). Twenty years of Czech science: A bibliometric analysis. *Malaysian Journal of Library and Information Science*, 20(2), 85-102.
- Fiala, D., Šubelj, L., Žitnik, S., & Bajec, M. (2015). Do PageRank-based author rankings outperform simple citation counts? *Journal of Informetrics*, 9(2), 334-348.
- Šubelj, L., Fiala, D., & Bajec, M. (2014). Network-based statistical comparison of citation topology of bibliographic databases. *Scientific Reports*, 4, art. no. 6496.
- Fiala, D. (2014). Sub-organizations of institutions in computer science journals at the turn of the century. *Malaysian Journal of Library and Information Science*, 19(2), 53-68.
- Nykl, M., Ježek, K., Fiala, D., & Dostal, M. (2014). PageRank variants in the evaluation of citation networks. *Journal of Informetrics*, 8(3), 683-692.
- Fiala, D. (2014). Current Index: A proposal for a dynamic rating system for researchers. *Journal of the Association for Information Science and Technology*, 65(4), 850-855.
- Fiala, D. (2012). Time-aware PageRank for bibliographic networks. *Journal of Informetrics*, 6(3), 370-388.
- Fiala, D. (2012). Bibliometric analysis of CiteSeer data for countries. *Information Processing and Management*, 48(2), 242-253.
- Fiala, D. (2011). Mining citation information from CiteSeer data. *Scientometrics*, 86(3), 553-562.
- Fiala, D., Rousselot, F., & Ježek, K. (2008). PageRank for bibliographic networks. *Scientometrics*, 76(1), 135-158.

Articles in other journals

- Maltseva, D. V., Pavlova, I. A., Kapustina, L. V., Vashchenko, V. A., & Fiala, D. (2023). Comparative analysis of the capabilities of WoS and eLibrary for analyzing bibliographic networks [in Russian]. *Sociology: Methodology, Methods, Mathematical Modeling (Sociology: 4M)*, 56, 7-68.
- Fiala, D. (2022). Indonesia's place in the research landscape of Southeast Asia. *Unisia*, 40(1), 45-66.
- Fiala, D., Král, P., & Dostal, M. (2021). Are papers asking questions cited more frequently in computer science? *Computers*, 10(8), art. no. 96.
- Fiala, D., & Tutoky, G. (2017). Computer Science Papers in Web of Science: A Bibliometric Analysis. *Publications*, 5(4), art. no. 23.
- Fiala, D., Havrilová, C., Dostal, M., & Paralič, J. (2016). Editorial Board Membership, Time to Accept, and the Effect on the Citation Counts of Journal Articles. *Publications*, 4(3), art. no. 21.

- Fiala, D. (2013). Testing ranking algorithms on CiteSeer data. *Global Journal of Advanced Engineering Technologies*, 2(4), 176-180.
- Fiala, D. (2013). From CiteSeer to CiteSeer^X: Author rankings based on coauthorship networks. *Journal of Theoretical and Applied Information Technology*, 58(1), 191-204.
- Fiala, D. (2013). Suborganizations of Institutions in Library and Information Science Journals. *Information*, 4(4), 351-366.
- Fiala, D. (2013). Extracting information from CiteSeer's textual data. *Journal of Theoretical and Applied Information Technology*, 56(2), 176-182.
- Fiala, D. (2013). Science Evaluation in the Czech Republic: The Case of Universities. *Societies*, 3(3), 266-279.

Monographs

- Fiala, D. (2009). *Web Mining Methods for the Detection of Authoritative Sources: Theory and Practice*. VDM Verlag, Saarbrücken.

