

Curriculum Vitae of Ivan Kurtev

Personal Data

Name: Ivan Kurtev Ivanov
Date of birth: June 9, 1972
Place of birth: Yambol, Bulgaria

Address: Software Engineering Group
Faculty of Applied Mathematics, Electrical Engineering, and Informatics (EWI)
University of Twente
P.O. Box 217
7500 AE, Enschede
the Netherlands

Phone: +31 (0) 53 489 27 38
Email: kurtev@ewi.utwente.nl
ivan.kurtev@gmail.com
Personal page: <http://www.utwente.nl/ewi/trese/people/Kurtev/>

Languages: English (fluent)
Dutch (beginner)
French (beginner)
Russian (medium)
Bulgarian (native)

Education

2005 PhD in Computer Science, University of Twente, the Netherlands
Thesis title: '*Adaptability of Model Transformations*' (under the supervision of Prof. Dr. Ir. M. Aksit and Dr. Ir. K.G. van den Berg)

1995 MSc in Computer Science, University of Sofia, Bulgaria

1990 High School of Mathematics, Yambol, Bulgaria

Employment History

Nov 2009 – Nov 2012 (expiration of temporary contract)	Assistant Professor (Universitair Docent), Software Engineering Group, University of Twente, Netherlands
Dec 2006 – Nov 2009	Postdoctoral researcher (QuadREAD project), Software Engineering Group, University of Twente, Netherlands
June 2005- Nov 2006	Postdoctoral researcher (MODELWARE project), ATLAS Group, INRIA & University of Nantes, France
Feb 2001-June 2005	PhD associate, Software Engineering Group, University of Twente, the Netherlands
Sep 2000- Feb 2001	Research Fellow, University of Twente, the Netherlands
Aug 1997- Sep 2000	Senior Assistant Professor ¹ , Faculty of Mathematics and Informatics, University of Sofia, Bulgaria
1996-1997	Military service (compulsory)

Research Interests

- Model Driven Engineering
 - Design and implementation of domain-specific modeling languages

¹ Academic titles in Bulgaria are: assistant professor, senior assistant professor, chief assistant professor, associate professor, full professor. The first three are junior positions that do not require a PhD degree

- Metamodeling and metalanguages
- Applications of Formal Ontology in metamodeling and language design
- Model transformation languages
- Software requirements and architectural modeling
 - Requirements modeling and reasoning
 - Software architecture simulation and verification
 - Traceability between requirements and architecture
 - Change impact analysis in requirements and architecture

Academic Activities

Participation in projects

- Dec 2006 – Dec 2010 Project QuadREAD, funded by NWO
 Role:
 - Principal Investigator (June 2010 – Dec 2010, after the retirement of the Principal Investigator dr. Klaas van den Berg)
 - Researcher (Dec 2006 – June 2010)
- QuadREAD (Quality-Driven Requirements Engineering and Architectural Design) was a project funded by the Dutch science foundation with the participation of 5 industrial partners. The project aimed at bridging the gap between requirements engineers and software architects. The research objectives were developing techniques for requirements modeling and reasoning, traceability between requirements and architecture, and supporting software architecture evolution by using change impact analysis techniques.
- Mar 2010 – Sep 2010 Project Modelploy, STW Phase 1 grant
 Role: Principal Investigator
- Modelploy was funded by Ministry of Industry (the Netherlands) as a STW Valorization Grant Phase 1 project. It was carried out in collaboration with the industrial partner Novulo B.V. The goal was to improve the model and component reuse in the commercial tool Novulo Architect.
- June 2005 – Nov 2006 MODELWARE FP6 European Project
 Role: Postdoc researcher at INRIA and University of Nantes, France
- MODELWARE was a FP6 IP project with 19 partners. My research activities were in the domain of Model Driven Engineering and led to contribution to the AMMA MDE platform. The main focus was on developing the ATL transformation language and the foundation for model-based domain specific languages (DSLs).
- Sep 2000 – June 2005 EPIC programme
 Role: PhD student (University of Twente)
- The doctoral thesis explored the adaptability quality property of model transformations. A metamodeling framework based on explicit definition of instantiation relation was proposed together with a model transformation language called Mistral. The framework was applied in the domain of XML processing with object-oriented languages aiming to improve the adaptability and the composability of XML applications.

