TEXAS STATE VITA

Please note: For all entries, list most recent items first.

I. Academic/Professional Background

A. Name: Rodion Podorozhny Title: Associate Professor

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PhD	2000 - 2004	The Univ. of Texas, Austin	Soft. Eng.	"Artifact based functional comparison of software processes" GPA 4.0/4.0 Advisor: Dewayne Perry PhD Committee: Tony Ambler, Don Batory, James Browne, Lee Osterweil
MSc	1995 - 1997	The Univ. of Massachusetts, Amherst	CS	"The criticality of modeling formalisms" GPA 3.72/4.0
BSc	1990 - 1994	St Petersburg Polytechnic University (former Leningrad Polytechnic Institute), Technical Cybernetics Faculty, Department of Information and Control Systems, GPA 4.0/4.0 Academic excellence scholarship		

Transferred 1988 – 1990 Leningrad Military Mechanical Institute (Baltic State Technical University since 1992), Faculty of Arms and Weapons Systems, Ordnance and Munitions Department (Designation "E3", group E382) GPA 4.0/4.0
Academic excellence scholarship after the name of D.F. Ustinov (USSR Minister of Defense)

Physics-Mathematics School Nr 17 of the city of Donetsk, USSR , graduated in June 1988
Silver graduation medal for academic excellence, pupil of Distinguished Teacher of Ukraine Vladimir Lysov (mathematics)

C. University Experience

Position	*University*	*Dates*
Associate Professor	Texas State University	Sept. 2010 - present
Assistant Professor	Texas State University	Sept. 2004 - 2010

D. Relevant Professional Experience

Position	*Entity*	*Dates*

Contractor	Hewlett-Packard Laboratories	2000-2002
Software Engineer	RiverLogic, Inc.	1999-2000

E. Other Professional Credentials (licensure, certification, etc.)

II. TEACHING

A. Teaching Honors and Awards:

Received many commendations for influencing a student's career

B. Courses Taught:

Formal Methods in Software Engineering (cs5392), Formal Languages (cs5338), Software Quality (cs5393), Software Engineering Practicum (cs5394), Advanced Software Process (cs5396), GUI Design (cs5389), Object-Oriented Design and Implementation (cs4354), Independent Study in Advanced Computer Science (cs5395), Practical Game Development (cs4378Z) and an undergraduate course on Software Engineering (cs3398 and cs4398)

C. Graduate Theses/Dissertations or Exit Committees (if supervisor, please indicate):

Supervisor for Master's Thesis of Stuart Siroky (graduated), Supervisor for Master's Thesis of Muhammad Shiraz, Committee member for Graduate Dissertations of Jason Michlowitz, Roie Black and Michael Carlson; supervised graduate student Karthik Radhakrishnan in an Independent Study; supervised graduate student Stephen Gross in an Independent Study; supervised undergraduate student Cory Lee in an Independent Study

D. Courses Prepared and Curriculum Development:

Developed course 4378Z (Practical Game Development)

Replaced over 70% of the material in 5392, 5393 and 5396 with more relevant topics and up-to-date information. Taught 4354 based on own experience of software development, introduced topics on software architecture and reliable **concurrent** software system synthesis and analysis into the course.

E. Funded External Teaching Grants and Contracts:

F. Submitted, but not Funded, External Teaching Grants and Contracts:

G. Funded Internal Teaching Grants and Contracts:

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

I. Other:

III. SCHOLARLY/CREATIVE

A. Works in Print

1. Books (if not refereed, please indicate)

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

e. Creative Books:

2. Articles

a. Refereed Journal Articles:

1) Leon Osterweil, Lori Clarke, Aaron Ellison, Emery Boose, Rodion Podorozhny, Alexander Wise, “Applying Software Engineering Technology to Support the Clear

and Precise Specification of Scientific Processes", accepted to *The IEEE Transactions on Automation Science and Engineering*, vol 7 issue 1, pp. 189-195, **2010**, (contribution: formalized an ecological process in a LJIL process language that resulted in a number of process versions, conducted its evaluation in a Juliette process enactment system, wrote the initial section that outlines the process formalization)

2) LiangZhao Zeng, Anne Ngu, Boualem Benatallah, Rodion Podorozhny, Hui Lei, "Dynamic composition and optimization of Web services", *The Journal of Distributed and Parallel Databases*, v. 24, issue 1-3 (Dec 2008), pp. 45-72, Kluwer Academic Publishing, **2008** (contribution: wrote the related work section)

