

## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s) **Edita Ananieva Djambazova**  
 Address(es) Bl. 2, Acad. G. Bonchev St.  
 1113 Sofia  
 Bulgaria  
 E-mail [ead@iccs.bas.bg](mailto:ead@iccs.bas.bg)

### Work experience

2014 - now Researcher at ICT - BAS  
 July 2010 - 2014 Assistant Professor at the Institute of Information and Communication Technologies (IICT) - BAS  
 1998 – July 2010 Research Fellow 2<sup>nd</sup> degree at the Institute of Computer and Communication Systems (ICCS) – BAS  
 1995 - 1998 Research Fellow 3<sup>rd</sup> degree at ICCS - BAS  
 1994 - 1995 Specialist in informatics at ICCS – BAS  
 1991 - 1994 Specialist in informatics at the Institute of Computer Systems – BAS  
 1990 - 1991 Specialist in informatics at the Institute of Technical Cybernetics and Robotics - BAS

### Education and training

1984 29-th Secondary School – Sofia, a class with extended English language teaching  
 1984 - 1989 M.Sc. in Computer Science and Automatics, Technical University - Sofia  
 November 2007 – February 2008 Scholarship on interdependencies among critical infrastructures at ENEA, Italy

### Personal skills and competences

Other language(s)

Self-assessment

European level (\*)

**English**

**Russian**

**Italian**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C1	Proficient user	C1	Proficient user	C2	Proficient user	C1	Proficient user
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user
C1	Proficient user	B2	Independent user	B2	Independent user	B1	Independent user	B1	Independent user

(\*) [Common European Framework of Reference for Languages](http://www.cedefop.europa.eu)

Organisational skills and competences January 2010 – July 2010: Head of Department “Dependable Computer and Communication Systems”, ICCS - BAS

Computer skills and competences Working with MS Word, MS Excel, MS Powerpoint, Open Office, SVN, LaTeX

Programming languages C, C++, Pascal, some experience with HTML

## Research interests and activities

- Dependability of distributed real-time process control systems;
- Techniques and protocols for clock synchronization and membership in distributed systems;
- Error detection, error handling and error recovery;
- Coverage modeling of error detection techniques;
- Systems with adaptive dependability;
- Simulation and modeling of dependable and resilient systems;
- Information security; dependability and security models and techniques; implementation of resilience;
- Interdependencies among critical infrastructures.

## Research projects

### National

- Simulation of fault-tolerant systems (contract with the National Science Fund),
- Fault-tolerant computer systems (contract with the National Science Fund),
- Study of methods and algorithms for clock synchronization in distributed real-time process control systems (programme "Young researchers", project leader),
- Study of the parameters of error detection techniques in computer systems (contract with the National Science Fund),
- Virtual Tour Operator (contract with the National Innovations Fund)
- A Unified Platform for Administration, Automation, and Management of International Standards (contract within OP "Competitiveness", project leader during the first year)

### International

- Assessment of the Safety of Hazardous Industrial Processes in the Presence of Design Faults (SHIP) (European Commission project)
- Integrated Risk Reduction of Information-based Infrastructure Systems (IRRIIS) (Integrated project of FP6)
- ICT FORWARD (coordination action of FP7)
- SysSec: A European Network of Excellence in Managing Threats and Vulnerabilities in the Future Internet: Europe for the World (NoE of FP7)

## Publications

1. Djambazova, E. "Adjusting Reliability of A Fault-Tolerant Distributed Process Control System – Preliminary Results", International Conference "Automatics and Informatics 2012", ISSN 1313-1869, Sofia, 3-5 Oct 2012, pp. 175-178.
2. E. Djambazova, M. Almgren, K. Dimitrov, E. Jonsson, "Emerging and Future Cyber Threats to Critical Systems", in J. Camenisch, V. Kisimov, and M. Dubovitskaya (Eds.): iNetSec 2010, LNCS 6555: Open Research Problems in Network Security, pp. 29 – 46, 2011.
3. ICT FORWARD, White Book: Emerging ICT Threats, January 2010, <http://www.ict-forward.eu/media/publications/forward-whitebook.pdf>.
4. E. Djambazova, K. Dimitrov, "Cyber Security Aspects in Critical Systems and Applications", *Proceedings of the ICCS-BAS*, Vol. 3, 2009, pp. 93-103.
5. E. Djambazova, "Node Reliability of A Fault-Tolerant Distributed Process Control System – Simulation Results", Proc. of the Int. Conf. "Automatics and Informatics' 2009", Sofia, Bulgaria, 29 Sept. – 4 Oct. 2009, pp. I-131 – I-134.
6. H. Bos, E. Jonsson, E. Djambazova, K. Dimitrov, S. Ioannidis, E. Kirda and C. Kruegel, "Anticipating Security Threats to a Future Internet", White Paper, March 2009, <http://www.ict-forward.eu/media/publications/fia-whitepaper.pdf>.
7. E. Djambazova, "Distributed Process Control System with Reliability Adjustment – Node Simulation Results", *Proceedings of the ICCS-BAS*, Vol. 2, 2008, pp. 139-145 (in Bulgarian).
8. P. Petrov, K. Dimitrov, E. Djambazova, „Quality of Service and Security of Computer and Communication Networks”, *Proceedings of the ICCS-BAS*, Vol. 2, 2008, pp. 133-138 (in Bulgarian).
9. E. Djambazova, V. Rosato, and G. Vicoli, "Provision of Prototype "Leontief-Based Tool", IRRIIS Deliverable D2.2.5, ENEA, 2008, <http://www.irriis.org/File.aspx?lang=2&oid=9227&pid=572>.
10. T. Velez, P. Petrov, R. Andreev, K. Dimitrov, E. Djambazova et al., „Internet-Based Information, Reservation and Communication System for the Tourism”, *Proceedings of the ICCS-BAS*, Sofia, Dec. 2007, pp. 8-16 (in Bulgarian).
11. E. Djambazova, "Information Security in Information, Reservation and Communication System for the Tourism", *Proceedings of the ICCS-BAS*, Sofia, Dec. 2007, pp. 174-182 (in Bulgarian).
12. E. Djambazova, "Specialized Systems for Tourist Information and Service", *Proceedings of the*