Supervision of PhD students

- *Assistant promotor and daily supervisor* of dr. Arda Goknil (currently with AOSTE team at INRIA, France). The thesis was defended in October 2011 titled “Traceability of Requirements And Software Architecture for Change Management”. Promotor: Prof.Dr.Ir. Mehmet Aksit, University of Twente, the Netherlands.
- *Daily supervision* of Dr. Frédéric Jouault (currently with AtlanMOD team at INRIA, France). Period: June 2005 – Sep 2006. Main supervisor: Prof. Dr. Jean Bézivin.

Grants

2010 STW Knowledge Valorization Grant Phase 1. Project *Modelploy* carried out together with the company Novulo B.V. (25,000 euro). Funded by the Dutch Ministry of Industry. Duration: 6 months

Participation in PCs

- PC member of *ECMFA 2013*
- PC member of *ICMT 2013*
- PC member of *MODELSWARD 2013*
- PC member of *LDTA 2012*
- PC member of *ITSLE 2011-2012*
- PC member of *SLE 2010-2011*
- PC member of *MtATL workshop 2009-2011*
- PC member of *TOOLS Europe 2007-2009*
- PC member of *ICMT 2008-2012*
- PC member of *ECMFA 2009-2012*
- PC member of Model Driven Requirements Engineering Workshop, *MoDre2011-2012*
- PC member for the IET Software special issue on Domain-Specific Aspect Languages
- PC member for the Springer SoSym special issue on Model Transformations (follow-up of ACM SAC 2007 MT Track)
- Co-reviewer for *AOSD 2008*
- PC member of *ACM SAC 2007*, Model Transformations Track
- Co-reviewer for *ECOOP 2007*
- Member of the tutorial selection committee for *MoDELS 2007*
- PC member of 1st International Workshop on Global Integrated Model Management (GaMMa’2006), collocated with ICSE 2006, Shanghai, China, 2006
- PC member of 4th Workshop on Software Model Engineering (WiSME 2005), collocated with MoDELS 2005, Montego Bay, Jamaica, 2005

I serve as a reviewer for IEEE Software, Elsevier Automated Software Engineering Journal, Elsevier Journal of Science of Computer Programming, Springer Journal of Software and System Modeling (SoSym), Journal of Object Technology (JOT)

Talks

- Invited speaker at 3d Brazilian Workshop on Model Driven Development (DSDM 2012), Natal, Brazil, September, 2012. *Towards Ontology-driven Language Engineering*
- SoTeSoLa summer school, University of Koblenz-Landau, Germany, 2012. *Technological spaces: past, present, and future*
- IPA Spring days, the Netherlands, 2012. *Performance and Scalability in Model Transformations: experiments with ATL, QVT and Java*
- IPA Spring days, the Netherlands, 2008. *Seminar on Model Transformations* (1 day)
- Invited speaker at AGTIVE 2007, Kassel, Germany, October, 2007. *State-of-the-art of QVT: a Model Transformation Language Standard*

Participation in PhD committees

- Assistant promotor of Arda Goknil, University of Twente, 2011

- Committee member of Jose Eduardo Rivera, University of Malaga, 2010
- Committee member of Jesús Sánchez Cuadrado, University of Murcia, 2009
- Committee member of Arnor Solberg, University of Oslo, 2007

Organization of Conferences, Workshops and Tutorials

- Co-organizer of the Second and Third *Workshop on Model Transformations with ATL* (MtATL2010, MtATL2011)
- Local organizing chair of *ECMDA-FA 2009*, Enschede, 2009
- Co-organizer of European *Workshop on Composition of Model Transformations*, collocated with ECMDA-FA06, Bilbao, Spain, July 2006
- Co-organizer of Tutorial *MDE: Foundations, standards, and tools*. An illustration of an open courseware initiative in model engineering (together with Jean Bezivin). ECMDA-FA, Nuremberg, Germany, 2005
- Local organizing chair of *Workshop on Model Driven Architecture: Foundations and Applications* (MDAFA2003), Enschede, the Netherlands, 2003
- Co-organizer of *Workshop on Modular Representation and Interpretation of Concerns in XML*, in conjunction with AOSD2002, Enschede, the Netherlands, 2002

