

## List of publications 2001-2010

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### A1: International Peer Reviewed Journals and Cited in ISI Web of Science

1. **Ionescu C.**, De Keyser R., Claire-Torrico B., De Smet T., Struys M., Normey-Rico J., "Robust predictive control strategy applied for Propofol using BIS as a controlled variable during Anesthesia", in *IEEE Transactions on Biomedical Engineering*, DOI 10.1109/TBME.2008.923142; Sept, **55(9)**: 2161-2170, **2008. (impact factor: 2.496)**
2. **Ionescu C.**, De Keyser R., "Relations between Fractional Order Model Parameters and Lung Pathology in Chronic Obstructive Pulmonary Disease", *IEEE Transactions on Biomedical Engineering*, DOI 10.1109/TBME.2008.2004966, April, 56(4): 978-987, **2009 (impact factor: 2.496)**
3. **Ionescu C.**, Segers P., De Keyser R., "Mechanical properties of the respiratory system derived from morphologic insight", *IEEE Transactions on Biomedical Engineering*, DOI 10.1109/TBME.2008.2007807, April, 56(4), pp. 949-959, **2009 (impact factor: 2.496)**
4. Nino J, Syafii S, De Keyser R, **Ionescu C.**, Struys M. , "EPSAC Controlled anesthesia with online gain adaptation", in special issue "Trust me I am a doctor" of the *Int Journal of Adaptive Control and Signal Processing*, **23**, pp. 455-471, **2009 (impact factor: 1.403 )**
5. Manuel Galvez, De Keyser R, **Ionescu C.**, "Nonlinear Predictive Control with Dead-time Compensator: Application to a Solar Power Plant", Elsevier, *Solar Energy*, **83**, pp. 743-752, **2009 (impact factor: 1.607)**
6. Mandru M., **Ionescu C.**, Chirita M., Modelling mechanical properties in native and biomimetically formed vascular grafts, *Journal of Bionic Engineering*, doi:10.1016/S1672-6529(08)60137-7, 6(4), pp. 371-377, **2009 (impact factor: not yet available, start-up year 2009 )**
7. **Ionescu C.**, Desager K., De Keyser R., "Estimating respiratory mechanics with constant-phase models in healthy lungs from forced oscillations measurements", *Studia Universitatis Vasile Goldis Life Sciences Series*, 19(1), pp. 123-132, **2009, (impact factor: not yet available, start-up year 2009)**
8. **Ionescu C.**, Derom E., De Keyser R, "Assessment of respiratory mechanical properties with constant phase models in healthy and COPD lungs", *Computer Methods and Programs in Biomedicine*, 97, pp. 78-85, DOI 10.1016/j.cmpb.2009.06.006, **2010 (impact factor: 1.220)**
9. De Keyser R., **Ionescu C.**, "Modelling and simulation of a lighting control system", *Simulation Modelling Practice and Theory*, 18, pp. 165-176, DOI:10.1016/j.simpat.2009.10.003, **2010 (impact factor: 0.586)**
10. **Ionescu C.**, Muntean I., J.T. Machado, R. De Keyser, M. Abrudean, "A theoretical study on modelling the respiratory tract with ladder networks by means of intrinsic fractal geometry", *IEEE Transactions on Biomedical Engineering*, DOI: 10.1109/TBME.2009.2030496, **online, in print (impact factor: 2.496)**
11. **Ionescu C.**, Tenreiro-Machado J., "Mechanical properties and impedance model for the branching network of the sapping system in the leaf of *Hydrangea Macrophylla*", *Nonlinear Dynamics*, DOI: 10.1007/s11071-009-9590-0, **online, in print (impact factor: 1.295)**
12. **Ionescu C.**, Kosinsky W. De Keyser R., "Viscoelasticity and fractal structure in a model of human lungs", accepted for *Archives of Mechanics*, **in print (impact factor: 0.519)**
13. **Ionescu C.**, De Keyser R., Oustaloup A., Sabatier J., Levron F., "Low frequency constant phase behaviour in respiratory impedance", **submitted to Biomedical Signal Processing and Control (impact factor: 0.422)**

14. De Keyser R., **Ionescu C.**, "Adaptive control of an artificial ventilator for a COPD patient", **submitted** to *Computer Methods and Programs in Biomedicine* (**impact factor: 1.220**)
15. **Ionescu C.**, Desager K., De Keyser R., "Fractional order model parameters for the respiratory input impedance in healthy and in asthmatic children", **submitted** to *Computer Methods and Programs in Biomedicine* (**impact factor: 1.220**)

