

List of publications

Rudolf FERENC, PhD

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Edited volumes

- [Fer17] **Rudolf Ferenc**, ed. *Conference of PhD Students in Computer Science*. Special Issue. Vol. 23. Acta Cybernetica 2. Szeged, Hungary: University of Szeged, 2017.
- [FBG16] **Rudolf Ferenc**, Balázs Bánhelyi, Tamás Gergely, Attila Kertész, and Zoltán Kincses, eds. *10th Jubilee Conference of PhD Students in Computer Science (CSCS 2016)*. Volume of Extended Abstracts. Szeged, Hungary: University of Szeged, June 2016.
- [Fer15] **Rudolf Ferenc**, ed. *Conference of PhD Students in Computer Science*. Special Issue. Vol. 22. Acta Cybernetica 1. Szeged, Hungary: University of Szeged, 2015.
- [FBG14] **Rudolf Ferenc**, Balázs Bánhelyi, Tamás Gergely, and Zoltán Kincses, eds. *9th Conference of PhD Students in Computer Science (CSCS 2014)*. Volume of Extended Abstracts. Szeged, Hungary: University of Szeged, June 2014.
- [MCF12] Tom Mens, Anthony Cleve, and **Rudolf Ferenc**, eds. *16th European Conference on Software Maintenance and Reengineering (CSMR'12)*. Los Alamitos (CA), USA: IEEE Computer Society, Mar. 2012.
- [CFD10] Rafael Capilla, **Rudolf Ferenc**, and Juan Carlos Dueñas, eds. *14th European Conference on Software Maintenance and Reengineering (CSMR 2010)*. Madrid, Spain: IEEE Computer Society, Mar. 2010.
- [KaF10] Yiannis Kanellopoulos and **Rudolf Ferenc**, eds. *4th International Workshop on System Quality and Maintainability (SQM 2010)*. Madrid, Spain: IEEE Computer Society, Mar. 2010.
- [FKW09] **Rudolf Ferenc**, Jens Knodel, and Andreas Winter, eds. *13th European Conference on Software Maintenance and Reengineering (CSMR 2009)*. Kaiserslautern, Germany: IEEE Computer Society, Mar. 2009.

Journal articles

- [BuF22] Levente Buttyán and **Rudolf Ferenc**. “IoT Malware Detection with Machine Learning”. In: *ERCIM NEWS* 129 (Apr. 2022). Open Access, pp. 17–19.
- [HeF22] Péter Hegedűs and **Rudolf Ferenc**. “Static Code Analysis Alarms Filtering Reloaded: A New Real-World Dataset and its ML-Based Utilization”. In: *IEEE Access* 10 (2022). Open Access, pp. 55090–55101.
- [SPJ22] Zoltán Ságodi, Edit Pengő, Judit Jász, István Siket, and **Rudolf Ferenc**. “Static Call Graph Combination to Simulate Dynamic Call Graph Behavior”. In: *IEEE Access* 10 (2022). Open Access, pp. 131829–131840.

- [ATH21] Gábor Antal, Zoltán Tóth, Péter Hegedűs, and **Rudolf Ferenc**. “Enhanced Bug Prediction in JavaScript Programs with Hybrid Call-Graph Based Invocation Metrics”. In: *Technologies* 9.1 (2021). Open Access, p. 3.
- [FBG20] **Rudolf Ferenc**, Dénes Bán, Tamás Grósz, and Tibor Gyimóthy. “Deep learning in static, metric-based bug prediction”. In: *Array* 6 (July 2020). Open Access, p. 100021.
- [FGG20] **Rudolf Ferenc**, Péter Gyimesi, Gábor Gyimesi, Zoltán Tóth, and Tibor Gyimóthy. “An automatically created novel bug dataset and its validation in bug prediction”. In: *Journal of Systems and Software* 169 (Nov. 2020). Open Access, p. 110691.
- [FTL20] **Rudolf Ferenc**, Zoltán Tóth, Gergely Ladányi, István Siket, and Tibor Gyimóthy. “A public unified bug dataset for java and its assessment regarding metrics and bug prediction”. In: *Software Quality Journal* 28 (2020). Open Access, pp. 1447–1506.
- [FVA20] **Rudolf Ferenc**, Tamás Viszkok, Tamás Aladics, Judit Jász, and Péter Hegedűs. “Deep-water framework: The Swiss army knife of humans working with machine learning models”. In: *SoftwareX* 12 (Dec. 2020). Open Access, p. 100551.
- [GVS20] Péter Gyimesi, Béla Vancsics, Andrea Stocco, Davood Mazinanian, Árpád Beszédes, **Rudolf Ferenc**, and Ali Mesbah. “BUGSJS: a benchmark and taxonomy of JavaScript bugs”. In: *Software Testing, Verification and Reliability* (Oct. 2020). Open Access.
- [VJT20] László Vidács, Márk Jelasity, László Tóth, Péter Hegedűs, and **Rudolf Ferenc**. “A mesterséges intelligencia néhány biztonsági vetülete”. In: *Scientia et Securitas* 1.1 (Dec. 2020). Open Access, pp. 29–34.
- [BFS18] Dénes Bán, **Rudolf Ferenc**, István Siket, Ákos Kiss, and Tibor Gyimóthy. “Prediction Models For Performance, Power, And Energy Efficiency Of Software Executed On Heterogeneous Hardware”. In: *The Journal of Supercomputing* 75.8 (Aug. 2019), pp. 4001–4025.
- [HKF18] Péter Hegedűs, István Kádár, **Rudolf Ferenc**, and Tibor Gyimóthy. “Empirical Evaluation of Software Maintainability Based on a Manually Validated Refactoring Dataset”. In: *Information and Software Technology* (Mar. 2018).
- [SAN17] Gábor Szőke, Gábor Antal, Csaba Nagy, **Rudolf Ferenc**, and Tibor Gyimóthy. “Empirical Study on Refactoring Large-scale Industrial Systems and Its Effects on Maintainability”. In: *Journal of Systems and Software* 129.C (July 2017), pp. 107–126.
- [USH15] Zoltán Ujhelyi, Gábor Szőke, Ákos Horváth, Norbert István Csiszár, László Vidács, Dániel Varró, and **Rudolf Ferenc**. “Performance Comparison of Query-based Techniques for Anti-pattern Detection”. In: *Information and Software Technology* 65.C (Sept. 2015), pp. 147–165.
- [DJN14] Richárd Dévai, Judit Jász, Csaba Nagy, and **Rudolf Ferenc**. “Designing and Implementing Control Flow Graph for Magic 4th Generation Language”. In: *Acta Cybernetica* 21.3 (2014), pp. 419–437.
- [FHV14] Csaba Faragó, Péter Hegedűs, Ádám Zoltán Végh, and **Rudolf Ferenc**. “Connection Between Version Control Operations and Quality Change of the Source Code”. In: *Acta Cybernetica* 21.4 (2014), pp. 585–607.

