



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **George Viorel POPESCU**
Address(es) Str. Atomistilor, Nr. 409,
Magurele 077125, Bucharest, Romania
Telephone(s) 0214575739 Mobile: 0733792087
Fax(es) 0214575739
E-mail george.popescu@inflpr.ro
Nationality Romanian
Date of birth October 25, 1968
Gender Male

Desired employment / Occupational field **Scientific researcher / Physical sciences**

Work experience

Dates	2011→
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Conducting research in optofluidics, spectroscopy, modeling and simulation of drug-pathogen interaction mechanisms
Name and address of employer	National Institute for Laser, Plasma and Radiation Physics Str. Atomistilor, Nr. 409, Magurele 077125, Bucuresti, Romania
Type of business or sector	Scientific Research
Dates	2009→
Occupation or position held	Researcher, adjunct professor
Main activities and responsibilities	Conducting research in information theory, complexity: teaching bioinformatics, systems biology, mathematical modeling and simulation.
Name and address of employer	University "Politehnica" Bucharest, Splaiul Independentei Nr. 313, RO-060042 Bucharest, Romania
Type of business or sector	Higher Education
Dates	2008, 2011→
Occupation or position held	Adjunct assistant scientist (since 2011), Bioinformatics consultant
Main activities and responsibilities	Conducting research in systems biology and bioinformatics
Name and address of employer	Boyce Thompson Institute of Plant Research Tower Rd. Ithaca, NY 14853, USA
Type of business or sector	Scientific Research
Dates	2004-2006
Occupation or position held	Postdoctoral Researcher
Main activities and responsibilities	Conducting research in bioinformatics, genomics and systems biology
Name and address of employer	MCDB Dept., Yale University, P.O. Box 208103, New Haven, CT 06620-8103 and Department of Genetics, Yale Medical School, 333 Cedar Street, New Haven, CT 06520-8005
Type of business or sector	Scientific Research

Dates	2001-2004
Occupation or position held	Researcher
Main activities and responsibilities	Conducting research in system analysis and optimization, distributed systems design, algorithm design and analysis, analysis of IBM broadband computing infrastructure strategy.
Name and address of employer	IBM TJ Watson Research Center PO Box 218, Yorktown Heights, NY 10598, USA
Type of business or sector	Scientific Research, Information technology
Dates	1996-2000
Occupation or position held	Graduate research assistant
Main activities and responsibilities	Research in real-time system modeling, interactive simulation, telemedicine
Name and address of employer	CAIP – Center for Advanced Information Processing, Rutgers University 96 Frelinghuysen Road, Piscataway, NJ 08854, USA
Type of business or sector	Scientific Research
Dates	1996
Occupation or position held	Research assistant, Office of Naval Research fellowship
Main activities and responsibilities	Research in communication systems, artificial intelligence
Name and address of employer	Dept. of Electrical and Computer Engineering University of Colorado at Colorado Springs, USA
Type of business or sector	Higher Education
Dates	1993-1996
Occupation or position held	Teaching assistant
Main activities and responsibilities	Teaching laboratories and seminars in Image processing, Information theory, Research in wavelet image processing, stochastic modeling for image analysis.
Name and address of employer	University "Politehnica" Bucharest, Splaiul Independentei Nr. 313, RO-060042 Bucharest, Romania
Type of business or sector	Higher Education
Dates	1993
Occupation or position held	TEMPUS research fellow
Main activities and responsibilities	Research in stochastic modeling for image analysis (Markov Random Fields for motion detection).
Name and address of employer	Laboratoire de traitement des images et reconnaissance des formes (LTIRF) INPG Grenoble, France
Type of business or sector	Higher Education

Education and training

Dates	2004-2006
Title of qualification awarded	Postdoctoral training in bioinformatics, systems biology and genomics
Principal subjects/occupational skills covered	Bioinformatics, genomics, systems biology
Name and type of organisation providing education and training	MCDB Department, Yale University and Department of Genetics, Yale Medical School
Dates	1996-2001
Title of qualification awarded	PhD
Principal subjects/occupational skills covered	Computer modelling and simulation
Name and type of organisation providing education and training	Rutgers – The State University of New Jersey
Dates	1994-1996
Title of qualification awarded	Doctoral program
Principal subjects/occupational skills covered	Stochastic modelling for image analysis