#### **A2: International Journals Peer-Reviewed not cited ISI Web of Science**

1. **Ionescu C.**, De Keyser R., "Some Challenging Feedback-Control Applications in Biomedical Systems", invited paper, in *Journal of Medical Informatics & Technologies*, University of Silesia – Poland, Vol.9, ISSN 1642-6037, 35-46, **2005**
2. **Ionescu C.** Hodrea R., De Keyser R., "Selection of prediction-models for blood-glucose regulation in diabetic patients", *ACAM Journal of Automation Computers and Applied Mathematics*, *Technical University of Cluj-Napoca, Romania*, ISSN 1221-437X, vol 16, no1, pp 3-16, **2007**
3. **Ionescu C.** De Keyser R., "A robust adaptive auto-tuner for artificially stimulated muscles" in *the CEAI Journal of Control Engineering and Applied Informatics*, Politehnica University of Bucharest, Romania, 8(6), ISSN 1454-8658, Ed.: Dumitrache I., pp. 15-22, **2007** (free access at: [www.ceai.srait.ro](http://www.ceai.srait.ro))
4. **Ionescu C.**, "Number of Women engineers lag in the household robotics era", *IEEE Women in Engineering Magazine*, 1(1), pp. 7-9, **Winter 2007/2008**
5. **Ionescu C.**, Caicedo A., De Keyser R., "Total respiratory impedance analysis using ladder networks analogy for fractional-order models" in *Bulletin of the Transilvania University of Brasov, Series A1*, ISSN 1223-9631, Vol 14(49), 227-234, **2007**
6. **Ionescu C.**, De Keyser R., "Parametric models for characterizing respiratory input impedance", *Journal of Medical Engineering & Technology*, 32(4), 315-324, **2008**
7. **Ionescu C.**, De Keyser R., "Exploring the advantages of blind source separation in monitoring input respiratory impedance during apneic events", in *the CEAI Journal of Control Engineering and Applied Informatics*, Politehnica University of Bucharest, Romania, 10(3), ISSN 1454-8658, Ed.: Dumitrache I., pp. 53-58, **2008** (free access at: [www.ceai.srait.ro](http://www.ceai.srait.ro))
8. **Ionescu C.**, Chirita M., "Stress-strain properties of natural and biomimetical formed collagen constructs", *Int J of Technology and Healthcare*, IOS Press, 16(6), 437-444, **2008**
9. **Ionescu C.**, De Keyser R., "The use of non-integer order modelling in a tracheal simulation study", in *Transactions on Automatic Control and Computer Science*, vol 53(67), nr 4, ISSN 1224-600X, pp. 201-208, **2008**
10. Dugan V., Dan A., **Ionescu C.**, Cotrumba M., "Digital PID Self-Tuning Controllers Used with Different Structures of the Control Loops", in *Annual Scientific Journal of Ovidius University – Mechanical Engineering Series*, Vol X, nr 1; ISSN 1226-1776, pp. 71-79, **2008**
11. Muntean I., **Ionescu C.**, Nascu I., "A simulator for the respiratory tree in healthy subjects derived from continued fractions expansion", *AIP Conference Proceedings vol 1117: BICS 2008: Proceedings of the 1st International Conference on Bio-Inspired Computational Methods Used for Difficult Problems Solving: Development of Intelligent and Complex Systems*, 225-231, Editor(s): B. Iantovics, Enachescu C., F. Filip, ISBN: 978-0-7354-0654-4, **2009 (cited ISI Proceedings)**
12. Muntean I., **Ionescu C.**, De Keyser R., Abrudean M., "An electrical model of the respiratory tree based on morphological insight", **submitted** to Monograph of Romanian Science Academy
13. **Ionescu C.**, Chirita M., "Effects of constriction in an electro-mechanical model of the lung parenchyma", **submitted** to *IEEE Transactions on Biomedical Circuits and Systems*

14. **Ionescu C.**, Tenreiro-Machado J., De Keyser R., "Modelling of the lung impedance using a fractional order ladder network with constant-phase elements", **submitted to *IEEE Transactions on Biomedical Circuits and Systems***