- [KHF14] István Kádár, Péter Hegedűs, and **Rudolf Ferenc**. “Runtime Exception Detection in Java Programs Using Symbolic Execution”. In: *Acta Cybernetica* 21.3 (2014), pp. 331–352.
- [HBL13] Péter Hegedűs, Tibor Bakota, Gergely Ladányi, Csaba Faragó, and **Rudolf Ferenc**. “A Drill-Down Approach for Measuring Maintainability at Source Code Element Level”. In: *Electronic Communications of the EASST* 60 (2013), pp. 1–21.
- [KaF12] Yiannis Kanellopoulos and **Rudolf Ferenc**. “Introduction to the Software Quality and Maintainability special issue”. In: *Software Quality Journal* 20.2 (June 2012). Editorial, pp. 263–264.
- [CDF11] Rafael Capilla, Juan Carlos Dueñas, and **Rudolf Ferenc**. “A Retrospective View of Software Maintenance and Reengineering Research – a Selection of Papers from European Conference on Software Maintenance and Reengineering 2010”. In: *Journal of Software: Evolution and Process* 25.6 (July 2011). Editorial, pp. 569–574.
- [FKW10] **Rudolf Ferenc**, Jens Knodel, and Andreas Winter. “Introduction to the Special Issue of the 13th European Conference on Software Maintenance and Reengineering (CSMR 2009)”. In: *Journal of Software: Evolution and Process* 25.2 (Nov. 2010). Editorial, pp. 111–112.
- [FIV09] Lajos Jenő Fülöp, Árpád Ilia, Ádám Zoltán Végh, Péter Hegedűs, and **Rudolf Ferenc**. “Comparing and Evaluating Design Pattern Miner Tools”. In: *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae Sectio Computatorica* 31 (2009), pp. 167–184.
- [PMF09] Denys Poshyvanyk, Andrian Marcus, **Rudolf Ferenc**, and Tibor Gyimóthy. “Using Information Retrieval Based Coupling Measures for Impact Analysis”. In: *Empirical Software Engineering* 14.1 (Feb. 2009), pp. 5–32.
- [FHF08] Lajos Jenő Fülöp, Péter Hegedűs, and **Rudolf Ferenc**. “BEFRIEND – A Benchmark for Evaluating Reverse Engineering Tools”. In: *Periodica Polytechnica Electrical Engineering* 52.3-4 (2008), pp. 153–162.
- [MPF08] Andrian Marcus, Denys Poshyvanyk, and **Rudolf Ferenc**. “Using the Conceptual Cohesion of Classes for Fault Prediction in Object Oriented Systems”. In: *IEEE Transactions on Software Engineering* 34.2 (Mar. 2008), pp. 287–300.
- [VGF06] László Vidács, Martin Gogolla, and **Rudolf Ferenc**. “From C++ Refactorings to Graph Transformations”. In: *Electronic Communications of the EASST* 3 (Sept. 2006), pp. 127–141.
- [GFS05] Tibor Gyimóthy, **Rudolf Ferenc**, and István Siket. “Empirical Validation of Object-Oriented Metrics on Open Source Software for Fault Prediction”. In: *IEEE Transactions on Software Engineering* 31.10 (Nov. 2005), pp. 897–910.
- [BFG03] Árpád Beszédes, **Rudolf Ferenc**, Tibor Gyimóthy, André Dolenc, and Konsta Karsisto. “Survey of Code-Size Reduction Methods”. In: *ACM Computing Surveys (CSUR)* 35.3 (Sept. 2003), pp. 223–267.
- [FGM02] **Rudolf Ferenc**, Juha Gustafsson, László Müller, and Jukka Paakki. “Recognizing Design Patterns in C++ programs with the integration of Columbus and Maisa”. In: *Acta Cybernetica* 15.4 (Dec. 2002), pp. 669–682.

Book chapters

- [FHG14] **Rudolf Ferenc**, Péter Hegedűs, and Tibor Gyimóthy. “Software Product Quality Models”. In: *Evolving Software Systems*. Springer Berlin Heidelberg, 2014. Chap. 3, pp. 65–100.
- [FBG05] **Rudolf Ferenc**, Árpád Beszedes, and Tibor Gyimóthy. “Extracting Facts with Columbus from C++ Code”. In: *Tools for Software Maintenance and Reengineering*. Ed. by Massimiliano Di Penta and Maarit Harsu. Franco Angeli, 2005, pp. 16–31.

