



## Europass Curriculum Vitae



### Personal information

Surname(s) / First name(s) **Kostadinov Kostadin**  
Address(es) Ovcha Kupel, Block 605 Apt. 21, 1618 Sofia, Bulgaria  
Telephone(s) (+359-2)-8706264 Mobile: (+359)- 882-909-100; and 888-957-682;  
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E-mail [kostadinov@gis-tc.org](mailto:kostadinov@gis-tc.org) or [kostadinov@imbm.bas.bg](mailto:kostadinov@imbm.bas.bg)  
Nationality Bulgarian  
Date of birth 27.11.1955  
Gender Male

**Occupational field** Professor, IPR Manager at Institute of Polymers – BAS;

### Work experience

|                                      |  |
|--------------------------------------|--|
| Dates                                | Since 20.05.2011   |
| Occupation or position held          | Professor, <b>Scientific Director</b> of MDS Dept. at Institute of Mechanics – BAS   |
| Main activities and responsibilities | Organization & Management of research activities in the field of Mechatronics & Robotics   |
| Name and address of employer         | Institute of Mechanics – BAS, acad. G. Bonchev St., Block 4, Sofia 1113, Bulgaria  |
| Type of business or sector           | Research   |
| Dates                                | 03 November 2008 – 11 February, 2013   |
| Occupation or position held          | <b>Scientific Secretary</b> and Member of the Managing Board of BAS - <i>part time</i>   |
| Main activities and responsibilities | Planning, Control and Management of activities in the field Engineering, Mathematical Sciences and Technology transfer and Innovation, Industry and Academy partnership. |
| Name and address of employer         | Bulgarian Academy of Sciences, 1, "15 Noemvri" St., Sofia 1040, Bulgaria   |
| Type of business or sector           | Science and Research   |
| Dates                                | 01.02.2010-06.06.2012  |
| Occupation or position held          | <b>Vice-Rector</b> of VUZF University for Research and Institutional Relations – <i>part time</i>  |
| Main activities and responsibilities | Organization of Research activities and Institutional Relations  |
| Name and address of employer         | VUZF University, 1, Gusla St., 1618 Sofia  |
| Type of business or sector           | High Education   |
| Dates                                | 17.08.2009 – 04.01.2010  |
| Occupation or position held          | Minister <b>Councilor</b> for Research and Science, Innovation and Technology – full time  |
| Main activities and responsibilities | Policy and Strategy planning of Science, Research, Technology transfer & Innovation  |
| Name and address of employer         | Ministry of Education, Youth and Science, 2A, Dondukov Boul., 1000 Sofia   |
| Type of business or sector           | Governmental   |

Dates Since 01.07.2008  
Occupation or position held Associate Professor in Robotics and Automation in Mechatronic Systems Dept. full time  
Main activities and responsibilities Research and Management of research activities in the field of Mechatronics and Robotics  
Name and address of employer Institute of Mechanics – BAS, acad. G. Bonchev St., Block 4, Sofia 1113, Bulgaria  
Type of business or sector Research

Dates Since 15.05.2001  
Occupation or position held **Chairman of the Managing Board**  
Main activities and responsibilities Planning, Management and Control of activities in the field of technology transfer and innovations  
Name and address of employer GIS-TransferCenter Foundation, acad. G. Bonchev St., Block 4, Sofia 1113, Bulgaria  
Type of business or sector Technology transfer

Dates 01.02.2000 – 30.06.2008  
Occupation or position held **Head of Mechatronic Systems Dept.** and Associate Professor in Robotics and Automation  
Main activities and responsibilities Research and Management of research activities in the field of Mechatronics and Robotics  
Name and address of employer Institute of Mechanics – BAS, acad. G. Bonchev St., Block 4, Sofia 1113, Bulgaria  
Type of business or sector Research

Dates 15.02.1998-03.07.2006  
Occupation or position held **Vice Director**  
Main activities and responsibilities Management of research activities and cooperation with industry partners for applied research projects  
Name and address of employer Institute of Mechanics – BAS, acad. G. Bonchev St., Block 4, Sofia 1113, Bulgaria  
Type of business or sector Research

### Education and training

Dates 04.12.2006-08.12.2006  
Title of qualification awarded Specialist  
Principal subjects/occupational skills covered Technology transfer – organization, management and networking  
Name and type of organisation providing education and training Steinbeis Foundation – Stuttgart, Germany  
Level in national or international classification Certificate

Dates 29.11.2006  
Title of qualification awarded Consultant of offset programs  
Principal subjects/occupational skills covered Offset programs and projects definition, preparation and management  
Name and type of organisation providing education and training Ministry of Economy and Energetics–Institute of Public Administration and European Integration Sofia  
Level in national or international classification Certificate