## **B2: Chapter in Books**

1. De Keyser R., **Ionescu C.M.**, "Modeling, Identification and Simulation of a Lighting Control System", The Annals of Dunarea de Jos University of Galati, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics, pp.115-120, **2002**
2. **Ionescu C.**, De Keyser R., "A Novel Parametric Model for the Human Respiratory System", The Annals of Dunarea de Jos University of Galati, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics, pp. 21-27, **2003**
3. De Keyser R., **Ionescu R.**, "The Disturbance Model in Model Based Predictive Control", The Annals of Dunarea de Jos University of Galati, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics, pp.14-20, **2003**
4. Wyns B., Sbarciog M., **Ionescu C.**, De Keyser R., Boullart L., "Neural Network Modelling versus Physical Modelling. Application to a Solar Power Plant", IHP Annals of the Plataforma Solar de Almería, Spain, pp. 131-138, **2004**
5. **Ionescu C.**, De Keyser R., "Some Frequency Domain Considerations upon Human Respiratory Mechanics", The Annals of "Dunarea de Jos" University of Galati, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics, pp. 74-79, **2004**
6. Dugan V., Solea R., **Ionescu C.**, Ghinita D., "Three fuzzy reasoning models as a decision support aid to find an electrical energy tariff", The Annals of "Dunarea de Jos" University of Galati, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics, pp. 77-83, **2005**
7. **Ionescu C.**, De Keyser R., "On the potential of using fractional-order systems to model the respiratory impedance", in the Annals of "Dunarea de Jos" University of Galati, Romania, Fasc.III, ISSN 1221-454X, Electrotechnics, Electronics, Automatic Control and Informatics (indexed DOAJ), pp. 57-62, **2006**
8. **Ionescu C.**, De Keyser R., "Model-free Adaptive Control in Frequency Domain: Application to Mechanical Ventilation", chapter in *Frontiers in Adaptive Control*, pp. 253-270, ISBN 978-953-7619-43-5, [www.intechweb.org/books.php](http://www.intechweb.org/books.php) (open access), **2008**,
9. Syaffie S., Nino J., **Ionescu C.**, De Keyser R., "NMPC for Propofol drug dosing during anesthesia induction", L. Magni et al. (Eds): *Nonlinear model predictive control*, LNCIS 384, 501-509, Springer Verlag, Berlin, ISBN: 978-3-642-01093-4, **2009. (cited ISI Proceedings Volume)**
10. Muntean I., **Ionescu C.**, Nasco I., "Models for the respiratory system using morphology-based electrical analogy", in *volume proceedings of the 1<sup>st</sup> Int Conf on Complexity and Intelligence of the Artificial and natural Complex Systems. Biomedical Computing*, CANS 2008 Tg Mures, (Eds): B. Iantovics et al., IEEE Computer Society, 243-249, ISBN: 978-0-7695-3621-7, **2009**
11. **Ionescu C.** De Keyser R., Desager K., Derom E., "Fractional-Order Models for Characterizing the Impedance of the Respiratory System", G. Naik (Ed.), chapter in book: *Advances in Biomedical Engineering* pp. 377--396, ISBN 978-953-307-004-9, [www.intechweb.org/books.php](http://www.intechweb.org/books.php) (open access), **2009**
12. De Keyser R., **Ionescu C.**, Lazar C., "Frequency-Response based CACSD for Fractional Order Systems", chapter in book: *New Trends in Nanotechnology and Fractional Calculus Applications*, Baleanu et al (Eds), Springer, **in press**