Conference proceedings

- [AHF22] Tamás Aladics, Péter Hegedűs, and **Rudolf Ferenc**. “A Vulnerability Introducing Commit Dataset for Java: An Improved SZZ based Approach”. In: *Proceedings of the 17th International Conference on Software and Data Technologies (ICSOFT)*. INSTICC. SciTePress, July 2022, pp. 68–79.
- [JHM22] Judit Jász, Péter Hegedűs, Ákos Milánkovich, and **Rudolf Ferenc**. “An End-to-End Framework for Repairing Potentially Vulnerable Source Code”. In: *Proceedings of the 22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)*. Oct. 2022, pp. 242–247.
- [MVH22] Balázs Mosolygó, Norbert Vándor, Péter Hegedűs, and **Rudolf Ferenc**. “A Line-Level Explainable Vulnerability Detection Approach for Java”. In: *Proceedings of the 22nd International Conference on Computational Science and Its Applications (ICCSA 2022)*. Malaga, Spain: Springer International Publishing, July 2022, pp. 106–122.
- [RAF22] Balázs Rózsa, Gábor Antal, and **Rudolf Ferenc**. “Don’t DIY: Automatically transform legacy Python code to support structural pattern matching”. In: *Proceedings of the 22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)*. Oct. 2022, pp. 164–169.
- [AJF21] Tamás Aladics, Judit Jász, and **Rudolf Ferenc**. “Bug Prediction Using Source Code Embedding Based on Doc2Vec”. In: *Proceedings of the 21th International Conference on Computational Science and Its Applications (ICCSA 2021)*. Cagliari, Italy: Springer International Publishing, Sept. 2021, pp. 382–397.
- [MVA21] Balázs Mosolygó, Norbert Vándor, Gábor Antal, Péter Hegedűs, and **Rudolf Ferenc**. “Towards a Prototype Based Explainable JavaScript Vulnerability Prediction Model”. In: *Proceedings of the 1st International Conference on Code Quality (ICCCQ 2021)*. Mar. 2021, pp. 15–25.
- [SVT21] Zsolt János Szamosvölgyi, Endre Tamás Váradi, Zoltán Tóth, Judit Jász, and **Rudolf Ferenc**. “Assessing Ensemble Learning Techniques in Bug Prediction”. In: *Proceedings of the 21th International Conference on Computational Science and Its Applications (ICCSA 2021)*. Cagliari, Italy: Springer International Publishing, Sept. 2021, pp. 368–381.

- [VHF21] Tamás Viszok, Péter Hegedűs, and **Rudolf Ferenc**. “Improving Vulnerability Prediction of JavaScript Functions using Process Metrics”. In: *Proceedings of the 16th International Conference on Software and Data Technologies (ICSOFT)*. INSTICC Press, July 2021, pp. 185–195.
- [AJF20] Tamás Aladics, Judit Jász, and **Rudolf Ferenc**. “Feature Extraction from JavaScript”. In: *Proceedings of the 12th Conference of PhD Students in Computer Science (CSCS 2020)*. Szeged, Hungary: University of Szeged, July 2020, pp. 143–146.
- [VGS19] Vancsics Béla, Gyimesi Péter, Stocco Andrea, Mazinianian Davood, Beszédes Árpád, Ferenc Rudolf, and Mesbah Ali. “Poster: Supporting JavaScript Experimentation with BugsJS”. In: *Proceedings of the 12th IEEE Conference on Software Testing, Validation and Verification (ICST)*. IEEE. Apr. 2019, pp. 375–378.
- [BMS19] Barta Bence, Manz Günter, Siket István, and Ferenc Rudolf. “Challenges of SonarQube Plug-In Maintenance”. In: *Proceedings of the 26th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*. IEEE. Feb. 2019, pp. 574–578.
- [FHG19] **Rudolf Ferenc**, Péter Hegedűs, Péter Gyimesi, Gábor Antal, Bán Dénes, and Tibor Gyimóthy. “Challenging Machine Learning Algorithms in Predicting Vulnerable JavaScript Functions”. In: *Proceedings of the 7th IEEE/ACM International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (RAISE)*. IEEE/ACM. May 2019, pp. 8–14.
- [JSP19] Judit Jász, István Siket, Edit Pengő, Zoltán Ságodi, and **Rudolf Ferenc**. “Systematic Comparison of Six Open-source Java Call Graph Construction Tools”. In: *Proceedings of the 14th International Conference on Software and Data Technologies (ICSOFT)*. Prague, Czech Republic: INSTICC Press, July 2019, pp. 117–128.
- [GVS19] Gyimesi Péter, Vancsics Béla, Stocco Andrea, Mazinianian Davood, Beszédes Árpád, Ferenc Rudolf, and Mesbah Ali. “BugsJS: A Benchmark of JavaScript Bugs”. In: *Proceedings of the 12th IEEE Conference on Software Testing, Validation and Verification (ICST)*. IEEE. Apr. 2019, pp. 90–101.
- [AHT18] Gábor Antal, Péter Hegedűs, Zoltán Tóth, **Rudolf Ferenc**, and Tibor Gyimóthy. “Static JavaScript Call Graphs: A Comparative Study”. In: *Proceedings of the 18th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)*. Distinguished Paper Award. Sept. 2018, pp. 177–186.
- [FTL18] **Rudolf Ferenc**, Zoltán Tóth, Gergely Ladányi, István Siket, and Tibor Gyimóthy. “A public unified bug dataset for Java”. In: *Proceedings of the 14th International Conference on Predictive Models and Data Analytics in Software Engineering*. ACM. 2018, pp. 12–21.
- [AHS16] Gábor Antal, Dávid Havas, István Siket, Árpád Beszédes, **Rudolf Ferenc**, and József Mihalicza. “Transforming C++11 Code to C++03 to Support Legacy Compilation Environments”. In: *Proceedings of the IEEE 16th International Working Conference on Source Code Analysis and Manipulation (SCAM 2016)*. Raleigh, NC, USA: IEEE Computer Society, Oct. 2016, pp. 177–186.