3) Emery R. Boose, Aaron M Ellison, Leon Osterweil, Rodion Podorozhny, Lori Clarke, Alexander Wise, Julian Hadley, David Foster, "Ensuring Reliable Datasets for Environmental Models and Forecasts", *The Journal of Ecological Informatics, special issue on Ecological Data Management*, v. 2, issue 3, pp. 237-247, October **2007** (contribution: collected requirements from the ecologists, formalized an ecological process in a LJIL process language that resulted in a number of process versions, conducted its evaluation in a Juliette process enactment system, wrote the initial section that outlines the process formalization)

4) XiaoQin Zhang, Victor Lesser, and Rodion M. Podorozhny, "Multi-Dimensional, Multi-Step Negotiation", *The Journal of Autonomous Agents and Multi-Agent Systems*, pp. 5-40, v. 10, issue 1, January **2005** (contribution: implemented a number of negotiation protocols, conducted part of their evaluation, contributed to the section describing the protocols and editing of the paper)

5) Lesser, V.; Decker, K.; Wagner, T.; Carver, N.; Garvey, A.; Horling, B.; Neiman, D.; Podorozhny, R.; Nagendra Prasad, M.; Raja, A.; Vincent, R.; Xuan, P.; Zhang, X.Q. "Evolution of the GPGP/TAEMS Domain-Independent Coordination Framework", *The Journal of Autonomous Agents and Multi-Agent Systems*, pp. 87-143, v. 9, issue 1, July **2004** (designed and implemented a generalized software architecture for protocols of the GPGP coordination framework, described the implementation)

b. Non-refereed Articles:

3. Conference Proceedings

a. Refereed Conference Proceedings:

1) Stuart Siroky, Rodion M. Podorozhny, Guowei Yang, "Verification of architectural constraints on sequences of method invocations", peer reviewed "Java Pathfinder" workshop, 2014

2) Rodion M. Podorozhny, "Design and Verification of Cell-Phone Based Cyber-Physical Systems: A Position Paper", peer reviewed "the Internet of Things" workshop co-located with CollaborateCom International Conference, 2013

3) Michael Carlson (co-advisee), Anne Ngu, Rodion Podorozhny, LiangZhao Zeng, "Automatic Mash Up of Composite Applications", in *Proceedings of International Conference on Service Oriented Computing 2008,* Springer Verlag LNCS 5364, pp. 317-330; **acceptance rate 20%**
(contribution: gave feedback to Michael Carlson regarding his M.Sc. dissertation, edited the paper, contributed the related work section)

4) Leon J. Osterweil, Lori A. Clarke, Aaron M. Ellison, Rodion Podorozhny, Alexander Wise, Emery Boose, Julian Hadley, "Using a Process Language to Define Scientific Workflow and Generate Dataset Provenance", in *Proceedings of the ACM SIGSOFT Foundations of Software Engineering* (FSE-16) 2008, pp. 319-329;
acceptance rate 20%, one of the two top conferences in the field of Software Engineering
(contribution: formalized an ecological process in a LJIL process language that resulted in a number of process versions, conducted its evaluation in a Juliette process enactment system, wrote the initial section that outlines the process formalization, contributed to multiple edits of the section)

5) Rodion M. Podorozhny, Sarfraz Khurshid, Dewayne Perry, Shelley Zhang, "Verification of cooperative multi-agent negotiation with Alloy", in *Proceedings of the International Conference on Integrated Formal Methods* 2007, Oxford, Springer Verlag LNCS 4591, pp. 501-517; **acceptance rate 38%**
(contribution: devised a method for application of a declarative static analyzer for multi-agent system verification, evaluated the method by applying an Alloy static analyzer to verification of negotiation protocols implemented in a large (over 100k lines of code) multi-agent system, wrote all the sections of the paper but parts of the introduction)

6) Boose, E. R., Ellison, A. M., Osterweil, L. J., Podorozhny, R., Clarke, L., Wise, A., Hadley, J. L., Foster, D. R. "Data provenance and reliability in sensor networks", in *Proceedings of Conference on Coastal Environmental Sensing Networks*, Boston, MA, **2007**
(contribution: formalized an ecological process in a LJIL process language that resulted in a number of process versions, conducted its evaluation in a Juliette process enactment system, wrote the initial section that outlines the process formalization, contributed to multiple edits of the section)

7) Boose, E. R., Ellison, A. M., Osterweil, L. J., Podorozhny, R., Clarke, L., Wise, A., Hadley, J. L., Foster, D. R. "Ensuring Reliable Datasets for Environmental Models and Forecasts", in Proceedings of Novel Concepts of Ecological Data Management, Proceedings of 5th International Conference on Ecological Informatics, **2007** (early version of a corresponding journal paper)