Dates 21 June – 18 July, 1995  
Title of qualification awarded Specialist  
Principal subjects/occupational skills covered Virtual Reality in Robotics and Medicine



|  |   |
|--|---|
| Name and type of organisation providing education and training | CIMPA/CIMI School, Nice, France   |
| Level in national or international classification              | Certificate   |
| Dates  | 18.12.1988-18.04.1994   |
| Title of qualification awarded                                 | <b>PhD in Applied Mechanics</b>   |
| Principal subjects/occupational skills covered                 | PhD Thesis "Investigation and synthesis of electromechanical drives for positioning robots" |
| Name and type of organisation providing education and training | Institute of Mechanics – Bulgarian Academy of Sciences – Sofia                              |
| Dates  | 01.05.81-23.04.83   |
| Title of qualification awarded                                 | <b>MSc in Robotics (Engineer)</b>   |
| Principal subjects/occupational skills covered                 | Mechanical Systems in Robotics  |
| Name and type of organisation providing education and training | Technical University – Sofia  |
| Dates  | 15.09.76-18.04.81   |
| Title of qualification awarded                                 | <b>MSc in Electrical Engineer</b>   |
| Principal subjects/occupational skills covered                 | Electricity supply and electricity fittings of industrial companies                         |
| Name and type of organisation providing education and training | Technical University – Sofia  |

## Personal skills and competences

Mother tongue(s) **Bulgarian**

Other language(s) **English, German, Russian**

Self-assessment

**Understanding**

**Speaking**

**Writing**

*European level (\*)*

Listening

Reading

Spoken interaction

Spoken production

**English**

C1

Proficient

C1

Proficient

C1

Proficient

C1

Proficient

C1

Proficient

**German**

B2

Independent

B2

Independent

B2

Independent

B2

Independent

B1

Independent

**Russian**

C2

Proficient

C2

Proficient

C1

Proficient

C1

Proficient

C1

Proficient

(\*) Common European Framework of Reference for Languages

Social skills and competences

Team spirit; good ability to adapt to multicultural environments, gained through my work experience in abroad; good communication skills gained through my experience as vice director responsible for work with industrial and other partners, university teacher.

Organisational skills and competences

Leadership (currently responsible for 9 people permanent staff and 40 project based experts in GIS-TransferCenter Foundation and 15 people (in the past for 144 people during 2 Mandates position of Vice-Director) in the Institute of Mechanics;  
Sense of organizations ( experience in establishment of NGO and as military officer – 2 years);  
Good experience in project management through work upon 9 international and 15 national projects  
Chairman and Committee Member of National (12) and International (5) Conferences and Workshops.

Technical skills and competences

Good command of electro systems; electro drive systems for manufacturing systems, and electromagnetic grippers, telemanipulation of micro robots, etc.

|                                 |   |
|---------------------------------|---|
| Computer skills and competences | Good command of Microsoft Office tools (Word, Excel, Power Point), Solid Dynamics, Marketing Manager, and graphic design applications   |
| Artistic skills and competences | Flowers breeding through leisure activities, driving, swimming  |
| Other skills and competences    | <p>Expert in FP7 for evaluation of proposal (since 2012)</p> <p>Member of the CEN/TC 389 "Innovation Management" – since 2010;</p> <p>National Contact Point for SME in the FP7 of EC since December 2006,</p> <p>Management of research (FP4, FP6 and FP7; CIP, Interreg IIIc, PHARE) and industrial projects;</p> <p>Member of commissions for accreditation the education of under and postgraduate students.</p> <p>Delivering lectures in Technical university of Sofia in two faculties – Machine building Faculty and English Language Faculty of Engineering;</p> <p>Visiting Researcher in University of Applied Sciences, Konstanz, Germany;</p> <p>Visiting researcher &amp; professor in University Otto-von-Guiricke Magdeburg; Germany;</p> <p>Visiting professor in Technical University of Riga, filial Liepaja, Latvia;</p> <p>Visiting professor in University "Dunarea de Jos", Galati; Romania;</p> <p>Supervisor of 7 PhD Students, 3 – promoted, 2 still in processing;</p> <p>Member of Expert Council of High-technology business incubator - Varna,</p> <p>Member of Evaluation Committee of National Innovation Fund since 2005;</p> <p>Short term consultant in the PHARE Project BG.0102.01 "Technology consultancy grant scheme for SME's" for Electro- and Machine building Industries and TAIEX.</p> |
| Driving licence                 | Category B  |
| Awards                          | <p>Award of Bulgarian Union of Scientists – 2012</p> <p>National award "Pitagor" 2010 for exceptional achievements in Engineering science</p> <p>NATO, DAAD and DFG awards for research projects (1999, 2001, 2003, 2004)</p>   |
| <b>Additional information</b>   | <p>Senior Member of IEEE (Robotics and Automation Society) – since 1999,</p> <p>Member of Bulgarian Union of Scientists (since 2004) and</p> <p>Bulgarian Robotics Society(founder)1991;</p> <p>Member of American – Romanian Academy of Arts and Science – since 2002</p>  |