- [GBS16] Gábor Gyimesi, Dénes Bán, István Siket, **Rudolf Ferenc**, Silvano Brugnoli, Thomas Corbat, Peter Sommerlad, and Toni Suter. “Enforcing Techniques and Transformation of C/C++ Source Code to Heterogeneous Hardware”. In: *Proceedings of the 16th IEEE International Conference on Scalable Computing and Communication (ScalCom 2016)*. Toulouse, France: IEEE Computer Society, July 2016, pp. 1173–1180.
- [KHF16] István Kádár, Péter Hegedűs, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Code Refactoring Dataset and Its Assessment Regarding Software Maintainability”. In: *Proceedings of the 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2016)*. Suita, Osaka, Japan: IEEE Computer Society, Mar. 2016, pp. 599–603.
- [KHF16b] István Kádár, Péter Hegedűs, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Manually Validated Code Refactoring Dataset and Its Assessment Regarding Software Maintainability”. In: *Proceedings of the 12th ACM International Conference on Predictive Models and Data Analytics in Software Engineering (PROMISE 2016)*. Ciudad Real, Spain: ACM, Sept. 2016, 10:1–10:4.
- [KHF16c] István Kádár, Péter Hegedűs, **Rudolf Ferenc**, and Tibor Gyimóthy. “Assessment of the Code Refactoring Dataset Regarding the Maintainability of Methods”. In: *Proceedings of the 16th International Conference on Computational Science and Its Applications (ICCSA 2016)*. Beijing, China: Springer International Publishing, July 2016, pp. 610–624.
- [SNF16] Gábor Szóke, Csaba Nagy, **Rudolf Ferenc**, and Tibor Gyimóthy. “Designing and Developing Automated Refactoring Transformations: An Experience Report”. In: *Proceedings of the 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2016)*. Suita, Osaka, Japan: IEEE Computer Society, Mar. 2016, pp. 693–697.
- [TGF16] Zoltán Tóth, Péter Gyimesi, and **Rudolf Ferenc**. “A Public Bug Database of GitHub Projects and Its Application in Bug Prediction”. In: *Proceedings of the 16th International Conference on Computational Science and Its Applications (ICCSA 2016)*. Beijing, China: Springer International Publishing, July 2016, pp. 625–638.
- [BFS15] Dénes Bán, **Rudolf Ferenc**, István Siket, and Ákos Kiss. “Prediction Models for Performance, Power, and Energy Efficiency of Software Executed on Heterogeneous Hardware”. In: *Proceedings of the 13th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2015)*. Helsinki, Finland: IEEE Computer Society, Aug. 2015, pp. 178–183.
- [FHF15] Csaba Faragó, Péter Hegedűs, and **Rudolf Ferenc**. “Code Ownership: Impact on Maintainability”. In: *Proceedings of the 15th International Conference on Computational Science and Its Applications (ICCSA 2015)*. Vol. 9159. Lecture Notes in Computer Science (LNCS). Banff, Alberta, Canada: Springer-Verlag, June 2015, pp. 3–19.
- [FHF15b] Csaba Faragó, Péter Hegedűs, and **Rudolf Ferenc**. “Cumulative Code Churn: Impact on Maintainability”. In: *Proceedings of the 15th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2015)*. Bremen, Germany: IEEE Computer Society, Sept. 2015, pp. 141–150.

- [FHL15] Csaba Faragó, Péter Hegedűs, Gergely Ladányi, and **Rudolf Ferenc**. “Impact of Version History Metrics on Maintainability”. In: *Proceedings of the 8th International Conference on Advanced Software Engineering & Its Applications (ASEA 2015)*. Jeju Island, Korea: IEEE Computer Society, Nov. 2015, pp. 30–35.
- [GGT15] Péter Gyimesi, Gábor Gyimesi, Zoltán Tóth, and **Rudolf Ferenc**. “Characterization of Source Code Defects by Data Mining Conducted on GitHub”. In: *Proceedings of the 15th International Conference on Computational Science and Its Applications (ICCSA 2015)*. Vol. 9159. Lecture Notes in Computer Science (LNCS). Banff, Alberta, Canada: Springer-Verlag, June 2015, pp. 47–62.
- [KHF15] István Kádár, Péter Hegedűs, and **Rudolf Ferenc**. “Adding Constraint Building Mechanisms to a Symbolic Execution Engine Developed for Detecting Runtime Errors”. In: *Proceedings of the 15th International Conference on Computational Science and Its Applications (ICCSA 2015)*. Vol. 9159. Lecture Notes in Computer Science (LNCS). Banff, Alberta, Canada: Springer-Verlag, June 2015, pp. 20–35.
- [LTF15] Gergely Ladányi, Zoltán Tóth, **Rudolf Ferenc**, and Tibor Keresztesi. “A Software Quality Model for RPG”. In: *Proceedings of the 22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2015)*. Montréal, Canada: IEEE Computer Society, Mar. 2015, pp. 91–100.
- [SNF15] Gábor Szőke, Csaba Nagy, Lajos Jenő Fülöp, **Rudolf Ferenc**, and Tibor Gyimóthy. “FaultBuster: An Automatic Code Smell Refactoring Toolset”. In: *Proceedings of the 15th International Working Conference on Source Code Analysis and Manipulation (SCAM 2015)*. Bremen, Germany: IEEE Computer Society, Sept. 2015, pp. 253–258.
- [SNH15] Gábor Szőke, Csaba Nagy, Péter Hegedűs, **Rudolf Ferenc**, and Tibor Gyimóthy. “Do Automatic Refactorings Improve Maintainability? An Industrial Case Study”. In: *Proceedings of the 31st International Conference on Software Maintenance and Evolution (ICSME 2015)*. Bremen, Germany: IEEE Computer Society, Sept. 2015, pp. 429–438.
- [TVF15] Zoltán Tóth, László Vidács, and **Rudolf Ferenc**. “Comparison of Static Analysis Tools for Quality Measurement of RPG Programs”. In: *Proceedings of the 15th International Conference on Computational Science and Its Applications (ICCSA 2015)*. Vol. 9159. Lecture Notes in Computer Science (LNCS). Banff, Alberta, Canada: Springer-Verlag, June 2015, pp. 177–192.
- [BHS14] Tibor Bakota, Péter Hegedűs, István Siket, Gergely Ladányi, and **Rudolf Ferenc**. “QualityGate SourceAudit: a Tool for Assessing the Technical Quality of Software”. In: *Proceedings of the 2014 Software Evolution Week (Merger of the 18th IEEE European Conference on Software Maintenance and Reengineering & 21st IEEE Working Conference on Reverse Engineering – CSMR-WCRE 2014)*. Antwerp, Belgium: IEEE Computer Society, Feb. 2014, pp. 440–445.