Name and type of organisation providing education and training	Information Engineering and Applied Electronics Department, Faculty of Electronics and Telecommunications, University "Politehnica" Bucharest																																								
Dates	1988-1993																																								
Title of qualification awarded	Engineering diploma (Master in Engineering)																																								
Principal subjects/occupational skills covered	Imaging, Patterns and Artificial Intelligence																																								
Name and type of organisation providing education and training	Information Engineering and Applied Electronics Department, Faculty of Electronics and Telecommunications, University "Politehnica" Bucharest																																								
Mother tongue(s)	romanian																																								
Other language(s)																																									
Self-assessment																																									
<i>European level (*)</i>																																									
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Understanding				Speaking				Writing																																	
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B2	Advanced	B2	Advanced	B2	Advanced	B2	Advanced	C1	Intermediate																																
C2	Intermediate	C2	Intermediate	C2	Intermediate	C2	Intermediate	C2	Intermediate																																
	(*) Common European Framework of Reference for Languages																																								
Organisational skills and competences	Co-organization of ITEMS-POSDRU 61756 master program at University "Politehnica" Bucharest, IBM Leadership training, Effective communication training Conference publication chair, IEEE Virtual Reality 2002, Orlando Florida Conference Video Proceedings Chair, IEEE VR 2000, New Brunswick, New Jersey																																								
Technical skills and competences	Mathematical modelling, computer modelling and simulation, design and analysis of computer networks, laboratory experimentation in molecular biology, laser spectroscopy.																																								
Computer skills and competences	Programming Languages: C, C++, Java, Perl; Unix Shell. Mathematical/Statistical packages: Matlab, R, Bioconductor, CPLEX, COIN-OR. Modeling and Simulation tools: Amber10, Autodock4.2, Gaussian09, GAMESS. Data analysis tools: Origin8.																																								
Artistic skills and competences	playing violin, amateur artist certificate.																																								
Other skills and competences	Laboratory experimentation: Molecular biology: DNA microarrays, Protein microarrays, Sequencing technology; Gene expression analysis; Physics: Methods for light pressure measurement, optofluidics, high-speed imaging, photon imaging, methods for control and synchronization of chaotic laser systems, UV/VIS spectroscopy, photochemical drug modification using laser systems.																																								
Additional information	<p>Professional activities:</p> <p>Member SPIE (The international society for optics and photonics) Member ISCB (International Society for Computational Biology) Member SIAM (Society for Industrial and Applied Mathematics) Member ACM (Association for Computing Machinery) Member IEEE-CS (1992-2001) , Member INFORMS (2004-2007), Reviewer for: Bioinformatics Journal, Journal of Computational Biology, GRID 2002, <i>Presence Journal</i>.</p> <p>Awards:</p> <p>2 IBM Invention Achievement Awards (2003, 2004) VR 2002 honorable mention award TEMPUS (European Commission Education Program) Fellowship, 1993 "Traian Lalescu" National Physics Contest Award, 1990 Romanian National Physics Olympiad Awards 1984, 1985, 1986 National Merit Scholarship, Romania, 1990, 1991, 1992, 1993</p> <p>Publications:</p> <p>12 journal papers; three book chapters, over 35 publications in journal and conference proceedings.</p> <p>Patents:</p> <p>9 US/EU patent applications in system modeling and optimization.</p>																																								

Journal

H. Y. Lee, C. H. Bowen, G. V. Popescu, H.-G. Kang, N. Kato, S. Ma, S. Dinesh-Kumar, M. Snyder and S. C. Popescu, "RTNLB1 and RTNLB2 Reticulon-Like Proteins Regulate Intracellular Trafficking and Activity of the FLS2 Immune Receptor, *Plant Cell Online* 2011, 10.1105/tpc.111.089656.

M. L. Pascu, G.V. Popescu, C.M. Ticos, I. R. Andrei, "Unresonant interaction of laser beams with microdroplets, accepted to JEOS-RP 2012.

Sorina C. Popescu, George V. Popescu, Shawn Bachan, Zimei Zhang, Mark Gerstein, Michael Snyder, and S. P. Dinesh-Kumar, "MAPK target networks in *Arabidopsis thaliana* revealed using functional protein microarrays", *Genes Dev.* 2009 Jan 1;23(1):80-92. Epub 2008 Dec 18.

Sorina C. Popescu, George V. Popescu, Shawn Bachan, Zimei Zhang, Montrell Seay, Mark Gerstein, Michael Snyder, and S. P. Dinesh-Kumar, "Differential binding of calmodulin-related proteins to their targets revealed through high-density *Arabidopsis* protein microarrays", *Proc Natl Acad Sci U S A.* 2007 Mar 13;104(11):4730-5.