Participation in Expert Panels and Project Evaluation

- Project reviewer for the Greek Ministry of Education and Life Long Learning

Professional Memberships

- ACM
- IPA Research School, the Netherlands

Teaching Experience

Qualifications and training

Certificate for pedagogical competencies of *University Teaching Qualification (UTQ)*. Obtained in June 2012 from University of Twente, the Netherlands

Academic Courses and Educational Activities

2011	Tutor in the <i>Creative Technology</i> bachelor program, University of Twente
2010-2011	Course on <i>Software Management</i> (lecturer), University of Twente
2007-2012	Course on <i>Advanced Design of Software Architectures: Model Driven Engineering</i> (lecturer and course leader), University of Twente
	Course on <i>XML Technologies</i> (lecturer and course leader), University of Twente
2005	Course on <i>Advanced Design of Software Architectures</i> (lecturer), University of Twente
	Course on <i>XML Technologies</i> (lecturer), University of Twente
2001-2005	Course on <i>XML Technologies</i> (lecturer), University of Twente
2000	Course on <i>Object-oriented Design with UML</i> (teaching assistant), University of Sofia
1997-2000	Teaching assistant in various introductory courses on programming (Pascal and Java), University of Sofia
1996	Course on <i>Management Information Systems</i> (teaching assistant), University of Sofia

Invited Lectures

2010	Two days course on <i>Model transformations with QVT</i> , Ecole des Mines de Nantes, France
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Industrial Courses

2007	PATO Course on <i>Model Driven Architecture</i> , Enschede, April 16-17
2006	PATO Course on <i>Model Driven Architecture and Engineering</i> , CAMS Force Vision, the Netherlands

Supervised Student Graduation Projects

1. Joost Wolfswinkel, *Semi-automatically Enriching Ontologies: a Case Study in the e-Recruiting Domain*, University of Twente and Epiqo, 2012

2. Steven Bosems, *Performance Analysis of Model Transformations and Tools*, 2011
3. Tim Harleman, *Towards a Generic Model for Audit Trails*, University of Twente and Topicus, 2011
4. Gijs Stuurman, *Action Semantics applied in MDE*, 2010
5. Marten Sijtema, *Managing Variability in Model Transformations for Product Lines*, 2010
6. Alfons Laarman, *Ontology-based Metalanguage with Explicit Instantiation*, 2009
7. Jan-Willem Veldhuis, *Tool supported metamodeling approach for reasoning about requirements*, 2009
8. Martin Looise, *Inter-level consistency checking between requirements and design artifacts through the use of change event notification*, 2008
9. Daniel van't Oever, *Domain Specific Languages for User Programmable Virtualized Networks (UPVNs)*, University of Twente and TNO, 2008
10. Niek Hoogma, *Definition of Domain Specific Language for Model Composition*, 2008
11. Geert Vos, *Applying iterative development in an MDE software process*, University of Twente and Getronics, 2008
12. Josbert Lonnee, *A metamodeling approach to the interoperability and scalability of model repositories*, University of Twente and BizzDesign, 2008
13. Matthijs Dee, *Traceability-based Change Management in the Model Driven Architecture*, 2007
14. Chris Scheffers, *Tool support for selection of alternatives in MDA model transformations*, 2005
15. Wilco Bonestroo, *Evaluation of a Model Driven Architecture model transformation language TRL* (joint project with Thales Naval Nederland), 2004
16. Muzaffar Igamberdiev, *Generating XML-to-RDF transformations from high level specifications*, 2004
17. Anny Sari, *Mapping UML class models into XML schemas using heuristics*, 2004
18. Duong Do, *Composition of Web Services*, 2003
19. Alfraed Rosheuvel, *XML processing based on model transformations: design, implementation and testing of Unmarshaler*, 2003
20. Linda Gunawan, *Mapping UML domain models onto XML schemas using UML profiles*, 2003
21. Dennis Wagelaar, *A concept-based approach to aspect-oriented software design*, 2002

Tutorials

Organizer of Tutorial “*MDE: Foundations, standards, and tools. An illustration of an open courseware initiative in model engineering*” (together with Jean Bezivin). ECMDA-FA, Nuremberg, Germany, 2005

Others

Development and evaluation of open source courseware materials and curriculum on Model Driven Engineering (in the framework of the MODELWARE, IST European project 511731)