- [BaF14] Dénes Bán and **Rudolf Ferenc**. “Recognizing Antipatterns and Analyzing Their Effects on Software Maintainability”. In: *Proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA 2014)*. Vol. 8583. Lecture Notes in Computer Science (LNCS). Guimarães, Portugal: Springer-Verlag, June 2014, pp. 337–352.
- [DVF14] Richárd Dévai, László Vidács, **Rudolf Ferenc**, and Tibor Gyimóthy. “Service Layer for IDE Integration of C/C++ Preprocessor Related Analysis”. In: *Proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA 2014)*. Vol. 8583. Lecture Notes in Computer Science (LNCS). Guimarães, Portugal: Springer-Verlag, June 2014.
- [FHF14] Csaba Faragó, Péter Hegedűs, and **Rudolf Ferenc**. “The Impact of Version Control Operations on the Quality Change of the Source Code”. In: *Proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA 2014)*. Vol. 8583. Lecture Notes in Computer Science (LNCS). Guimarães, Portugal: Springer-Verlag, June 2014, pp. 353–369.
- [FLS14] **Rudolf Ferenc**, László Langó, István Siket, Tibor Gyimóthy, and Tibor Bakota. “SourceMeter SonarQube plug-in”. In: *Proceedings of the 14th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2014)*. Victoria, British Columbia, Canada: IEEE Computer Society, Sept. 2014, pp. 77–82.
- [LHF14] Gergely Ladányi, Péter Hegedűs, **Rudolf Ferenc**, István Siket, and Tibor Gyimóthy. “The Connection of the Bug Density and Maintainability of Classes”. In: *8th International Workshop on Software Quality and Maintainability*. SQM. Presentation only. Antwerp, Belgium, Feb. 2014.
- [SAN14] Gábor Szőke, Gábor Antal, Csaba Nagy, **Rudolf Ferenc**, and Tibor Gyimóthy. “Bulk Fixing Coding Issues and Its Effects on Software Quality: Is It Worth Refactoring?” In: *Proceedings of the 14th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2014)*. Victoria, British Columbia, Canada: IEEE Computer Society, Sept. 2014, pp. 95–104.
- [SNF14] Gábor Szőke, Csaba Nagy, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Case Study of Refactoring Large-Scale Industrial Systems to Efficiently Improve Source Code Quality”. In: *Proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA 2014)*. Vol. 8583. Lecture Notes in Computer Science (LNCS). Guimarães, Portugal: Springer-Verlag, June 2014, pp. 524–540.
- [UHV14] Zoltán Ujhelyi, Ákos Horváth, Dániel Varró, Norbert István Csiszár, Gábor Szőke, László Vidács, and **Rudolf Ferenc**. “Anti-pattern Detection with Model Queries: A Comparison of Approaches”. In: *Proceedings of the 2014 Software Evolution Week (Merger of the 18th IEEE European Conference on Software Maintenance and Reengineering & 21st IEEE Working Conference on Reverse Engineering – CSMR-WCRE 2014)*. Best paper of the conference. Antwerp, Belgium: IEEE Computer Society, Feb. 2014, pp. 293–302.

- [DJF13] Dan Daniel, Stan Jarzabek, and **Rudolf Ferenc**. “Configuring Software for Reuse with VCL”. In: *Proceedings of the 13th Symposium on Programming Languages and Software Tools (SPLST 2013)*. Szeged, Hungary: University of Szeged, Aug. 2013, pp. 16–30.
- [DJN13] Richárd Dévai, Judit Jász, Csaba Nagy, and **Rudolf Ferenc**. “Designing and Implementing Control Flow Graph for Magic 4th Generation Language”. In: *Proceedings of the 13th Symposium on Programming Languages and Software Tools (SPLST 2013)*. Szeged, Hungary: University of Szeged, Aug. 2013, pp. 200–214.
- [FNF13] Dániel Fritsi, Csaba Nagy, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Methodology and Framework for Automatic Layout Independent GUI Testing of Applications Developed in Magic xpa”. In: *Proceedings of the 13th International Conference on Computational Science and Its Applications (ICCSA 2013)*. Vol. 7972. Lecture Notes in Computer Science (LNCS). Ho Chi Minh City, Vietnam: Springer-Verlag, June 2013, pp. 513–528.
- [HBL13b] Péter Hegedűs, Tibor Bakota, Gergely Ladányi, Csaba Faragó, and **Rudolf Ferenc**. “A Drill-Down Approach for Measuring Maintainability at Source Code Element Level”. In: *Proceedings of the 7th International Workshop on Software Quality and Maintainability (SQM 2013)*. Genova, Italy, Mar. 2013, pp. 20–29.
- [KHF13] István Kádár, Péter Hegedűs, and **Rudolf Ferenc**. “Runtime Exception Detection in Java Programs Using Symbolic Execution”. In: *Proceedings of the 13th Symposium on Programming Languages and Software Tools (SPLST 2013)*. Szeged, Hungary: University of Szeged, Aug. 2013, pp. 215–229.
- [MSF13] Kornél Muhi, Gábor Szóke, Lajos Jenő Fülöp, **Rudolf Ferenc**, and Ágoston Berger. “A Semi-automatic Usability Evaluation Framework”. In: *Proceedings of the 13th International Conference on Computational Science and Its Applications (ICCSA 2013)*. Vol. 7973. Lecture Notes in Computer Science (LNCS). Ho Chi Minh City, Vietnam: Springer-Verlag, June 2013, pp. 529–542.
- [NNF13] Gábor Novák, Csaba Nagy, and **Rudolf Ferenc**. “A Regression Test Selection Technique for Magic Systems”. In: *Proceedings of the 13th Symposium on Programming Languages and Software Tools (SPLST 2013)*. Szeged, Hungary: University of Szeged, Aug. 2013, pp. 76–89.
- [TNF13] Zoltán Tóth, Gábor Novák, **Rudolf Ferenc**, and István Siket. “Using Version Control History to Follow the Changes of Source Code Elements”. In: *Proceedings of the 17th European Conference on Software Maintenance and Reengineering (CSMR 2013)*. Genova, Italy: IEEE Computer Society, Mar. 2013, pp. 319–322.
- [BHL12] Tibor Bakota, Péter Hegedűs, Gergely Ladányi, Péter Körtvélyesi, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Cost Model Based on Software Maintainability”. In: *Proceedings of the 28th IEEE International Conference on Software Maintenance (ICSM 2012)*. Riva del Garda, Trento, Italy: IEEE Computer Society, Sept. 2012, pp. 316–325.