- ICCS-BAS, Sofia, Dec. 2007, pp. 27-35 (in Bulgarian).
13. E. Djambazova, "An Approach to Online Information Security Assessment", *Scientific Support to the Transformation in the Security Sector - 2006*, Center for National Security and Defense Research - BAS, Sept. 2006, pp. 214-225 (in Bulgarian).
  14. K. Djambazov and E. Djambazova, "Online Assessment of Data Protection", Proc. of the Int. Conf. on Informatics in the Scientific Knowledge 2006, ISK'2006, June 28-30, 2006, Varna, Bulgaria, pp. 154-167.
  15. E. Djambazova, "Comparative Analysis of Signature-Monitoring Error Detection Techniques", Proc. of the Int. Conf. "Automatics and Informatics' 02", Sofia, Bulgaria, Nov. 2002, pp. 29-32.
  16. K. Djambazov and E. Djambazova, "Clock Synchronization with Independent Adjustment in Distributed Systems", in *Cybernetics and Information Technologies*, Vol. 2, No. 2, Sofia, 2002, pp. 68-87.
  17. E. Djambazova and K. Djambazov, "Processor Control-Flow Error-Detection Techniques - Model and Evaluation Tool", in *Cybernetics and Information Technologies*, Vol. 1, No. 2, Sofia, 2001, pp. 3-18.
  18. E. Djambazova and K. Djambazov, "Time-Dependent Coverage Factor Model", Proc. of the Int. Conf. "Automatics and Informatics' 2000", Sofia, Bulgaria, Oct. 2000, pp. 40-43.
  19. E. Djambazova, "Construct Integrity Checking: An Assigned-Signature Technique", Proc. of the Int. Conf. "Automatics and Informatics' 2000", Sofia, Bulgaria, pp. 32-35.
  20. K. Djambazov and E. Djambazova, "Fault Tolerance of Clock Synchronization Algorithms", Proc. of the CompSysTech' 2000, Sofia, June 2000, pp. II.2-1 - II.2-5.
  21. K. Djambazov and E. Djambazova, "Implementation Aspects of Clock Synchronization Algorithm with Independent Adjustment in Distributed Systems", International Scientific Conference "Communication, Electronic, and Computer Systems' 2000", Sofia, May 2000, Vol. 2, pp. 91-95.
  22. E. Djambazova and K. Djambazov, "Clock Synchronization with Independent Adjustment in Distributed Systems: Simulation Results", International Scientific Conference "Communication, Electronic, and Computer Systems' 2000", Vol. 2, pp. 96-101, Sofia, May 2000
  23. E. Djambazova and K. Djambazov, "Clock Synchronization with Independent Adjustment in Distributed Time-Triggered Systems", Proc. of the National Conference "Automatics and Informatics '99", Oct. 1999, Sofia, Bulgaria, pp. 60-63.
  24. K. Djambazov and E. Djambazova, "Modeling of Methods for Error Detection in Microprocessor Systems", Proc. of the National Conference "Automatics and Informatics '99", Oct. 1999, Sofia, Bulgaria, pp. 64-67.
  25. E. Djambazova and K. Djambazov, "Clock Synchronization in Distributed Systems - Simulation Results", Proc. of the National Conference "Automatics and Informatics '98", 20-23 Oct. 1998, Sofia, Bulgaria, pp. 29-32.
  26. K. Djambazov and E. Djambazova, "Distributed Clocks' Adjustment in Real-Time Systems", Proc. of the National Conference "Automatics and Informatics '98", 20-23 Oct. 1998, Sofia, Bulgaria, pp. 33-36.
  27. K. Djambazov and E. Ananieva, "Analytical Assessment of the Coverage Factor of Watchdog Timers", Proc. of the National Conference "Automatics and Informatics '96", 9-11 Oct. 1996, Sofia, Bulgaria, pp. 42-45.
  28. K. Djambazov and E. Ananieva, "Control Systems with Modular Adaptability of the Fault Tolerance", Proc. of the National Conference "Automatics and Informatics '95", 7-9 Nov. 1995, Sofia, Bulgaria, pp. 247-250 (in Bulgarian).
  29. K. Djambazov and E. Ananieva, "The Effect of Power Supply Reliability in Triple Modular Redundancy Systems", in *Problems of Engineering Cybernetics and Robotics*, Vol. 42, 1995, pp. 94-107.
  30. K. Djambazov, P. Popov, and E. Ananieva, "Modelling of Design-Faults Tolerating Mechanisms", SHIP Project Technical Report, May 1994.
  31. K. Djambazov and E. Ananieva, "A Fault-Tolerant Controller with Modular Redundancy", XXVIII Scientific Session - Communication, electronic, and computer systems, Technical University - Sofia, 21 May 1993, pp. 299 - 306 (in Bulgarian).

## Additional information

Member of John Atanasoff Society of Automatics and Informatics

Expert in the Technical Committee 57 "Information and Communication Technologies" of the Bulgarian Institute for Standardization

Member of the Editorial Board of Proceedings of the ICCS - BAS