## **Annex #1 RECENT PUBLICATIONS ('07 - '12)**



## RECENT PUBLICATIONS ('08 - '12)

1. **K. KOSTADINOV**, D. CHAKAROV, **Chapter 21** "IMPEDANCE CONTROLLED MECHATRONIC SYSTEMS for Autonomous Intelligent Devices", pp.385-408
2. **K. KOSTADINOV**, **Chapter 22** „HYDRO-MINA ROBOT TECHNOLOGY FOR MICRO AND NANO MANIPULATION IN MANUFACTURING OF MICRO PRODUCTS", pp.409-419  
in Book Editors: Dr Jitendra R. Raol, Dr. Ajith Gopal, *Mobile Intelligent Autonomous Systems*, CRC Press(Taylor & Francis), Florida, USA, Aug. 2012. [www.crcpress.com](http://www.crcpress.com)
3. Tiankov, T., Trifonov, D., Chakarov, D., Shulev, A., **Kostadinov, K.**, "Microfluidic Mechatronic Device – Basic Unit for Automation of Cell Microinjection", 13<sup>th</sup> Mechatronics forum International Conference, Proceedings vol. 2/3, September 17-19.2012, Johannes Kepler University, Linz, Austria, Trauner Verlag, ISBN: 978-3-99033-045-6, pp: 476-481.
4. Shulev Ass., Il. Roussev, **K. Kostadinov**, Force Sensor for Cell Injection and Characterization, in Conference Proceedings Edited by:Volkmar Eichhorn, Hui Xie, Rencheng Liu & Miao Yu, International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale (3M-NANO) 29 August - 1 September 2012, Xi'an, China, pp.335-338, **IEEE** Catalog Number: CFP123MN-CDR, ISBN: 978-1-4673-4589-7
5. Galin Valchev, Daniel Dantchev **Kostadin Kostadinov**, On the Forces between Micro and Nano Objects and the Gripper, accepted for publication by *International Journal of Intelligent Mechatronics and Robotics (IJIMR)*, **ISSN: 2156-1664**, and presented in 3M-NANO International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale, Changchun, China, 29.08-02.09.2011
6. Assen Shulev, **K. Kostadinov**, T. Tiankov, and Ilia Roussev, Optical Positioning Control of a 3D Micromanipulator, in Proceedings of 3M-NANO International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale, Changchun, China, 29.08-02.09.2011
7. **K.G. Kostadinov**, D.S. Trifonov, M.A. Al-Wahab, V.F. Kotev and T.P. Petrov, CD-Based Microfluidic Device for Automated Immobilization and Microinjection of Biological Cell, *Journal of Micro and Nanosystems*, Volume 3, Issue 3, September 2011, Pages 236-249, ISSN 1876-4029
8. Fl. Ionescu, **K. Konstadinov**, St. Arghir, Dr. Arotaritei, Hybrid Micro-Nano Robot for Cell and Cristal Manipulations, *Journal of Control Engineering and Applied Informatics*, Vol 13, No 2 (2011), pp.56-63.
9. R. Kasper,M. Al-Wahab, **K. Kostadinov** and T. Tiankov, Micro/Nano-Manipulators with Structured piezo-ceramic actuators, in Eds.: J.-L. Ferrier, Al. Bernard, Ol. Gusikhin, K. Madani, Proceedings of ICINCO 2011, Vol.2., Noordwijkerhout, The Netherlands 28-31 July, 2011, pp.242-247, **ISBN:978-989-8425-75-1**, **SciTePress**, Portugal.
10. D. S. Trifonov, Kostadin G. **Kostadinov**, M. A. Al-Wahab, V.F. Kotev, Computer Simulation of CD-based Injection-Moulded Micro-patterned Polymer Substrates for Cell Immobilization, in *Journal of Materials Science and Engineering* 5 (2011), pp.110-119, Impact factor of this journal 2010-08-05: **0.2334**, ISSN 1934-8959.
11. **K. Kostadinov**, Robot Technology in Hybrid Assembly Approach for Precise Manufacturing of Microproducts, Proceedings of the 12<sup>th</sup> Mechatronics Forum Biennial International Conference June 28-30, 2010, Swiss Federal Institute of Technology, ETH Zurich, Switzerland, Book 1, pp. 293-300.
12. D. Trifonov, **K. Kostadinov**, M. Al-Wahab, V. Kotev, T. Petrov. Design and Investigation of Micro-Patterned Injection-Moulded Polymer Substrates for Use in CD-based Microfluidics for Cell Manipulation. The 6<sup>th</sup> International Conference on Micro Manufacturing ICOMM/4M 2010, April 5-8, 2010 Madison, Wisconsin USA, pp. 379-385.
13. Stavrov Vl., Em. Tomerov, Ch. Hardalov, D. Dantchev, K. **Kostadinov**, G. Stavreva, Evst. Apostolov, As. Shulev, Anna Andonova, M. Al-Wahab, Low Voltage Thermo-Mechanically Driven Monolithic Microgripper with Piezoresistive Feedback, in *Precision Assembly Technologies and Systems: 5th Ifip Wg 5.5 International Precision Assembly Seminar*, Ipas 2010, Chamonix, France, February 14-17, 2010, Proceedings, Volume 315 of *IFIP Advances in Information and Communication Technology Series*, Ed. Sv. Ratchev, Publisher Springer, 2010, ISBN 3642115977, 9783642115974, pp.207-214.
14. Tiankov T., P. Genova, Vl. Kotev, K. **Kostadinov** (2009) Strategy for Control of a Hybrid Macro-