- [HBF12] Péter Hegedűs, Dénes Bán, **Rudolf Ferenc**, and Tibor Gyimóthy. “Myth or Reality? Analyzing the Effect of Design Patterns on Software Maintainability”. In: *Proceedings of the 2012 International Conference on Advanced Software Engineering & Its Applications (ASEA 2012)*. Vol. 340. Communications in Computer and Information Science (CCIS). Jeju Island, Korea: Springer-Verlag, Nov. 2012, pp. 138–145.
- [HLS12] Péter Hegedűs, Gergely Ladányi, István Siket, and **Rudolf Ferenc**. “Towards Building Method Level Maintainability Models Based on Expert Evaluations”. In: *Proceedings of the 2012 International Conference on Advanced Software Engineering & Its Applications (ASEA 2012)*. Vol. 340. Communications in Computer and Information Science (CCIS). Jeju Island, Korea: Springer-Verlag, Nov. 2012, pp. 146–154.
- [VDF12] László Vidács, Richárd Dévai, **Rudolf Ferenc**, and Tibor Gyimóthy. “Developer Support for Understanding Preprocessor Macro Expansions”. In: *Proceedings of the 2012 International Conference on Advanced Software Engineering & Its Applications (ASEA 2012)*. Vol. 340. Communications in Computer and Information Science (CCIS). Jeju Island, Korea: Springer-Verlag, Nov. 2012, pp. 121–130.
- [BKF11] Tibor Bakota, Péter Körtvélyesi, **Rudolf Ferenc**, and Tibor Gyimóthy. “A Probabilistic Software Quality Model”. In: *Proceedings of the 27th IEEE International Conference on Software Maintenance (ICSM 2011)*. Williamsburg, VA, USA: IEEE Computer Society, Sept. 2011, pp. 243–252.
- [FNF11] Dániel Fritsi, Csaba Nagy, **Rudolf Ferenc**, and Gyimóthy Tibor. “A Layout Independent GUI Test Automation Tool for Applications Developed in Magic/UniPaaS”. In: *Proceedings of the 12th Symposium on Programming Languages and Software Tools (SPLST 2011)*. Tallinn, Estonia, Nov. 2011, pp. 249–261.
- [HBI11] Péter Hegedűs, Tibor Bakota, László Illés, Gergely Ladányi, **Rudolf Ferenc**, and Tibor Gyimóthy. “Source Code Metrics and Maintainability: A Case Study”. In: *Proceedings of the 2011 International Conference on Advanced Software Engineering & Its Applications (ASEA 2011)*. Vol. 257. Communications in Computer and Information Science (CCIS). Jeju Island, Korea: Springer-Verlag, Dec. 2011, pp. 272–284.
- [NFB11] Csaba Nagy, **Rudolf Ferenc**, and Tibor Bakota. “A True Story of Refactoring a Large Oracle PL/SQL Banking System”. In: *Industrial Track of the 8th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2011)*. Szeged, Hungary, Sept. 2011.
- [NVF11] Csaba Nagy, László Vidács, **Rudolf Ferenc**, Tibor Gyimóthy, Ferenc Kocsis, and István Kovács. “Complexity Measures in 4GL Environment”. In: *Proceedings of the 2011 Computational Science and Its Applications (ICCSA 2011)*. Vol. 6786. Lecture Notes in Computer Science (LNCS). Santander, Spain: Springer-Verlag, June 2011, pp. 293–309.

- [NVF11b] Csaba Nagy, László Vidács, **Rudolf Ferenc**, Tibor Gyimóthy, Ferenc Kocsis, and István Kovács. “Solutions for Reverse Engineering 4GL Applications, Recovering the Design of a Logistical Wholesale System”. In: *Proceedings of the 15th IEEE European Conference on Software Maintenance and Reengineering (CSMR 2011)*. Oldenburg, Germany: IEEE Computer Society, Mar. 2011, pp. 343–346.
- [Fer10] **Rudolf Ferenc**. “Bug Forecast: A Method for Automatic Bug Prediction”. In: *Proceedings of the 2010 International Conference on Advanced Software Engineering & Its Applications (ASEA 2010)*. Vol. 117. Communications in Computer and Information Science (CCIS). Jeju Island, Korea: Springer-Verlag, Dec. 2010, pp. 283–295.
- [NVF10] Csaba Nagy, László Vidács, **Rudolf Ferenc**, Tibor Gyimóthy, Ferenc Kocsis, and István Kovács. “MAGISTER: Quality Assurance of Magic Applications for Software Developers and End Users”. In: *Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM 2010)*. Tool Demo. Timișoara, Romania: IEEE Computer Society, Sept. 2010, pp. 1–6.
- [SFF10] Lajos Schrettner, Lajos Jenő Fülöp, **Rudolf Ferenc**, and Tibor Gyimóthy. “Visualization of Software Architecture Graphs of Java Systems”. In: *Proceedings of the 8th ACM International Conference on the Principles and Practice of Programming in Java (PPPJ 2010)*. Vienna, Austria: ACM, Sept. 2010, pp. 148–157.
- [SHF10] Lajos Schrettner, Péter Hegedűs, **Rudolf Ferenc**, Lajos Jenő Fülöp, and Tibor Bakota. “Development of a Methodology, Software-suite and Service for Supporting Software Architecture Reconstruction”. In: *Proceedings of the 14th European Conference on Software Maintenance and Reengineering (CSMR 2010)*. Madrid, Spain: IEEE Computer Society, Mar. 2010, pp. 195–198.
- [UFP10] Béla Újházi, **Rudolf Ferenc**, Denys Poshyvanyk, and Tibor Gyimóthy. “New Conceptual Coupling and Cohesion Metrics for Object-Oriented Systems”. In: *Proceedings of the 10th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2010)*. Best paper of the conference. Timișoara, Romania: IEEE Computer Society, Sept. 2010, pp. 33–42.
- [HFF09] György Hegedűs, Lajos Jenő Fülöp, and **Rudolf Ferenc**. “Script2Ant – a tool for cross-platform scripting between different operating systems”. In: *Proceedings of the 11th Symposium on Programming Languages and Software Tools (SPLST 2009)*. Tampere, Finland, Aug. 2009, pp. 45–58.
- [LPF09] Yixun Liu, Denys Poshyvanyk, **Rudolf Ferenc**, Tibor Gyimóthy, and Nikos Chrisochoides. “Modeling Class Cohesion as Mixtures of Latent Topics”. In: *Proceedings of the 25th IEEE International Conference on Software Maintenance (ICSM 2009)*. Edmonton, Canada: IEEE Computer Society, Sept. 2009, pp. 233–242.
- [BBF08] Tibor Bakota, Árpád Beszédés, **Rudolf Ferenc**, and Tibor Gyimóthy. “Continuous Software Quality Supervision Using SourceInventory and Columbus”. In: *Companion Material of the 30th International Conference on Software Engineering (ICSE 2008)*. Leipzig, Germany: ACM, May 2008, pp. 931–932.

- [FFG08] Lajos Jenő Fülöp, **Rudolf Ferenc**, and Tibor Gyimóthy. “Towards a Benchmark for Evaluating Design Pattern Miner Tools”. In: *Proceedings of the 12th European Conference on Software Maintenance and Reengineering (CSMR 2008)*. Antwerp, Belgium: IEEE Computer Society, Apr. 2008, pp. 143–152.
- [FHF08c] Lajos Jenő Fülöp, Péter Hegedűs, and **Rudolf Ferenc**. “Introducing a Benchmark for Evaluating Reverse Engineering Tools”. In: *Proceedings of the 6th Conference of PhD Students in Computer Science (CSCS 2008)*. Szeged, Hungary: University of Szeged, July 2008, p. 25.
- [FHF08b] Lajos Jenő Fülöp, Péter Hegedűs, **Rudolf Ferenc**, and Tibor Gyimóthy. “Towards a Benchmark for Evaluating Reverse Engineering Tools”. In: *Proceedings of the 15th Working Conference on Reverse Engineering (WCRE 2008)*. Antwerp, Belgium: IEEE Computer Society, Oct. 2008, pp. 335–336.
- [BFG07] Tibor Bakota, **Rudolf Ferenc**, and Tibor Gyimóthy. “Clone Smells in Software Evolution”. In: *Proceedings of the 2007 IEEE International Conference on Software Maintenance (ICSM 2007)*. Paris, France: IEEE Computer Society, Oct. 2007, pp. 24–33.
- [FAV07] Lajos Jenő Fülöp, Ilia Árpád, Ádám Zoltán Végh, and **Rudolf Ferenc**. “Comparing and Evaluating Design Pattern Miner Tools”. In: *Proceedings of the 10th Symposium on Programming Languages and Software Tools (SPLST 2007)*. Dobogókő, Hungary: Eötvös Loránd University, June 2007, pp. 372–386.
- [VBF07] László Vidács, Árpád Beszédes, and **Rudolf Ferenc**. “Macro Impact Analysis Using Macro Slicing”. In: *Proceedings of the 2nd International Conference on Software and Data Technologies (ICSOFT 2007)*. Vol. SE. Barcelona, Spain: INSTICC Press, July 2007, pp. 230–235.
- [BFG06] Tibor Bakota, **Rudolf Ferenc**, Tibor Gyimóthy, Claudio Riva, and Jianli Xu. “Towards Portable Metrics-based Models for Software Maintenance Problems”. In: *Proceedings of the 22nd International Conference on Software Maintenance (ICSM 2006)*. Philadelphia, PA, USA: IEEE Computer Society, Sept. 2006, pp. 483–486.
- [FGF06] Lajos Jenő Fülöp, Tamás Gyovai, and **Rudolf Ferenc**. “Evaluating C++ Design Pattern Miner Tools”. In: *Proceeding of the 6th International Workshop on Source Code Analysis and Manipulation (SCAM 2006)*. Philadelphia, PA, USA: IEEE Computer Society, Sept. 2006, pp. 127–138.
- [BFG05] Árpád Beszédes, **Rudolf Ferenc**, and Tibor Gyimóthy. “Columbus: A Reverse Engineering Approach”. In: *Pre-Proceedings of the 13th Workshop on Software Technology and Engineering Practice (STEP 2005)*. Budapest, Hungary: IEEE Computer Society, Sept. 2005, pp. 93–96.
- [FBF05] **Rudolf Ferenc**, Árpád Beszédes, Lajos Jenő Fülöp, and János Lele. “Design Pattern Mining Enhanced by Machine Learning”. In: *Proceedings of the 21st IEEE International Conference on Software Maintenance (ICSM 2005)*. Budapest, Hungary: IEEE Computer Society, Sept. 2005, pp. 295–304.