A. Urban, J. Korb, R. Selzer, T. Richmond, J. Cubells, A. Hacker, G. Popescu, R. Green, B. Emanuel, M. Gerstein, S. M. Weissman and M. Snyder, "High resolution mapping of DNA copy alterations in human chromosome 22 using high density tiling oligonucleotide arrays," *PNAS*, March 2006, 103 (12), pp. 4534-4539.

Feingold, E.A. et al.. "The ENCODE (ENCyclopedia of DNA Elements) Project." *Science* 306:636-640.

M. Bouzit, G. Burdea, G. Popescu, and R. Boian, "The Rutgers Master II-New Design Force-Feedback Glove", *IEEE/ASME Transactions on Mechatronics*, Vol. 7(2), pp. 256-263, June 2002.

Girone M., Burdea, G., M. Bouzit, V.G. Popescu, and J. Deutsch, "A Stewart Platform-based System for Ankle Telerehabilitation," invited article, Special Issue on Personal Robotics, *Autonomous Robots*, Vol. 10, pp. 203-212, Kluwer, March 2001.

Burdea, G., Popescu V., V. Hentz, and K. Colbert, "Virtual Reality-based Orthopedic Telerehabilitation," *IEEE Transactions on Rehabilitation Engineering*, Vol. 8, No. 3, pp. 429-432, September 2000.

A. Kolcz, J. Alspector, M. Augusteijn, R. Carlson and G. V. Popescu, "A line-oriented approach to word spotting in handwritten documents," *Pattern Analysis and Applications*, vol. 3, no. 2, pp. 153-168, 2000.

Popescu V. G., G. Burdea, M. Bouzit, M. Girone, and V. Hentz, "A Virtual-Reality-Based Telerehabilitation System with Force Feedback," *IEEE Transactions on Information Technology in Biomedicine*, vol. 4, No. 1, pp. 45-51, March 2000.

G. Burdea, G. Patounakis, G. V. Popescu, R. E. Weiss, "Virtual Reality-based Training for the Diagnosis of Prostate Cancer", *IEEE Transactions on Biomedical Engineering*, Vol. 46, No. 10, pp 1253-1260, October 1999.

Book chapters

G. V. Popescu, Sorina C. Popescu, "Complexity and modularity of MAPK signaling networks", *Handbook of Research in Computational and Systems Biology: Interdisciplinary Applications*, IGI Global 2011.

G. V. Popescu, "Distributed indexing networks for efficient large-scale group communication," in *Handbook of Research on P2P and Grid Systems for Service-Oriented Computing: Models, Methodologies and Applications*, N. Antonopoulos, G. Exarchakos, M. Li and A. Liotta eds, IGI Global 2009.

G. V. Popescu, G. Burdea, and H. Trefftz, "Multimodal interaction modeling," in *Handbook of Virtual Environments: Design, Implementation and Applications*, K. Stanney ed., Lawrence Erlbaum Associates, Inc. February 2002.

Conference proceedings and presentations

M. L. Pascu, I. R. Andrei, V. Nastasa, M. Boni, G. V. Popescu "LASER RADIATION INTERACTION WITH FLUOROPHORES IN MICRO-/NANO-DROPLETS OF SOLUTIONS" Laser Medicine World Florence, Italy, 4-5 November 2011 (to be published as AIP Proceedings).

G. Popescu, S. Popescu, "Functional Protein Microarrays: toward a system view of the plant cell" ISWLA 2011, Bran Romania

Sorina C. Popescu, G. V. Popescu, M. Snyder, and S. P. Dinesh-Kumar, "Large scale identification of MAPK networks in *Arabidopsis Thaliana*", RECOMB Regulatory Genomics, Systems Biology and DREAM3 Workshop, 2008.

G. Popescu, "Computational models for comparative genomics hybridization analysis", DM-HI08, INFORMS Annual Meeting, Pittsburgh, 2008.

G. Popescu, S. Weissman, "In-silico DNA micro-array hybridization: Computational models for estimating DNA micro-array hybridization efficiency", 8-th Annual Computational Genomics Conference, 2005.

G. Popescu, "Transposition Search for Optimal Graph Embedding", INFORMS Annual Meeting, Pittsburgh, 2006.

G. Popescu, Z. Liu, "Network overlays for efficient control of large scale dynamic groups", Proceedings of DS-RT 2006.

T. Chang, J. Fan, M. Ahamad, G. Popescu, Z. Liu, "Preference-aware overlay topologies for group communication," Proceedings of Globecom 2005. 6 pp.

Simon J. E. Taylor, George V. Popescu, J. Mark Pullen, Stephen John Turner: Distributed Simulation and the Grid: Position Statements. Proceedings of DS-RT 2004: pp. 144-149

G. Popescu, Z. Liu, "Stateless application-level multicast for dynamic group communication", Proceedings of DS-RT 2004, pp. 20-28.

G. Popescu, C. Codella, "An Architecture for QoS data replication in Networked Virtual Environments", Proceedings of IEEE VR2002, March 29-30, Orlando FL, pp. 41-49.

T. Chang, G. Popescu, C. Codella, "Scalable and Efficient Update Dissemination for Interactive Distributed Applications", Proceedings of ICDCS 2002, July 2002, pp 143-151.

G. Popescu, Z. Liu, "On Scheduling 3D model transmission in Networked Virtual Environments", Proceedings of IEEE DSRT 2002, pp. 127-134.

G.V. Popescu, G. Burdea and R. Boian, "Shared Virtual Environments for Telerehabilitation," Proceedings of Medicine Meets Virtual Reality 2002, IOS Press, Newport Beach CA, pp. 362-368, January 23-26 2002.

M. Bouzit, G. Popescu, G. Burdea, and R. Boian, "The Rutgers Master II-ND Force Feedback Glove", Proceedings of IEEE VR 2002 Haptics Symposium, pp. 145-152, Orlando FL, March 2002.

M. Girone, G. Burdea, M. Bouzit, V.G. Popescu and J. Deutsch, "Orthopedic Rehabilitation using the 'Rutgers Ankle' Interface," Proceedings of Virtual Reality Meets Medicine 2000, IOS Press, pp. 89-95, January 2000.

Popescu, V., G. Burdea, M. Bouzit, "Virtual Reality Simulation Modeling for a Haptic Glove," Computer Animation'99 Conference, Geneva, Switzerland, pp. 195-200, May 26-28, 1999.

Popescu, V., G. Burdea, M. Bouzit, M. Girone, and V. Hentz, "PC-Based Telerehabilitation System With Force Feedback," Proceedings of Medicine Meets Virtual Reality (7) Conference, "The Convergence of Physical Informational Technologies: Options for a New Era in Healthcare", IOS Press, Amsterdam, Vol. 62, pp. 262-267, 1999.

Popescu, V. and G. Burdea, "Dextrous Haptic Interface for Jack," ASME WAM, Seventh Annual Symposium on Haptic Interfaces for Virtual Environment, Anaheim CA, November 19-20, DSC Vol. 64, pp. 189-194, 1998.

Burdea, G., G. Patounakis, V. Popescu and R. Weiss, "Virtual Reality Training for the Diagnosis of Prostate Cancer," IEEE International Symposium on Virtual Reality and Applications (VRAIS'98), Atlanta, GA, March, pp. 190-197. Reprinted in IEEE Proceedings of Information Technology Applications in Biomedicine (ITAB'98), Washington DC, pp. 6-13 invited talk, May 16-17, 1998.

Andre, M., V. G. Popescu, A. Shaikh, A. Medl, I. Marsic, C. Kulikowski, and J. L. Flanagan, "Integration of Speech and Gesture for Multimodal Human-Computer Interaction," Second International Conference on Cooperative Multimodal Communication, 28-30 January 1998, Tilburg, The Netherlands.

Medl, A., I. Marsic, V. Popescu, A. Shaikh, M. Andre, C. Kulikowski and J. Flanagan, "Multimodal Interface for Collaborative Mission Planning," Workshop on Real-time Intelligent User Interfaces for Decision Support, and Information Visualization, 6-9 January 1998, San Francisco, CA.

Burdea, G., S. Deshpande, V. Popescu, N. Langrana, D. Gomez, D. DiPaolo, and M. Kanter, "Computerized Hand Diagnostic/Rehabilitation System Using a Force Feedback Glove," Proceedings of Medicine Meets Virtual Reality 5 Conference, pp. 141-150, 1997.