List of Publications by Ivan Kurtev

Key figures

Data from Google Scholar (November 2012)

Citations: 2722 citations

Most cited paper: 743 citations

H-index: 22

Journal Papers

1. Göknil, A., Kurtev, I., van den Berg, K.G., Veldhuis, J.-W. (2011) *Semantics of trace relations in requirements models for consistency checking and inferencing*. *Software and Systems Modeling*, 10(1): 31-54
2. Kurtev, I. (2010) *Application of reflection in a model transformation language*. *Software and System Modeling*, 9(3): 311-333
3. Aksit, M. and Kurtev, I. (2008) *Elsevier special issue on foundations and applications of model driven architecture*. *Science of Computer Programming*, 73 (1): 1-2
4. Jouault, F., Allilaire, F., Bézivin, J., and Kurtev, I. (2008) *ATL: a Model Transformation Tool*. *Science of Computer Programming*, special issue on Experimental Software Tools 72(1-2): 31-39
5. Jouault, F. and Kurtev, I. (2007) *On the interoperability of model-to-model transformation languages*. *Elsevier Science of Computer Programming*, 68 (3): 114-137
6. Kurtev, I., van den Berg, K.G., Jouault, F. (2007) *Rule-based modularization in model transformation languages illustrated with ATL*. *Science of Computer Programming*, 68 (3). pp. 138-154

Conference Papers

7. van Amstel, M., Bosems, S., Kurtev, I., Ferreira Pires, L. (2011) *Performance in Model Transformations: Experiments with ATL and QVT*. *ICMT 2011*: 198-212
8. Laarman, A., Kurtev, I. (2009) *Ontological Metamodeling with Explicit Instantiation*. *SLE 2009*: 174-183
9. Göknil, A. and Kurtev, I. and van den Berg, K.G. (2008) *A Metamodeling Approach for Reasoning about Requirements*. In: *ECMDA-FA 2008*, 9-13 June 2008, Berlin, Germany pp. 310-325. *Lecture Notes in Computer Science 5095*. Springer Verlag.
10. Kurtev, I. (2008) *Application of reflection in model transformation languages*. In: *Theory and Practice of Model Transformations*, 1-2 Jul 2008, Zurich, Switzerland. pp. 199-213. *Lecture Notes in Computer Science 5063*. Springer Verlag.
11. Kurtev, I. (2008) *State of the art of QVT: a model transformation language standard*. In: *Applications of Graph Transformations with Industrial Relevance*, Kassel, Germany. pp. 377-393. *Lecture Notes in Computer Science 5088*. Springer Verlag.
12. Cleenewerck, T., Kurtev, I. (2007) *Separation of Concerns in Translational Semantics for DSLs in Model Engineering*, *ACM SAC 2007*, Model Transformations Track, Seoul, Korea, March 2007
13. Jouault, F., Bezivin, J., Kurtev, I. (2006) *TCS: a DSL for the Specification of Textual Concrete Syntaxes in Model Engineering*. *GPCE2006*, Portland, Oregon, USA. October 2006
14. Bezivin, J., Buettner, F., Gogolla, M., Jouault, F., Kurtev, I., Lindow, A. (2006) *Model Transformations? Transformation Models!* *MoDELS 2006*, Genoa, Italy, October 2006
15. Kurtev, I., Bezivin, J., Jouault, F., Valduriez, P. (2006) *Model-based DSL Frameworks*. *OOPSLA 2006 Companion Proceedings*.
16. Jouault, F., Allilaire, F., Bézivin, J., Kurtev, I., Valduriez, P. (2006) *ATL: a QVT-like transformation language*. *OOPSLA 2006 Companion Proceedings*.
17. Bézivin, J., Bouzitouna, S., Del Fabro, M.D., Gervais, M.-P., Jouault, F., Kolovos, D., Kurtev, I., and Paige, R.F. (2006) *A Canonical Scheme for Model Composition*. *ECMDA-FA 2006*, Bilbao, Spain

