

# Curriculum Vitae



## Personal information

First name(s) / Surname(s) **Nikolay Rumenov Kakanakov**  
Address(es) 22, Antim 1st. , 4000, Plovdiv, Bulgaria  
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Web site: <http://dsnet.tu-plovdiv.bg/website/members/~kakanakov/>  
Nationality Bulgarian  
Date / Place of birth 18.10.1980, Plovdiv  
Gender Male

## Education and training

Dates *07.2004 – 11.2008*  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered code: 02.21.04, theme: “Methods for developing distributed embedded systems based on the TCP/IP environment”  
Name and type of organisation providing education and training Technical University of Sofia, branch Plovdiv, department “Computer Systems and Technologies”  
Dates *10.2003 – 07.2004*  
Title of qualification awarded Master of Science  
Principal subjects/occupational skills covered Computer Systems and Technologies  
Name and type of organisation providing education and training Technical University of Sofia, branch Plovdiv, department “Computer Systems and Technologies”  
Dates *09.1999 – 09.2003*  
Title of qualification awarded Bachelor of Science  
Principal subjects/occupational skills covered Computer Systems and Technologies  
Name and type of organisation providing education and training Technical University of Sofia, branch Plovdiv, department “Computer Systems and Technologies”

## Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

**Bulgarian**

**English**

**Russian**

| Understanding |                  | Speaking |                  | Writing            |                  |                   |                  |
|---------------|------------------|----------|------------------|--------------------|------------------|-------------------|------------------|
| Listening     |                  | Reading  |                  | Spoken interaction |                  | Spoken production |                  |
|               | <i>excellent</i> |          | <i>excellent</i> |                    | <i>very good</i> |                   | <i>very good</i> |
|               | <i>good</i>      |          | <i>excellent</i> |                    | <i>good</i>      |                   | <i>very good</i> |

Professional Interests

Computer Networks, Distributed Systems, Embedded Networking, Real-time Operating Systems, Middleware technologies.

Membership in Professional Organizations

Bulgarian Union of Automatics and Informatics from 2005

IEEE Student Member 2006-2009

## Additional information

Scientific Awards:

Award for best paper of young scientist in science conference of Union of Scientists in Bulgaria, Plovdiv, October 2004.

Award for best presentation from conference "CompSysTech'06", June, 2006, section "Application aspects of Computer Science"

Teaching experience:

2003-2009

Laboratory work, subject "Computer Networks" in B.Sc. programme.

2004-2009

Laboratory work, subject "Distributed Systems and Computer Communications" in M.Sc. programme.

2004-2009

Laboratory work, subject "Distributed Embedded Systems" in M.Sc. programme.

Participation in Scientific Projects:

2004 (completed)

Contract I-574/06.08.2004, Technical University of Sofia, branch Plovdiv subject: "Internet-based distributed embedded system for monitoring of parameters in real-time"

2005-2008 (completed)

National Science Fund of Bulgaria project, contract VU-MI-108/2005 subject: "Web Services and Data Integration in Distributed Automation and Information Systems in Internet Environment"

2006-2008 (completed)

National Science Fund of Bulgaria project, contract MU-MI-102/2005 subject: "Analysis of attacks and methods for securing Web services in global networks"

2007-2008 (completed)

Technical University of Sofia project subject: "Web-based experimental network of controllers for analysis of informational interaction in distributed automation systems"

2009 (undergoing)

Technical University of Sofia project subject: "Web-base experimental network for investigation of information interaction and data traffic in personal health systems (WebPHS)"

## Annexes

## Publications:

- 2008
- [1].N. **Kakanakov**, M. Shopov, and G. Spasov, "Time-Delay Simulation Analysis of Local Controller Networks," in Proc. International Conference on Computer Systems and Technologies (CompSysTech), June 2008, p. IIIA.12.
  - [2].M. Shopov, N. **Kakanakov**, and G. Spasov, "On the use of NS-2 in Simulations of Internet-based Distributed Embedded Systems," in Proc. Industrial Electronics (INDEL'08), Banja Luka, Bosnia and Herzegovina, November 2008.
  - [3].**Kakanakov**, N., M. Shopov, G. Spasov, "Experimental Analysis of CoS Performance in Local Controller Networks," in Proc. Electronic-ET, 24-26.09, Sozopol, Bulgaria, pp. 81-86, 2008.
  - [4].Shopov, M., N. **Kakanakov**, G. Spasov, "A Web Service for Data Visualization in Distributed Automation and Information Systems," in Proc. International Conference on Computer Sciences, 18-20.09, Kavala, Greece, 2008.
- 2007
- [1].**Kakanakov**, N., E. Kostadinova, "Using SNMP for Remote Measurement and Automation," In Proc. ELECTRONICS07, 19-21 Sept 2007, Sozopol, BULGARIA, pp. 85-90.
  - [2].Shopov, M., N. **Kakanakov**, "EVALUATION OF A SINGLE WS-SECURITY IMPLEMENTATION," in Proc. International conference on Automatics and Informatics, Oct. 2007, Sofia, vol 1, pp. VI.39-42
  - [3].Shopov, M., I. Stankov, N. **Kakanakov**, "Standards and technologies for applying security in Web Services," journal Automatics and Informatics, 2007, vol 2 pp.8-11.
  - [4].**Kakanakov**, N., M. Shopov, G. Spasov, H. Hristev, "Performance Evaluation of Switched Ethernet as Communication Media in Controller Networks," International Conference on Computer Systems and Technologies - CompSysTech'07, page IIIA.8, 2007.