A. Kolcz, J. Alspector, M. Augusteijn, R. Carlson and G. V. Popescu, "A line-oriented approach to word spotting in handwritten documents," University of Colorado at Colorado Springs Technical Report 1998-ECE-1 March 1998.

A. Kolcz, J. Alspector, M. Augusteijn, R. Carlson and G. V. Popescu, "Visual Keyword Based Word-Spotting in Handwritten Documents," Proceedings of the SPIE International Symposium on Document Recognition V (Part of the SPIE Photonics-West' 98 Conference), San Jose, USA, Jan. 26-30 1998.

A. Kolcz, J. Alspector, M. Augusteijn, R. Carlson and G. V. Popescu, "Keyword search in handwritten documents," Proceedings of the International Workshop on Applications of Neural Networks to Telecommunications 3 (IWANN'T'97), Melbourne, Australia. Eds. J. Alspector, R. Goodman and T. X. Brown. pp. 171-180. LEA, Publishers, Mahwah, New Jersey, 1997.

C. Vertan, V. Buzuloiu, V. Popescu: "Morphological Like Operators for Color Images", in Proc. of EUSIPCO' 96, 10-13 Sept. 1996, Trieste, Italy, vol. 1, pp. 165-168

C. Vertan, M. Malciu, V. Buzuloiu, V. Popescu: "Median Filtering Techniques for Vector Valued Signals", in Proc. of the IEEE International Conference on Image Processing ICIP' 96, 16-19 Sept. 1996, Lausanne, Switzerland, vol. 1, pp. 977-980.

V. Buzuloiu, C. Vertan, V. Popescu, M. Malciu: "Introducing Mathematical Morphology for Vector Signals", in Proc. of the 3rd Conference on Applied and Industrial Mathematics ROMAI '95, 17-19 Sept. 1995, Oradea, Romania.

Popescu V., Buzuloiu V., Malciu M., Vertan C., "Multidimensional signal compression using wavelet transform", The XXXVI International Workshop of the A.T.M. Bucharest, Vol. 4, pp. 191-198, Bucharest, 16-17 November 1995.

Popescu V., Luthon F., Caplier A., "Analog resistive networks for motion detection", 4-th International Conference in Optics, "Romopto '94", Proceedings SPIE Vol. 2461, 3 pp., Bucuresti, 5-8 Sept. 1994.

V. Buzuloiu, M. Malciu, V. Popescu, "Improvements to parameter extraction from noisy signals", 4-th International Conference in Optics, "Romopto '94", Proceedings SPIE Vol. 2461, 4 pp., Bucuresti, 5-8 Sept. 1994.

Luthon F., Popescu V., Caplier A., "An MRF Based motion detection algorithm implemented on analog resistive network", ECCV '94, Lecture notes in Computer Science, Jan-Olof-Eklund Ed., Vol. 800, pp. 167-174, Stockholm, May 94.

Annexes | Patent applications list

Title: "Method for efficient data transmission in Interactive Networked Environments",
YOR920030034US1

Inventors: George Popescu, Zhen Liu, Christopher Codella

Title: "A METHOD OF ESTABLISHING TRANSMISSION HEADERS FOR STATELESS GROUP
COMMUNICATION", YOR920030104US1

Inventors: George Popescu, Zhen Liu

Title: "A METHOD OF STATELESS GROUP COMMUNICATION AND REPAIR OF DATA PACKETS
TRANSMISSION TO NODES IN A DISTRIBUTION TREE", YOR2003408US1

Inventors: George Popescu, Zhen Liu

Title: "Method and apparatus to support application and network awareness of collaborative
applications using multi- attribute clustering", YOR920030523US1

Inventors: George Popescu, Zhen Liu, Sambit Sahu

Title: "Method an apparatus for providing dynamic session management for distributed interactive
applications" , YOR920030529US1

Inventors: George Popescu, Zhen Liu, Sambit Sahu

Title: "Method and apparatus for virtualization network resources", YOR920030522US1

Inventors: Zhen Liu, George Popescu, Sambit Sahu.

Title: "Transposition Search method for optimal topology construction", YOR920040259US1

Inventor: George Popescu

Title: "Hierarchal space partitioning for scalable data distribution in large scale interactive
applications," YOR920040191US1.

Inventors: George Popescu, Zhen Liu.

Title: "Method for efficient Construction of Network Overlays Through Interconnection Topology
Embedding", YOR920040404US1.

Inventors: George V. Popescu, Parijat Dube, Zhen Liu, Dimitrios Pendarakis