18. Jouault, F., Kurtev, I (2006). *On the Architectural Alignment of ATL and QVT*. ACM SAC 2006, Model Transformations Track, Dijon, France
19. Kurtev, I., van den Berg, K., Jouault, F. (2006) *Evaluation of Rule-based Modularization in Model Transformation Languages illustrated with ATL*. ACM SAC 2006, Model Transformations Track, Dijon, France
20. Jouault, F., Kurtev, I. (2005) *Transforming Models with ATL*, In Jean-Michel Bruel (Ed.), Satellite Events at the MoDELS 2005 Conference: MoDELS 2005 International Workshops OCLWS, MoDeVA, MARTES, AOM, MTiP, WiSME, MODAUI, NfC, MDD, WUsCAM, Montego Bay, Jamaica, October 2-7, 2005, Revised Selected Papers, LNCS 3844, pp. 128-138, Springer-Verlag, 2006
21. Kurtev, I., van den Berg, K. (2005) *MISTRAL: A Language for Model Transformations in the MOF Meta-modeling Architecture*, In Aßmann, U., Aksit, M., and Rensink, A. (Eds.), Model Driven Architecture: European MDA Workshops: Foundations and Applications, MDAFA 2003 and MDAFA 2004, LNCS 3599, pp. 139-158, Springer-Verlag
22. Kurtev, I., van den Berg, K. (2005) *Building Adaptable and Reusable XML Applications with Model Transformations*, Proceedings of 14th World Wide Web Conference (WWW2005), Chiba, Japan
23. Kurtev, I., van den Berg, K. (2003) *Model Driven Architecture based XML Processing*. Proceedings of the 3d ACM Symposium on Document Engineering (DocEng2003), Grenoble, France
24. Kurtev, I., van den Berg, K., Aksit, M. (2003) *UML to XML-Schema Transformation: a Case Study in Managing Alternative Model Transformations in MDA*. Forum on Specification and Design Languages (FDL2003), Frankfurt, Germany
25. Stoyanov, S., Aroyo, L., Kommers, P., Kurtev, I. (1999) *SMILE Maker: A Web-Based Tool for Problem Solving*. WebNet

PhD Thesis

26. Kurtev, I. *Adaptability of Model Transformations*, PhD Thesis, University of Twente, ISBN 90-365-2184-X, May 2005

Workshop Papers

27. Tekka, A., Condori-Fernández, N., Kurtev, I., Quartel, D. and Engelsman, W. (2012) : *Impact Analysis of Indirect Goal Relations: Comparison of NFR and TROPOS Approaches Based on Industrial Case Study*. Second workshop on Model Driven Requirements Engineering (MoDRE2012)
28. Stuurman, G., Kurtev, I. (2011) *Action semantics for defining dynamic semantics of modeling languages*. In Proceedings of the Third Workshop on Behavioural Modeling (BM-FA '11). ACM, New York, NY, USA, 64-71.
29. Göknil, A. and Kurtev, I. and van den Berg, K.G. (2010) *Tool Support for Generation and Validation of Traces between Requirements and Architecture*. In: Proceedings of the Sixth ECMFA Traceability Workshop (ECMFA-TW), 15 June 2010, Paris, France. pp. 39-46. ACM International Conference proceedings Series. ACM. ISBN 978-1-60558-993-0
30. Göknil, A. and Kurtev, I. and van den Berg, K.G. and Veldhuis, J.-W. (2009) *Semantics of trace relations in requirements models for consistency checking and inferencing*. Software and Systems Modeling, Online. ISSN 1619-1366
31. ten Hove, D. and Göknil, A. and Kurtev, I. and van den Berg, K.G. and de Goede, K. (2009) *Change Impact Analysis for SysML Requirements Models based on Semantics of Trace Relations*. In: Proceedings of the ECMDA Traceability Workshop (ECMDA-TW) 2009, 23 June 2009, Enschede, the Netherlands. pp. 17-28. Centre for Telematics and Information Technology, University of Twente. ISSN 0929-0672