Micro Robot with a 5-Link Closed Structure – An Inverse Problem Of Kinematics, *Journal of ICMaS*, Vol.4: pp.113-118, November.

15. D. Dantchev, **K. Kostadinov**, On the environmental influence on the force between two metallic plates of a gripper immersed in a nonpolar fluid: the role of the temperature and the chemical potential, In: International Conferences on Multi-Material Micro Manufacture (4M)/International Conferences on Micro Manufacturing (ICOMM) Edited by:Stefan Dimov, Wolfgang Menz. pp. 297-300, Whittles Publishing
16. D.S. Trifonov, **K. Gr. Kostadinov**, M.A. Al-Wahab, Design and analysis of prototype mould for micro- and nano-structure replication on polymer substrates, In: International Conferences on Multi-Material Micro Manufacture (4M)/International Conferences on Micro Manufacturing (ICOMM) Edited by:Stefan Dimov, Wolfgang Menz. pp. 106-109, Whittles Publishing .
17. Chakarov D., **K.Kostadinov**, D. Gotseva, T. Tiankov, Web-based Synthesis of Robot Structures for Micro and Nano Manipulations, *Solid State Phenomena Vols. 147-149 (2009) pp 25-30*.
18. Genova, P., **Kostadinov**, K., Kotev, VI. Synthesis and selection of optimal structures for macro robots. *Journal of Proceedings of the International Conference on Manufacturing Systems ICMaS*, ISSN 1842-3183, Volume No. 3, 2008, pp. 087-092.
19. **Kostadinov**, K., Kotev, VI, Genova, P. Some ideas for cooperating of macro-micro robots. *J. "Mechanics of machine"*, National committee on machines and mechanisms theory, TU-Varna, Year XII, No 79, page75-78, 2008, ISSN 0861-9727, (in Bulgarian).
20. Muhammed Abed Al-Wahab, Ronald Kasper **Kostadin Kostadinov**; D. Chakarov, T. Tiankov, STRUCTURED PIEZO-CERAMIC MECHATRONIC HANDLING DEVICES FOR MICRO AND NANO APPLICATIONS, IEEE Proceeding of the 5th t International Symposium on Mechatronics and its Applications (ISM08), Amman, Jordan, May 27-29, 2008
21. **Kostadinov K.**, R. Kasper, M.A. Al-Wahab, D. Chakarov, T. Tiankov and D. Gotseva, Mechatronic Handling Device For Cell Micro Operations With Human Assisted Automation Control, in Eds.: Ulbrich and Ginzinger "Motion and Vibration Control:MOVIC 2008", Springer Verlag, 2008, 12 p.
22. D. Dantchev, **K. Kostadinov**, On the force between two metallic plates of a gripper immersed in nonpolar fluid, in 4M 2008 Proceedings of the 4<sup>th</sup> International Conference on Multi-Material Micro Manufacture, Edited by St. Dimov and W. Menz, Cardiff, UK, 9<sup>th</sup> – 11<sup>th</sup> September 2008, Whittles Publishing, ISBN 978-1904445-76-0, pp.279-282.
23. Ionescu F., **K. Kostadinov**, Ilie Talpasanu, Dr. Arotaritei, G. Constantin, Chapter 8: *Design, Analysis, Modeling, Simulation, and Control of Microscale and Nanoscale Cell Manipulations* (pp.215-252) in Eds: Tachung C. Yih & Ilie Talpasanu, Micro and Nano Manipulations for Biomedical Applications ISBN 978-1-59693-254-8, Artech house Copyright 2008, Boston.