8) Rodion M. Podorozhny, Anne Ngu, Dimitrios Georgakopoulos, "Business process learning for real time enterprises", peer-reviewed *International workshop on Business Intelligence in Real Time Enterprise* (BIRTE) **2006** (co-located with VLDB 2006), Springer Verlag LNCS 4365, pp. 118-132; **acceptance rate 46%**

(contribution: heavily contributed to the design of the suggested method and wrote major sections of the paper)

9) Rodion M. Podorozhny, Wuxu Peng, and Dewayne E. Perry, "Self-stabilization in cooperative multi-agent systems by a reset: Position paper", *IEEE Regional Conference*, **2006**
(contribution: heavily contributed to the described idea and wrote major sections of the paper)

10) Rodion M. Podorozhny, Dewayne E. Perry, Leon J. Osterweil, "Automatically analyzing software process", in *Proceedings of SPW'05*, **2005**, Springer Verlag LNCS 3840, pp. 482-497; **acceptance rate 27%**
(contribution: designed a method for process analysis, implemented it in a Java-based system, evaluated the method and wrote the major sections of the paper)

11) Rodion M. Podorozhny, Dewayne E. Perry, Leon J. Osterweil, "Artifact-based functional comparison of software processes", in *Proceedings of International Workshop on Software Process Simulation and Modeling* (co-located with ICSE'03), **2003**

12) Rodion M. Podorozhny, Dewayne E. Perry, "A Multi-Agent Framework for an Architecting Process Environment", in *Proceedings of International Workshop on Software Engineering for Large-Scale Multi-Agent Systems* (co-located with ICSE'02), **2002**.

13) XiaoQin Zhang, Victor Lesser, and Rodion M. Podorozhny, "New Results On Cooperative, Multi Step Negotiation Over a Multi-Dimensional Utility Function", in *Proceedings of AAAI Fall 2001 Symposium on Negotiation Methods for Autonomous Cooperative Systems*, **2001**.

14) XiaQin Zhang, R. Podorozhny, V. Lesser, "Cooperative Multi-stage Negotiation over Multi-dimensional Utility Function", in *Proceedings of International Conference on Artificial Intelligence and Soft Computing* (ASC'2000), **2000**

15) R. Podorozhny, B. Lerner, and L. Osterweil, "Modeling Resources for Activity Coordination and Scheduling", in *Proceedings of International Conference on Coordination Models and Languages*, Springer-Verlag LNCS series, **1999**.

16) R. Podorozhny and L. Osterweil, "The Criticality of Modeling Formalisms in Software Design Method Comparison", in *Proceedings of International Conference on Software Engineering* (ICSE), **1997**; **acceptance rate 23% one of the two top conferences** in the field of Software Engineering

b. Non-refereed:

4. Abstracts:

5. Reports:

1) Karthik Radhakrishnan (advisee), Rodion Podorozhny, “Automatic test case generation for web service processes using a SAT solver”, Technical Report of an Independent Study TXSTATE-CS-TR-2009-13, 2009

2) Rodion Podorozhny, Dimitrios Georgakopoulos, Anne Ngu, “Metric-based dynamic process adaptation for crisis mitigation”, Technical Report TXSTATE-CS-TR-2008-15, 2008

3) Rodion Podorozhny, Anne Ngu, Dimitrios Georgakopoulos, “Software architecture for flexible integration of process model synthesis methods”, Technical Report TXSTATE-CS-TR-2006-14, 2006

4) Rodion M. Podorozhny, Sarfraz Khurshid, Dewayne Perry, Shelley Zhang,“Verification of cooperative multi-agent negotiation with Alloy”, Technical Report TXSTATE-CS-TR-2006-4, 2006

6. Book Reviews:

External reviewer for MIT Press (book “Readings in Service-Oriented Computing: the Web-Services Phenomenon“);

Reviewer for “Software Process Modeling” book (International Series in Software Engineering) by Silvia T. Acuna (Editor), Natalia Juristo (Editor) , Springer-Verlag, 2005, ISBN-10: 0387242619; 2004

7. Other:

B. Works not in Print

1. Papers Presented at Professional Meetings:

2. Invited Talks, Lectures, and Presentations:

1) Presentation of “Verification of architectural constraints on sequences of method invocations”, peer reviewed “Java Pathfinder workshop”, 2014

2) Presentation of “Automatic Mash Up of Composite Applications” published in ICSOC 2008, Sydney, Australia

3) Presentation of "Verification of cooperative multi-agent negotiation with Alloy" published in Integrated Formal Methods 2007, Oxford, UK

4) Presentation of "Business process learning for real time enterprises", BIRTE'06, 2006, Seoul, South Korea

5) Presentation of "Automatically analyzing software process", SPW'05 (pre-ICSE'05 conference), St Louis, Missouri, ICSE 2005

6) Presentation of "Artifact-based functional comparison of software processes", International Workshop on Software Process Simulation and Modeling (co-located with ICSE'03), 2003

7) Presentation of "A Multi-Agent Framework for an Architecting Process Environment", Proceedings of International Workshop on Software Engineering for Large-Scale Multi-Agent Systems (co-located with ICSE'02), 2002.