Papers published in international conference proceedings

- Heigl, M., Doerr, L., Schramm, M., & Fiala, D. (2019). On the Energy Consumption of Quantum-resistant Cryptographic Software Implementations Suitable for Wireless Sensor Networks. In *Proceedings of the 16th International Joint Conference on e-Business and Telecommunications (SECURITY)*, pp. 72-83, Prague, Czech Republic.
- Doerr, L., Heigl, M., Fiala, D., & Schramm, M. (2019). Comparison of Energy-Efficient Key Management Protocols for Wireless Sensor Networks. In *Proceedings of the 2019 International Electronics Communication Conference*, pp. 21-26, Okinawa, Japan.
- Heigl, M., Schramm, M., & Fiala, D. (2019). A Lightweight Quantum-Safe Security Concept for Wireless Sensor Network Communication. In *Proceedings of the 2019 IEEE International Conference on Pervasive Computing and Communications Workshops (PerCom Workshops)*, pp. 906-911, Kyoto, Japan.
- Heigl, M., Doerr, L., Almaini, A., Fiala, D., & Schramm, M. (2018). Incident Reaction Based on Intrusion Detections' Alert Analysis. In *Proceedings of the 23rd International Conference on Applied Electronics*, pp. 45-50, Pilsen, Czech Republic.
- Doerr, L., Fiala, D., Heigl, M., & Schramm, M. (2017). Assessment Simulation Model for Uncoupled Message Authentication. In *Proceedings of the 22nd International Conference on Applied Electronics*, pp. 45-48, Pilsen, Czech Republic.
- Dostal, M., Nykl, M., Ježek, K., & Fiala, D. (2013). Linked Data and PageRank-based Classification. In *Proceedings of IADIS International Conference on Theory and Practice in Modern Computing*, pp. 61-64, Prague, Czech Republic.
- Dostal, M., Fiala, D., & Ježek, K. (2013). Semantic Markup for Web Applications. In *Proceedings of the International Conference on Computer, Communication, Information Sciences, and Engineering*, pp. 506 - 509, Paris, France.
- Ježek, K., Fiala, D., & Steinberger, J. (2008). Exploration and Evaluation of Citation Networks. In *Proceedings of the 12th International Conference on Electronic Publishing*, pp. 351-362, Toronto, Canada.
- Fiala, D., Rousselot, F., & Ježek, K. (2007). Ranking algorithms for web sites. In *Proceedings of the 3rd International Conference on Web Information Systems and Technologies*, pp. 372-375, Barcelona, Spain.
- Fiala, D., Ježek, K., & Rousselot, F. (2006). Finding Authoritative Researchers on Academic Web Sites. In *Proceedings of the Conference of the World Academy of Science, Engineering, and Technology*, pp. 74-79, Cairo, Egypt.
- Fiala, D., Tesař, R., Ježek, K., & Rousselot, F. (2006). Extracting Information from Web Content and Structure. In *Proceedings of the 9th International Conference on Information Systems Implementation and Modelling*, pp. 133-140, Písek, Czech Republic.
- Tesař, R., Fiala, D., Rousselot, F., & Ježek, K. (2005). A comparison of two algorithms for discovering repeated word sequences. In *Proceedings of the 6th International Conference on Data Mining, Text Mining, and their Business Applications*, pp. 121-131, Skiathos, Greece.
- Belaïd, A., Alusse, A., Rangoni, Y., Cecotti, H., Farah, F., Gagean, N., Fiala, D., Rousselot, F., & Vigne, H. (2005). Document retro-conversion for personalized electronic reedition. In *Proceedings of the International Workshop on Document Analysis*, pp. 193-218, Kolkata, India.
- Fiala, D., & Ježek, K. (2004). Retrieving Citations on the Web. In *Proceedings of the International Conference on Knowledge Engineering and Decision Support*, pp. 481-488, Porto, Portugal.

Papers in national conference proceedings

- Ježek, K., Fiala, D., Dostal, M., Baratta, Š., Herout, P., Pešička, L., Včalová, M., Král, P., Nykl, M., & Lenc, L. (2019). KnowING IPR: projekt podpory inovací znalostními prostředky. In *Proceedings of the Conference DATA A ZNALOSTI*, pp. 93-96, Košice, Slovakia.
- Fiala, D. (2017). Získávání dat z bibliografických databází. In *Proceedings of the Conference DATA A ZNALOSTI*, pp. 72-76, Pilsen, Czech Republic.
- Kukrál, P., Dostal, M., & Fiala, D. (2016). Vizualizace dat s využitím frameworku AngularJS. In *Proceedings of the Conference DATA A ZNALOSTI*, pp. 129-133, Smolenice, Slovakia.
- Fiala, D., Dostal, M., Paralič, J., Tutoky, G., & Havrilová, C. (2015). Moderné informetrické metódy hodnotenia vedeckého výskumu. In *Proceedings of the Conference DATA A ZNALOSTI*, pp. 81-84, Prague, Czech Republic.
- Fiala, D., Ježek, K., & Rousselot, F. (2007). Využití struktury webu pro vyhledávání autoritativních institucí a osob. In *Proceedings of the 6th Annual Conference ZNALOSTI*, pp. 300-303, Ostrava, Czech Republic.

Theses and technical reports

- Fiala, D. (2014). Modern Informetric Methods for the Evaluation of Scientific Research. *Habilitation thesis*, University of West Bohemia, Plzeň, Czech Republic.
- Fiala, D. (2007). Web Mining Methods for the Detection of Authoritative Sources. *PhD dissertation*, University of West Bohemia, Plzeň, Czech Republic, and Louis Pasteur University Strasbourg, France.
- Fiala, D. (2005). Web Mining and Its Applications to Researchers Support. *Technical report*, no. DCSE/TR-2005-06, University of West Bohemia, Plzeň, Czech Republic.
- Fiala, D. (2003). A System for Citations Retrieval on the Web. *MSc thesis*, University of West Bohemia, Plzeň, Czech Republic.