32. Göknil, A. and Kurtev, I. and van den Berg, K.G. (2008) *Change Impact Analysis based on Formalization of Trace Relations for Requirements*. In: ECMDA Traceability Workshop (ECMDA-TW), Berlin, Germany. pp. 59-75. SINTEF Report. ISBN 978-82-14-04396-9
33. Kurtev, I. *Metamodels: Definitions of Structures or Ontological Commitments?* Workshop on TOWERS of models. Collocated with TOOLS Europe 2007, Zurich, Switzerland, June 2007
34. Kurtev, I. and Dee, M. and Göknil, A. and van den Berg, K.G. (2007) *Traceability-based change management in operational mappings*. In: ECMDA Traceability Workshop 2007, June 12 2007, Haifa, Israel. pp. 57-67. SINTEF. ISBN 978-82-14-04056-2
35. Kurtev, I., Didonet Del Fabro, M. *A DSL for Definition of Model Composition Operators*. Second Workshop on Models and Aspects – Handling Crosscutting Concerns at MDSD. ECOOP2006, Nantes, France, July 2006
36. Bezivin, J., Kurtev, I. *Model-based Technology Integration with the Technical Space Concept*, In Metainformatics Symposium 2005, Esbjerg, Denmark, November 2005
37. Bézivin, J., Hillairet, G., Jouault, F., Kurtev, I., and Piers, W. *Bridging MS/DSL Tools and the Eclipse Modeling Framework*, OOPSLA2005 International Workshop on Software Factories, San Diego, CA, USA, October 2005
38. Bézivin, J., Brunette, C., Chevrel, R., Jouault, F., and Kurtev, I. *Bridging the Generic Modeling Environment (GME) and the Eclipse Modeling Framework (EMF)*, OOPSLA2005 Workshop on Best Practices for Model Driven Software Development, San Diego, CA, USA, October 2005
39. Jouault, F., Kurtev, I. *Transforming Models with ATL*, Workshop Model Transformations in Practice, collocated with MoDELS 2005, Montego Bay, Jamaica, October 2005
40. Bezivin, J., Brunelière, H., Jouault, F., and Kurtev, I. *Model Engineering Support for Tool Interoperability*, WiSME 2005, collocated with MoDELS 2005, Montego Bay, Jamaica, October 2005
41. Kurtev, I., van den Berg, K. *A Language for Model Transformations in the MOF Meta-modeling Architecture*. Proceedings of workshop on Model Driven Architecture: Foundations and Applications (MDAFA2004), Linköping, Sweden, June 2004
42. Kurtev, I., van den Berg, K. *Unifying Approach for Model Transformations in the MOF Metamodeling Architecture*. Proceedings of the 1st European MDA Workshop, MDA-IA, University of Twente, the Netherlands, March 2004
43. Kurtev, I., van den Berg, K. *A Synthesis-based Approach to Transformations in an MDA Software Development Process*. In A. Rensink (ed.), Model Driven Architecture: Foundations and Applications (MDAFA2003), CTIT Technical Report TR-CTIT-03-27, University of Twente, June 2003
44. Kurtev, I., Bézivin, J., Aksit, M. *Technological Spaces: An Initial Appraisal*. CoopIS, DOA'2002 Federated Conferences, Industrial track, Irvine, USA, 2002

Technical Reports and Unpublished Papers

45. Di Ruscio, D., Jouault, F., Kurtev, I., Bezivin, J., Pierantonio, A. *Extending AMMA for Supporting Dynamic Semantics Specifications of DSLs*. LINA Research Report, N. 06.02, April 2006
46. Di Ruscio, D., Jouault, F., Kurtev, I., Bezivin, J., Pierantonio, A. *A Practical Experiment to give Dynamic Semantics to a DSL for Telephony Services Development*. LINA Research Report, N. 06.03, April 2006

References

Prof. Dr. Ir. Mehmet Aksit

Head of Software Engineering Group
Faculty EWI, University of Twente
Phone : +31 53 489 2638
Fax : +31 53 489 3247
Email: M.Aksit@ewi.utwente.nl
Postal address:
Faculty of Electrical Engineering, Mathematics & Computer Science
University of Twente
PO Box 217
7500 AE Enschede
the Netherlands

Prof. Dr. Jean Bezivin

Professor Emeritus at University of Nantes, France
Industry consultant on software modeling
Email: jbezivin@gmail.com

Dr. Luis Ferreira Pires

Associate Professor
Software Engineering Group
Faculty EWI, University of Twente
Phone : +31 53 489 3843
Fax : +31 53 489 5477
Email: l.ferreirapires@ewi.utwente.nl
Postal address:
Faculty of Electrical Engineering, Mathematics & Computer Science
University of Twente
PO Box 217
7500 AE Enschede
the Netherlands