- 2006 [1].**Kakanakov**, N., M. Shopov, I. Stankov, and G. Spasov, "Web Services and Data Integration in Distributed Automation and Information Systems in Internet Environment," Journal International Review on Computers and Software, vol. 1, no. 3, pp. 194-201, Nov 2006.
- [2].**Kakanakov**, N., I. Stankov, M. Shopov, and G. Spasov, "Controller Network Data Extracting Protocol – design and implementation," Proc. CompSysTech, 2006, pp.III-A.14-1-6.
- [3].N. **Kakanakov**, M. Shopov, and G. Spasov, "Distributed automation systems based on java and web services," Proc. CompSysTech, 2006, pp.III-A.24-1-6.
- [4].N. **Kakanakov**, "An application of web services for distributed measurement," Proc. ISMC (JVA) Youth Session, 2006, pp.55-60.
- [5].G. Spasov, N. **Kakanakov**, and G. Petrova, "Distributed measurements – A system architecture and an application example," Proc. Electronika, 2006, pp.167-172.
- [6].G. Spasov, N. **Kakanakov**, and E. Ivanov, "An example of distributed measurement system employing web-based micro-controller DS TINm400," Proc. Electronika, 2006, pp.173-178.
- [7].N. **Kakanakov**, "Web базирани модели за разпределена автоматизация," Списание „Автоматика и Информатика“, бр. 3, pp.44-48, 2006.
- [8].N. **Kakanakov**, M. Shopov, and G. Spasov, „A new web based multi-tier model for distributed automation systems," Journal Information Technology and Control, vol. 2, pp.44-48, 2006.
- [9].N. **Kakanakov** and M. Shopov, „Evaluating controller network data extracting protocol for embedded devices," Proc. of conference "Electronics ET'06", 20-22 Sept 2006, Book 3, pp. 15-20, ISBN: 954-438-566-6.
- [10].N. **Kakanakov**, and B. Ribov, "Distributed System for Monitoring and Control in Internet Environment," Journal Fundamental Sciences and Applications, vol. 13, 2006, Anniversary Scientific Conference 2006, Plovdiv, Bulgaria.
- [11].N. **Kakanakov**, N. Raitchev, and G. Spasov, "Virtual Laboratory for Distributed System," Journal Fundamental Sciences and Applications, vol. 13, 2006, Anniversary Scientific Conference 2006, Plovdiv, Bulgaria.
- [12].M. Shopov, I. Stankov, N. **Kakanakov**, and G. Spasov, "On the Use of XML for Data Access in Networks of Embedded Devices," Proc. Third International Bulgarian-Turkish Conf. - Computer Science'06, Istanbul, Turkey, 12-15.10.2006.
- 2005 [1].Spasov, G., N. **Kakanakov**, "Distributed embedded system for monitoring temperature and humidity", Journal of "Electronics and Electrotechnics", vol.3-4, pp.38-44, 2005.
- [2].**Kakanakov**, N., G. Spasov, "Web-based distributed embedded systems", Journal of "Automatics and Informatics", vol.1, pp.44-46, 2005.
- [3].**Kakanakov**, N., G. Spasov, „Adaptation of Web service architecture in distributed embedded systems", In Proc. of CompSysTech'05, Varna, Bulgaria, pp. IIIB.10, 2005.
- [4].N. **Kakanakov** and G. Spasov, "A system for test-bed experiments of networking in embedded systems," In Proc. of Computer Science, pp. 138-143, 2005.
- [5].N. **Kakanakov**, "Experimental analysis of client/server applications in embedded systems," Proc. ELECTRONICS, book 4, pp. 97-102, 2005.

- 2004 | [1].N. **Kakanakov** and G. Spasov, "*Internet-based distributed embedded system for real-time monitoring*," Proc. Conf. Technics, Technologies, Natural, Humanitarian, and Public Sciences, pp. 46-50, 2004.
- [2].D. Grozev, G. Spasov, B. Ribov, and N. **Kakanakov**, "*Throughput analysis of Bluetooth and WLAN 802.11 coexistence*," Proc. Conf. Technics, Technologies, Natural, Humanitarian, and Public Sciences, pp. 51-57, 2004.
- [3].Spasov, G. , N. **Kakanakov**, „*CGI-based applications for distributed embedded systems for monitoring temperature and humidity*”, Proceedings on the International Conference on Computer systems and technologies – CompSysTech’04, Ruse, Bulgaria, pp. 1.6, 2004.
- [4].Spasov G., N. **Kakanakov**, “*Measurement of temperature and humidity using SHT11/71 intelligent sensor*”, Proceedings of the Conference ELECTRONICS’04, Sozopol, Bulgaria, book 2, pp. 94-99, 2004.
- [5].Spasov G., N. **Kakanakov**, N. Lupanov, „*Three-tier distributed applications*”, In Proc. of Computer Science’04, Sofia, Bulgaria, 2004.