3. Consultancies:

4. Workshops:

5. Other:

C. Grants and Contracts

1. Funded External Grants and Contracts:

Mentor for REU NSF program in 2014 and 2015
Summer 2006 – funded contract on methods for definition of reliable ecological scientific processes by the University of Massachusetts, Amherst in the amount of $5000

2. Submitted Grants under consideration

3. Submitted, but not Funded, External Grants and Contracts:

1) "A Testbed for Design and Analysis of Intelligent and Secure Systems of Small Mobile Computing Devices", submitted to **NSF CNS** program, #0958309 in August **2009** (with Hongchi Shi as a PI, Qijun Gu, Xiao Chen)

2) "Automated process learning from retrospective process traces", submitted to **NSF IIS** program, #0954184 in July **2009** (PI)

3) "A Facile and Efficient Platform for Targeted Situational Awareness". Submitted to **Office of Naval Research** in collaboration with Telcordia Technologies and SPAWAR (ONR BAA-08-009), **2008** (co-PI)

4) "Integrated methods for automated process learning and analysis", summary submitted to **ARP 2006** (with Anne Ngu, Dewayne Perry [UT Austin])

5) "Achieving robustness in multi-agent systems", summary submitted to **ARP 2006** (with Wuxu Peng, Dewayne Perry [UT Austin])

6) "Integrated Learner for Processes" to **DARPA BAA05-43, 2005** (with Anne Ngu as a PI, Marian Nodine [Telcordia], Risto Miikulainen [UT Austin])

7) "Collaborative Research: User Driven Dynamic Discovery and Integration of Web Services" to **NSF IIS** program, #0534424, **2005** (with Anne Ngu as a PI, Dewayne Perry [UT Austin])

8) "Automated Analysis of Software Processes" to **NSF CNS** program**,** #0509520, **2004** (with Dewayne Perry [UT Austin])

9) "Formal Verification of Software Process Traces" to **Microsoft New Faculty Research program, 2004**

4. Funded Internal Grants and Contracts:

"Automatic testcase generation for webservices using a satisfiability solver", REP 2011 ($8000)

5. Submitted, but not Funded, Internal Grants and Contracts:

1) "Achieving robustness in multi-agent systems by a reset" to **Research Enhancement Program, 2005** (PI, with Wuxu Peng)

D. Fellowships, Awards, Honors:

IV. SERVICE

A. University:

Committee member for student speaker selection for the commencement in August 2009

B. Departmental:

Chair of faculty search committee for software engineering (2012),

Chair of faculty search committee for software engineering (2011), Member of Library Committee (2012), Member of Comprehensive Exam Committee (2004-present), Promotion and Tenure Committee (2008), Program Assessment and Review Committee (2009-present) and Graduate Curriculum Committee (2008-present)

C. Community:

D. Professional:

- Organizing Committee member (Web Chair) for the International Conference on Software Engineering 2016 (top conference in Software Engineering)
- Reviewer for the refereed International Journal of Applied Intelligence (Springer Verlag) 2012;
- External reviewer for peer-reviewed International Conference on Web Information Systems Engineering (WISE) 2012,
- Reviewer for the refereed International Journal of Applied Intelligence (Springer Verlag) 2011;
- External reviewer for the International Journal of Business Process Integration (2009);
- External reviewer for the 5th International Conference on Collaborative Computing (CollaborateCom 2009);
- Reviewer for the refereed International Journal of Applied Intelligence (Springer Verlag) 2009;
- External reviewer for the peer-reviewed 9th International Conference on Web-Age Information Management (WAIM) 2008;
- External reviewer for the refereed International Journal of Cooperative Information Systems (IJCIS) 2007;
- Program committee member for peer-reviewed International Conference on Web Information Systems Engineering (WISE) 2007;
- External reviewer for MIT Press (book “Readings in Service-Oriented Computing: the Web-Services Phenomenon“) 2006;
- Program committee member for peer-reviewed International Conference on Web Information Systems Engineering (WISE) 2005
- Reviewer for the Association for Computing machinery (ACM) Transactions on Software Engineering and Methodology journal 2004;

E. Organizations

1. Honorary:

2. Professional:

F. Services Honors and Awards: