

# Professor Dr. Eng. Goga Nicolae

## Publications (2000-2016)

### I ) PhD Thesis

**T1. N. Goga**, *Contributions to the Modeling and Verification of Reactive Systems*, Universitatea Politehnica Bucuresti, 2005.

**T2. N. Goga**, *Control and selection techniques for the automated testing of reactive systems*, Technishe Universiteit Eindhoven Press, the Netherlands, 2004

**T3 N. Goga**, *Advances in standardised medical informatics and computational molecular dynamics*, Habilitation thesis, defended on 17.02.2016, University Politehnica of Bucharest

### II) Published books (Ca, Cb, Cc) and book chapters

**Ca** Goga, M. and **Goga, N.** *New Perspectives on Computer Music Génération and Education*. Politehnica Press, ISBN 978-606-515-555-8, 111 pages, 2014.

**Ca N. Goga**, K. Veil, *Verification Results For It Standards: Firewire, Iso 11073, Ansi/hl7*, Publisher: Vdm Verlag, Germany, ISBN 9783639091021, 194 pages, 2008

**Ca. N. Goga**, *Control and selection techniques for the automated testing of reactive systems*, Technishe Universiteit Eindhoven Press, the Netherlands, ISBN 90-386-0892-6, 188 pages, 2004

**Cb.** L.M.G. Feijs, **N. Goga**, S. Mauw, T.A.C. Willemse ((Tim)) Editors, *Nederlandse testdag : 7e, Eindhoven, 8 November 2001 : proceedings*, Technishe Universiteit Eindhoven Press, the Netherlands, ISSN 0926-4515, 2001,

### III) Other Published Materials

**Ca** (chapter) **N. Goga**, A. Rzepiela, M. N. Melo, A.H. de Vries, A. Hadar, A.J. Markvoort, S. Nedeia and H.J.C. Berendsen, *Methods for multiscale modeling of membranes*, Chapter in "Advances in Planar Lipid Bilayers and Liposomes" (APLBL) 15 (2012) 139-170. Academic Press, Elsevier Inc, ISBN: 978-0-12-396533-2, ISSN: 1554-4516

### III.1) Articles: a) in international journals ISI indexed or indexed in other international recognised data basis (Ris); b) in other international journals (Rio);

**Ris (ISI Web of Science, impact factor 5.49)** Peters, EAJF; Goga, N; Berendsen, HJC. Stochastic Dynamics with Correct Sampling for Constrained Systems, JOURNAL OF CHEMICAL THEORY AND COMPUTATION, Volume: 10 Issue: 10 Pages: 4208-4220 , DOI: 10.1021/ct500380x, Published: OCT 2014, WOS:000343196300005

**Ris (ISI Web of Science, impact factor 1.19)** Goga, N, Simulating chemical systems: MPI and GPU parallelization of novel SD algorithms, JOURNAL OF CHEMICAL SCIENCES, Volume: 125, Issue: 5, Pages: 1285-1292, DOI: 10.1007/s12039-013-0490-y, Published: SEP 2013, WOS:000326296800037

**Ris (ISI Web of Science, impact factor 5.49)** Bulacu, M; Goga, N ; Zhao, W ; Rossi, G; Monticelli, L; Periole, X; Tieleman, DP; Marrink, SJ , Improved Angle Potentials for Coarse-Grained Molecular Dynamics Simulations, JOURNAL OF CHEMICAL THEORY AND COMPUTATION, Volume: 9 Issue: 8 Pages: 3282-3292, DOI: 10.1021/ct400219n, Published: AUG 2013, WOS:000323193500003

**Ris (ISI Web of Science, impact factor 5.49)** Melo, MN; Goga, N; de Vries, AH; Marrink, SJ; Berendsen, H , Mixing and matching simulations at different resolutions, EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS, Volume: 42, Pages: S87-S87, Supplement: 1, Published: JUL 2013, WOS:000330215300199

**Ris ( ISI Web of Science, impact factor 0.39 )**Egner, A; Moldoveanu, F; Goga, N; Moldoveanu, A; Asavei, V; Morar, A; Customized Test Data Generator for HL7v3 based Healthcare Information Systems, CONTROL ENGINEERING AND APPLIED INFORMATICS, Volume: 15, Issue: 3, Pages: 78-86, Published: SEP 2013, WOS:000325118900010

**Ris, (ISI Web of Science, impact factor 5.49)** N. Goga, A.J. Rzepiela, A.H. de Vries, S.J. Marrink, H.J.C. Berendsen. Efficient algorithms for Langevin and DPD dynamics. *J. Chem. Theory Comput.*, 2012. DOI:10.1021/ct3000876, ISSN: 1549-9618, WOS:000309505600021

**Ris (ISI Web of Science, impact factor 4,39)** Andrzej J. Rzepiela, Durba Sengupta, **Nicolae Goga**, and Siewert J. Marrink, Membrane poration by antimicrobial peptides combining atomistic and coarse-grained descriptions, *FARADAY DISCUSSIONS* , Volume: 144, Pages: 431-443, Published: 2010, WOS:000276653600023, ISSN: 0192-8651

**Ris (ISI Web of Science, impact factor 4,39)** Andrzej J. Rzepiela, Lars V. Schäfer, **Nicolae Goga**, H. Jelger Risselada, Alex H. De Vries, Siewert J. Marrink, Reconstruction of atomistic details from coarse-grained structures, *Journal of Computational Chemistry*, Wiley Periodicals, Inc, US, **2010**, WOS:000271017100026 , ISSN: 1364-5498

**Ris (ISI Web of Science, impact factor 0.57)** Moga, SA; Goga, N; Hadar, A, Combining Berendsen Thermostat with Dissipative Particle Dynamics (DPD) for Polymer Simulation MATERIALE PLASTICE, Volume: 50, Issue: 3, Pages: 196-200, Published: SEP 2013, WOS:000324783500011

**Ris (ISI Web of Science, impact factor 0.57)** Moga, SA; Goga, N; Hadar, A; New Thermostats for Multiscaling Polymer Simulation; MATERIALE PLASTICE; Volume: 49; Issue: 3; Pages: 146-150; Published: SEP 2012; WOS:000309699300003

**Ris (ISI Web of Science, impact factor 0.57)** Nedea, S; Goga, N; Markvoort, B; Van Steenhoven, A; New Multiscale Heat Transfer Techniques, MATERIALE PLASTICE, Volume: 48, Issue: 2, Pages: 132-137, Published: JUN 2011, WOS:000292630200004

**Ris (ISI, impact factor 0.57) NICOLAE GOGA, STEFANIA COSTACHE, SIEWERT MARRINK.** New Gromacs Implementations for Multiscaling Space MD, *MATERIALE PLASTICE*, Volume: 46, Issue: 3, Pages: 220-223, Published: 2009, WOS:000272488600002 , ISSN: 0025-5289

**Ris (ISI, impact factor 0.57) NICOLAE GOGA, STEFANIA COSTACHE, SIEWERT MARRINK, A Multiscaling Constant Lambda Molecular Dynamic Gromacs Implementation, MATERIALE PLASTICE.** Volume: 46, Issue: 1, Pages: 53-57, Published: 2009, WOS:000265431100010, ISSN: 0025-5289

**Ris (BDI, Indexed by Google Scholar) Goga, N.,** Implementing heuristic testing selection, *WSEAS Transactions on Communications*, Volume: vol.2, no.4, Pages: 398-403, ISSN 1109-2742, Published: Oct. 2003

**Rio** S. A. Moga, G. Dragoi, A. Hadar, and N. Goga. A Parallelization Scheme for New DPD-B Thermostats, *Journal of Atomic and Molecular Physics* Volume 2013 (2013), Article ID 579696, Doi: <http://dx.doi.org/10.1155/2013/579696>

**Rio** Goga, M.; **Goga, N.** Form analyse optimisations for hymnal computer music, *WSEAS Transactions on Acoustics and Music*, Volume: vol.1, no., Pages: 6-10, Published: Jan. 2004

**Rio N. Goga.** Probabilistic Testing Coverage, *WSEAS Transactions on Mathematics*, Vol. I, pages 198-204, USA, 2003. Extended article accepted in AVOCS'03, England.

**Rio N. Goga.** A corollary of Fermat's Theorem". In V.A. Artamonov, G.I arhipov and V.N. Bezverhni editors, *Russian journal of theoretical Science*, pages 134-142, Russia, 2003. Abstract published also in *International Conference: Algebra and Number Theory, Modern Problems and Applications*, Tula, Russia, 2003.

### III.2) Articles in international conferences

**Vis (ISI Proceedings, Indexed)** Pestritu, L; Todiruta, A; Goga, M; Goga, N, Method for Measuring the Heart Rate Through Fingertip Using a Low-end Video Camera and Its Application in Self Care, 2013 IEEE 13TH INTERNATIONAL CONFERENCE ON BIOINFORMATICS AND BIOENGINEERING (BIBE), Published: 2013, WOS:000335217700114

**Vis (ISI Proceedings, Indexed)** Vasilateanu, A; Goga, N; Sutu, T; Nastasescu, M; Moldoveanu, A; Asavei, V; Taslitchi, C; QUESTOR - automatic searching for reports, 19TH INTERNATIONAL CONFERENCE ON CONTROL SYSTEMS AND COMPUTER SCIENCE (CSCS 2013), Pages: 263-267, DOI: 10.1109/CSCS.2013.60, Published: 2013, WOS:000328493800039

**Vis (ISI Proceedings, Indexed)** Goga, N; Moga, A; Berendsen, H; Dragoi, G; Hadar, A; Pavilioiu, B; Baoukina, S; MPI parallelization of innovative DPD thermostats, 2013 IEEE INTERNATIONAL CONFERENCE ON HEALTHCARE INFORMATICS (ICHI 2013), Pages: 476-476, DOI: 10.1109/ICHI.2013.64, Published: 2013, WOS:000332894400058

**Vis (ISI Proceedings, Indexed)** Vasilateanu, A; Goga, N; Moldoveanu, F; Moldoveanu, A; Taslitchi, C; Questor: medical report search engine, 2013 IEEE INTERNATIONAL CONFERENCE ON HEALTHCARE INFORMATICS (ICHI 2013), Pages: 478-478, DOI: 10.1109/ICHI.2013.66, WOS:000332894400060

**Vis (ISI Proceedings, Indexed)** Todiruta, A ; Goga, M; Pestritu, L; Ciobanu, L; Goga, N; StressFree - a tool for stress determination and treatment through computer music generation, 2013 IEEE INTERNATIONAL CONFERENCE ON HEALTHCARE INFORMATICS (ICHI 2013), Pages: 477-477, DOI: 10.1109/ICHI.2013.65, Published: 2013, WOS:000332894400059

**Vis (ISI Proceedings, Indexed)** N. Goga, S. Marrink, R. Cioromela, F. Moldoveanu, *GPU-SD and DPD parallelization for Gromacs tools for molecular dynamics simulations, 2012 IEEE 12th International Conference on Bioinformatics & Bioengineering (BIBE)*, Cyprus, 2012, WOS:000315332900051

**Vis (ISI Proceedings, Indexed)** Goga, N; Costache, S; Moldoveanu, F. A formal analysis of ISO/IEEE P11073-20601 standard of medical device communication, *3rd Annual IEEE Systems Conference 2009*, Date: MAR 23-26, 2009 Vancouver CANADA, Pages: 163-166 Published: 2009, WOS:000267591000029

**Vis (ISI Proceedings, Indexed)** Goga, N; Marrink, S; Costache, SV, et al, Multiscaling Algorithms for Molecular Dynamics Simulations with GROMACS *3rd Annual IEEE Systems Conference 2009*, Date: MAR 23-26, 2009 Vancouver CANADA, Pages: 350-353 Published: 2009, WOS:000267591000063

**Vis (ISI Proceedings, Indexed)** Goga, M; Goga, N, Student Vision Regarding an Ideal e-Tutor in Romania, *7th European Conference on e-Learning*, Date: NOV 06-07, 2008 Agia Napa CYPRUS, Source: 7TH EUROPEAN CONFERENCE ON E-LEARNING, VOL 1 Pages: 435-442 Published: 2008, WOS:000263192600054

**Vis (ISI Proceedings, Indexed)** Calame, J.R.; **Goga, N.**; Ioustinova, N., et al. TTCN-3 testing of Hoorn-Kersenboogerd railway interlocking, *2006 Canadian Conference on Electrical and Computer Engineering*, Date: Ottawa, Ont. Canada , Pages: 4 pp. |CD-ROM Published: 2007, WOS:000245344704024

**Vis (ISI Proceedings, Indexed)** **Goga, N.**; Moldoveanu, F.; Goga, M. Test selection and coverage based on CTM and metric spaces 2006 Canadian Conference on Electrical and Computer Engineering, Date: Ottawa, Ont. Canada , Pages: 4 pp. |CD-ROM Published: 2007, WOS:000245344700097

**Vis (BDI – IEEE explore, Indexed)** Wesselink, W.; **Goga, N.**; Mooij, A.J., et al., Formal methods impact on ANSI standard HL7/IM - filling gaps in MSC theory, Conference Information: *2005 Canadian Conference on Electrical and Computer Engineering*, Date: Saskatoon, Sask. Canada, Pages: 1656-9 |CD-ROM, 2005, ISSN : 0840-7789, doi: 10.1109/CCECE.2005.1557301

**Vis (BDI – IEEE explore, Indexed)** **N. Goga** and F. Moldoveanu. Bit boundary testing coverage. *2005 Canadian Conference on Electrical and Computer Engineering.*, IEEE Canada, 2005, ISSN : 0840-7789, doi:10.1109/CCECE.2005.1556958

**Vis (ISI Proceedings, Indexed)** Mooij, A.J.; **Goga, N.**; Romijn, J.M.T., Non-local choice and beyond: intricacies of MSC choice nodes, *Fundamental Approaches to Software Engineering. 8th International Conference, FASE 2005 Held as Part of the Joint European Conference on Theory and Practice of Software, ETAPS 2005. Proceedings*, Date: Edinburgh UK Pages: 273-88+371 Published: 2005, WOS:000229183200020

**Vis (ISI Proceedings, Indexed)** Mooij, AJ; **Goga, N.**, Dealing with non-local choice in IEEE 1073.2's standard for remote control *4th International SDL and MSC Workshop*, Date: JUN 01-04, 2004 Ottawa CANADA, SYSTEM ANALYSIS AND MODELING Volume: 3319 Pages: 257-270 Published: 2005, WOS:000228865500017

**Vis (ISI Proceedings, Indexed)** **Goga, N.**, Probabilistic testing for a distributed conference protocol, *2004 IEEE International Conference on Systems, Man and Cybernetics*, Date: The Hague Netherlands, (IEEE Cat. No.04CH37583) Pages: 5154-8 vol.6 |7 vol. Published: 2004, WOS:000226863300868

**Vis (ISI Proceedings, Indexed)** **Nicolae, G.**; Moldoveanu, F., A distance coverage measure for bit boundary value analyse, *IEEE International Conference on Systems, Man and Cybernetics (IEEE Cat. No.04CH37583)* Pages: 973-7 vol.1-7, Published: 2004, WOS:000226863300165

**Vis (ISI Proceedings, Indexed)** **Goga, N.**; Romijn, J., Guiding Spin simulation, Formal Methods and Software Engineering. *6th International Conference on Formal Engineering Methods, ICFEM 2004. Proceedings*, Date: Seattle, WA USA, Formal Methods and Software Engineering, Lecture Notes in Computer Science Vol.3308, Pages: 176-93 |xiii+500 Published: 2004. , WOS:000225639600016

**Vis (ISI Proceedings, Indexed)** **Nicolae, G.**; Moldoveanu, F; Telea, A., Shading in a distributed environment, *8th International Conference on Information Visualisation*, Date: JUL 14-16, 2004 London ENGLAND, Pages: 1003-1006 Published: 2004, WOS:000223198000147

**Vis (ISI Proceeding Indexed)** Nicolae, G. Racovita, Z, Telea, A., Texture mapping in a distributed environment, SEVENTH International Conference on Information Visualisation Book Series: IEEE CONFERENCE ON INFORMATION VISUALIZATION - PROCEEDINGS, London, England, 2002, WOS:000184737800007

**Vis (ISI Proceedings, Indexed)** Belinfante, A., Feenstra, P.R., Vries, R. de, Tretmans, J., **Goga, N.**, Feijs, L.M.G., Mauw, S., Heerink, L. (1999). Formal test automation : a simple experiment. In G. Csopaki, S. Dibuz, K. Tarnay (Eds.), *Testing of Communicating Systems, Methods and Applications* , Vol. 147, pp. 179-196) Dordrecht: Kluwer, Budapest, Hungary, September 1-3, 1999, WOS:000088555300012

**Vi (IEEE explore Proceedings, Indexed)** Goga, M.; **Goga, N.** Feelings based computer music, *Canadian Conference on Electrical and Computer Engineering 2004* (IEEE Cat. No.04CH37513) Pages: 673-6 Vol.2|2908 Published: 2004, **ISSN:** 0840-7789, doi: 10.1109/CCECE.2004.1345202

**Vi (IEEE explore indexed)** van Langevelde, I.; Romijn, J.; **Goga, N.**, Founding FireWire bridges through Promela prototyping, *International Parallel and Distributed Processing Symposium (IPDPS 2003)*, Nice France Pages: 8 pp.|CD-ROM Published: 2003, **ISSN :** 1530-2075, Doi: 10.1109/IPDPS.2003.1213434

**Vi** Feijs, L.M.G., Mauw, S., **Goga, N.**, Tretmans, J. (2002). Test selection, trace distance and heuristics. In I. Schieferdecker, H. König, A. Wolisz (Eds.), *Testing of Computer Systems XIV: Applications to Internet Technologies and Services (Proceedings TestCom 2002)*, Berlin, Germany, March 19-22, 2002), pp. 267-282, Norwell MA, USA: Kluwer Academic Publishers., 2002

**Vi Goga, N.**, Comparing TorX, Autolink, TGV and UIO test algorithms, *SDL 2001: Meeting UML. 10th International SDL Forum*. Proceedings, Date: Copenhagen Denmark, Lecture Notes in Computer Science Vol.2078, Pages: 379-402|xi+437, Published: 2001

**Vi N. Goga**, Invited Speaker *Conquest Conference*, Germany, 2009,

**Vi M. Goga, N. Goga.** The role of e-tutor in e-learning. *IOCEDL 2007*, Greece.

**Vi M.Goga, N.Goga.** Music Generation in Education. *Proceedings of International Conference on Arts and Humanities*, USA, Hawaii, 2005.

**Vi A. Mooij, N. Goga** and W. Wesselink. A distributed spanning tree algorithm for topology-aware networks". In H. Unger editors, *Design, Analysis and Simulation of Distributed Systems*, Washington, USA, 2004. Also available as Technical Report Nr 03-09 of Eindhoven University of Technology

**Vi M. Goga and N. Goga.** An optimization of the Aesthetic MelodyLine of Computer Music, Abstract published at the *International Conference for Music Perception and Cognition*, Las Vegas, USA, 2003.

**Vi N. Goga.** A probabilistic coverage for on-the-fly test generations algorithms. In M. Leuschel, S. Gruner and S. Presti, editors, *Automated Verification of Critical Systems (AVoCS'03)*, pages 15--30. University of Southampton, England, 2003

**Vi M.Goga and N. Goga.** Aesthetic Analyse of Computer Music. In G. Soddu editors, *6'th International Conference of Generative Art*, pages 174-186, Milano, Italy, 2003.

**Vi N. Goga.** Experimenting with the probabilistic TorX, In P.D. Curtis, editors, *Software Engineering for High Assurance System*, pages 13--21. Software Engineering Institute, Portland, Oregon, USA, 2003.

**Vi Feijs, L.M.G., Goga, N., Mauw, S.** (2000). Probabilities in the TorX test derivation algorithm. In S. Graf, E. Sherratt, C. Jard, Y. Lahav (Eds.), *SAM 2000, Proceedings 2nd Workshop on SDL and MSC*, Col de Porte, Grenoble, France, June 26-28, 2000, pp. 173-188, VERIMAG, IRISA, SDL Forum, 2000

**Vi Vries, R. de, Tretmans, J., Belinfante, A., Feenstra, J., Feijs, L.M.G., Mauw, S., Goga, N., Heerink, L.** (2000). Côte de Resyste in PROGRESS. In J. P. Veen, J.P. Veen (Eds.), *Proceedings of the 1st PROGRESS Workshop on Embedded Systems*, Revised Edition. (pp. 157-164). Utrecht: STW Technology Foundation, Utrecht, The Netherlands, October 13, 2000

g) **Other scientific contributions: a) journal articles in Ro indexed by C.N.C.S.I.S. (Rns); b) journal articles in Ro (Rno); c) conference articles in Ro (Vn).**

**Rno N. GOGA**, Florica Moldoveanu, A technique for guiding Spin simulations, *U.P.B. Sci. Bull.*, Series C, Vol. 67, No. 3, 2005

**Vn M. Goga and N. Goga.** An optimization of the computer music. In I. Dumitrache, P. Borne and N. Cupcea, editors, *14<sup>th</sup> International Conference on Control Systems and Computer Science*, pages 98-103, Romania, 2003.

**Vn N.Goga.** Implementing the test selection theory. In I. Dumitrache, P. Borne and N. Cupcea, editors, *14<sup>th</sup> International Conference on Control Systems and Computer Science*, pages 103-109, Romania, 2003.

**N. Goga** co-author, *IEEE Standard 11073-10420<sup>TM</sup> - Standard for Health informatics – Personal health device communication – Part 10420: Device specialization – Body composition analyzer*, IEEE Press, US, ISBN 978-0-7381-6368-0, 2010.

**N. Goga** co-author, *IEEE Standard 11073- 10472<sup>TM</sup> - Standard for Health informatics – Personal health device communication – Part 10472: Device specialization – Medication monitor*, IEEE Press, US, ISBN 978-0-7381-6212-6, 2010.

**N. Goga** co-author, *IEEE Standard 11073- 10421<sup>TM</sup> - Standard for Health informatics – Personal health device communication – Part 10472: Device specialization – Peak expiratory flow monitor (peak flow)*, IEEE Press, US, ISBN 978-0-7381-6212-8, 2010.

**N. Goga** co-author, *ISO/IEEE Standard 11073-20601<sup>TM</sup>-2008 -Health informatics—Personal health device communication Part 20601: Application profile—Optimized Exchange Protocol*, IEEE Press, ISBN 978-0-7381-5827-3, US, 2008.

## **VI) Grants and Scientific Reports**

**Pi N. Goga- Coordinator UPB: Eurostar Project No.8949 Premises**

**Pi N. Goga - Coordinator UPB– Erasmus Mundus Eurica Grant – fellowships for Postdoc/PhD/Msc/Bachelors between Latin America and Europe, 2013-2016,**

**Pi N. Goga , Director Eureka Project Questor, 2012-2014**

**Pi N. Goga, director, NWO, Improved parallel scaling of the Gromacs MD code, 2011**

**Pi N. Goga-director, NWO<sup>1</sup>, Improving the Quality of Protocol Standards Grant, 2002-2006**

**Pi N. Goga – director, Managing Wireless Medical Devices Course Development Grant, Virtually University of Bavaria („Virtuelle Hochschule Bayern”), Germany, 2011**

**Pi N. Goga – director, Management of Internet of Things for Telehealth Applications Grant, Virtually University of Bavaria („Virtuelle Hochschule Bayern”), Germany, 2012**

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<sup>1</sup> Dutch Organization for Scientific Research-<http://www.nwo.nl/>