- [BFG04] Árpád Beszédés, **Rudolf Ferenc**, Tamás Gergely, Tibor Gyimóthy, Gábor Lóki, and László Vidács. “CSiBE Benchmark: One Year Perspective and Plans”. In: *Proceedings of the 2004 GCC Developers’ Summit (GCC 2004)*. Ottawa, Canada, June 2004, pp. 7–15.
- [FBG04b] **Rudolf Ferenc**, Árpád Beszédés, and Tibor Gyimóthy. “Extracting Facts with Columbus from C++ Code”. In: *Tool Demonstrations of the 8th European Conference on Software Maintenance and Reengineering (CSMR 2004)*. Tampere, Finland, Mar. 2004, pp. 4–8.
- [FBG04] **Rudolf Ferenc**, Árpád Beszédés, and Tibor Gyimóthy. “Fact Extraction and Code Auditing with Columbus and SourceAudit”. In: *Proceedings of the 20th International Conference on Software Maintenance (ICSM 2004)*. Chicago Illinois, USA: IEEE Computer Society, Sept. 2004, p. 513.
- [FSG04] **Rudolf Ferenc**, István Siket, and Tibor Gyimóthy. “Extracting Facts from Open Source Software”. In: *Proceedings of the 20th International Conference on Software Maintenance (ICSM 2004)*. Chicago Illinois, USA: IEEE Computer Society, Sept. 2004, pp. 60–69.
- [SiF04] István Siket and **Rudolf Ferenc**. “Calculating Metrics from Large C++ Programs”. In: *Proceeding of the 6th International Conference on Applied Informatics (ICAI 2004)*. Eger, Hungary, Jan. 2004, pp. 319–328.
- [VBF04] László Vidács, Árpád Beszédés, and **Rudolf Ferenc**. “Columbus Schema for C/C++ Preprocessing”. In: *Proceedings of the 8th European Conference on Software Maintenance and Reengineering (CSMR 2004)*. Tampere, Finland: IEEE Computer Society, Mar. 2004, pp. 75–84.
- [BaF03] Zsolt Balanyi and **Rudolf Ferenc**. “Mining Design Patterns from C++ Source Code”. In: *Proceedings of the 19th International Conference on Software Maintenance (ICSM 2003)*. Amsterdam, The Netherlands: IEEE Computer Society, Sept. 2003, pp. 305–314.
- [FeB03] **Rudolf Ferenc** and Árpád Beszédés. “Az Objektumvezérelt Szoftverek Elemzése”. In: *VIII. Országos (Centenárium) Neumann Kongresszus Előadások és Összefoglalók*. Budapest, Hungary: Neumann János Számítógép-tudományi Társaság, Oct. 2003, pp. 463–474.
- [FeB02] **Rudolf Ferenc** and Árpád Beszédés. “Data Exchange with the Columbus Schema for C++”. In: *Proceedings of the 6th European Conference on Software Maintenance and Reengineering (CSMR 2002)*. Budapest, Hungary: IEEE Computer Society, Mar. 2002, pp. 59–66.
- [FBT02] **Rudolf Ferenc**, Árpád Beszédés, Mikko Tarkiainen, and Tibor Gyimóthy. “Columbus – Reverse Engineering Tool and Schema for C++”. In: *Proceedings of the 18th International Conference on Software Maintenance (ICSM 2002)*. Montréal, Canada: IEEE Computer Society, Oct. 2002, pp. 172–181.
- [FGM01] **Rudolf Ferenc**, Juha Gustafsson, László Müller, and Jukka Paakki. “Recognizing Design Patterns in C++ programs with the integration of Columbus and Maisa”. In: *Proceedings of the 7th Symposium on Programming Languages and Software Tools (SPLST 2001)*. Szeged, Hungary: University of Szeged, June 2001, pp. 58–70.

- [FMB01] **Rudolf Ferenc**, Ferenc Magyar, Árpád Beszédes, Ákos Kiss, and Mikko Tarkiainen. “Columbus – Tool for Reverse Engineering Large Object Oriented Software Systems”. In: *Proceedings of the 7th Symposium on Programming Languages and Software Tools (SPLST 2001)*. Szeged, Hungary: University of Szeged, June 2001, pp. 16–27.
- [FSH01] **Rudolf Ferenc**, Susan Elliott Sim, Richard C Holt, Rainer Koschke, and Tibor Gyimóthy. “Towards a Standard Schema for C/C++”. In: *Proceedings of the 8th Working Conference on Reverse Engineering (WCRE 2001)*. Stuttgart, Germany: IEEE Computer Society, Oct. 2001, pp. 49–58.

Technical reports

- [Fer01] **Rudolf Ferenc**. *A short introduction to the Columbus Proposal for a standard C/C++ Schema*. Tech. rep. Szeged, Hungary: University of Szeged, 2001.
- [FBM01] **Rudolf Ferenc**, Árpád Beszédes, Ferenc Magyar, and Tibor Gyimóthy. *A short introduction to Columbus/CAN*. Tech. rep. Szeged, Hungary: University of Szeged, 2001.
- [FMB00] **Rudolf Ferenc**, Ferenc Magyar, Árpád Beszédes, Gábor Márton, Mikko Tarkiainen, and Tibor Gyimóthy. *Columbus 2.0 – Tool for Reverse Engineering Large Object Oriented Software Systems*. Tech. rep. Szeged, Hungary: University of Szeged, 2000.
- [BFG99] Árpád Beszédes, **Rudolf Ferenc**, Tibor Gyimóthy, Ferenc Magyar, Gábor Márton, and Mikko Tarkiainen. *An Evaluation of Reverse Engineering Capabilities of the TDE/Columbus system*. Tech. rep. Szeged, Hungary: University of Szeged, 1999.

PhD theses

- [Ban18] Dénes László Bán. “Static Source Code Analysis in Pattern Recognition, Performance Optimization and Software Maintainability”. Supervisor: Rudolf Ferenc. PhD thesis. Szeged, Hungary: University of Szeged, 2018.
- [Kad18] István Kádár. “Symbolic Execution for Runtime Error Detection and Investigation of Refactoring Activities Based on a New Dataset”. Supervisor: Rudolf Ferenc. PhD thesis. Szeged, Hungary: University of Szeged, 2018.
- [Far17] Csaba Faragó. “Maintainability of Source Code and its Connection to Version Control History Metrics”. Supervisor: Rudolf Ferenc. PhD thesis. Szeged, Hungary: University of Szeged, 2017.
- [Heg15] Péter Hegedűs. “Advances in Software Product Quality Measurement and its Applications in Software Evolution”. Supervisor: Rudolf Ferenc. PhD thesis. Szeged, Hungary: University of Szeged, 2015.
- [Fer05] **Rudolf Ferenc**. “Modelling and reverse engineering C++ source code”. Supervisor: Tibor Gyimóthy. PhD thesis. Szeged, Hungary: University of Szeged, 2005.

Miscellaneous

- [BKL07] Attila Bicsák, Ákos Kiss, Gábor Lehotai, **Rudolf Ferenc**, and Tibor Gyimóthy. *Method and a device for abstracting instruction sequences with tail merging*. US Patent 7,293,264. Nov. 2007.
- [BKF07] Attila Bicsák, Ákos Kiss, **Rudolf Ferenc**, and Tibor Gyimóthy. *Constructing control flows graphs of binary executable programs at post-link time*. US Patent 7,207,038. Apr. 2007.
- [AFR97] Péter Alb, **Rudolf Ferenc**, and Vilmos Rajda. *Vállalati információs rendszer elemzése és tervezése SSADM-mel és a DFD-k globális analízise*. OTDK dolgozat. Konzulensek: Dr. Bohus Mihály, Dr. Gyimóthy Tibor. Apr. 1997.
- [Fer97] **Rudolf Ferenc**. “Adatfolyam-diagramok globális elemzése. Információs rendszer tervezése SSADM-mel”. Témavezető: Dr. Gyimóthy Tibor. MA thesis. Szeged, Hungary: József Attila Tudományegyetem, 1997.