### **C1 Conference Proceedings (6-8 page papers)**

1. **Ionescu C.M.**, De Keyser R., "Design of PID-Controllers for a Lighting Systems: The use of CAD-Tools and of AUTOTUNING-Methods", 2nd International Conference on Automatic Control (AUT'2002), Santiago de Cuba, Cuba, Universidad de Oriente, Santiago de Cuba, 6p CD-Paper nr. 042, **2002**
2. De Keyser R., **Ionescu C.M.**, "Modeling, Identification and Simulation of a Lighting Control System", Proc. of the IASTED Intern. Conf. on Modeling, Identification and Control – MIC 2002, Innsbruck, Austria, Acta Press, Anaheim, pp. 39-44, **2002**
3. **Ionescu C.M.**, De Keyser R., "A Novel Parametric Model for the Human Respiratory System". In: Proceedings of the IASTED International Conference on Modelling and Simulation, USA, Acta Press, Anaheim, pp. 246-251, **2003**
4. De Keyser R., **Ionescu C.M.**, "The Disturbance Model in Model Based Predictive Control", IEEE Conference on Control Applications (CCA'2003), Istanbul, Turkey, CD paper CF-001472, 6p, **2003 (cited ISI Proceedings)**
5. Sbarciog M., Wyns B., **Ionescu C.**, De Keyser R., Boullart L., "Neural Network Models for a Solar Power Plant", IASTED Conference on Neural Networks and computational Intelligence (NCI'04), Grindelwald, Switzerland, CDpaper 413-042, 6p, **2004 (cited ISI Proceedings)**
6. **Ionescu C.**, Wyns B., Sbarciog M., Boullart L., De Keyser R., "Comparison Between Physical Modelling and Neural Network Modelling of a Solar Power Plant", IASTED Conference on Applied Simulation and Modelling (ASM04), Rhodos, Greece, CDpaper 443-068, 6p, **2004 (cited ISI Proceedings)**
7. De Keyser R., **Ionescu C.**, Sbarciog M., "Advanced Control of a Boost Converter", Symp. on Power Electronics, Electrical Drives, Automation & Motion (Speedam2004), Capri, Italy, CDpaper – A061, 6p, **2004**
8. **Ionescu C.**, De Keyser R., "Towards a Novel Non-invasive Diagnosis Method for the Human Respiratory System", in CD Proc. of the X (IFMBE) Mediterranean Conf. on Medical and Biological Engineering (MEDICON2004), Ischia, Italy, 4p, **2004**
9. De Keyser R., **Ionescu C.**, "Power Electronics Control: a Case-Study in Control Engineering", Minicurso - ACA Congreso de Automatizacion, Univ. De Ibague, Colombia, Nov **2004**, 11p
10. **Ionescu C.** De Keyser R., "Adaptive closed-loop control strategy for paralyzed skeletal muscles", in Proc. of the IASTED Int. Conf. on Biomedical Engineering, 16-18 Feb **2005**, Innsbruck, Austria, in Special Session 7: Control Applications in Biomedical Engineering – Organizer: De Keyser R, pp. 667-672.
11. **Ionescu C.**, De Keyser R., "Detection of novel respiratory mechanics parameters by means of forced oscillations", Proc. of the IFAC 16<sup>th</sup> World Congress, Praha, Czech Republic, 6p, paper #02524, **2005**
12. Isoc D., Pop M., Ignat A., **Ionescu C.** De Keyser R., "Functional Diagnosis for Medical Purposes by using an Integrated Intelligent System", Proc. of the Int. Conf. SINTES12, Craiova, Romania, 564-569, **2005**
13. **Ionescu C.**, De Keyser R., "EPSAC predictive control of blood glucose level in type I diabetic patients", IEEE CDC-ECC Joint Int. Conf., Sevilla, Spain, 4845-4850, **2005 (cited ISI Proceedings)**
14. De Keyser R., Bonilla J., **Ionescu C.**, "A comparative study of several control techniques applied to a boost converter", pp. 71-78, IEEE Int Conf on Optimisation of Electrical and Electronic

Equipment (OPTIM), (Eds. Cernat, Nicolaide, Margineanu) Brasov Romania, **2006 (cited ISI Proceedings)**

15. **Ionescu C.**, De Keyser R., "Activating paralyzed muscles using adaptive control and a neuroprosthetic technique", Proc.IEEE AQTR'06 Int. Conf. on Automation, Quality and Testing, Robotics (Eds. L. Miclea, I. Stoian), ISBN 1-4244-0360-X, Cluj-Napoca, Romania, pp. 43-47, **2006 (cited ISI Proceedings)**
16. **Ionescu C.**, Zlate S., De Keyser R. , "An approach to control the blood glucose-level in diabetic patients", Proc. IEEE AQTR'06 Int. Conf. on Automation, Quality and Testing, Robotics (Eds. L. Miclea, I. Stoian), ISBN 1-4244-0360-X, Cluj-Napoca, Romania, pp. 48-53, **2006 (cited ISI Proceedings)**
17. **Ionescu C.**, De Keyser R., "Self-assessment of respiratory mechanics as educational tool in system identification course", In 7<sup>th</sup> IFAC Advances in Control Education (ACE), (Eds. Dormido, Fernández, Morilla, Pastor), CD-Rom M-26008-2006, Madrid-Spain, 6p, **2006**
18. Nascu I.; De Keyser R., **Ionescu C.**, "Introducing a novel auto-tuner as an educational tool", In 7<sup>th</sup> IFAC Advances in Control Education (ACE), (Eds. Dormido, Fernández, Morilla, Pastor), CD-Rom M-26008-2006, Madrid-Spain, 6p, **2006**
19. De Keyser R., **Ionescu C.**, "FRtool: a frequency response tool for CACSD in MatLab", IEEE Conf on Computer Aided Control Systems Design (CACSD-CCA-ISIC), Munchen, Germany, pp. 2276-2280, **2006 (cited ISI Proceedings)**
20. Claire-Torrice B., De Keyser R., **Ionescu C.**, Normey-Rico J., "Robust predictive control of drug dosing during anesthesia", in Proc. of the European Control Conference ECC07, Kos, Greece, paper 621, ISBN 978-960-89028-5-5, E. Camacho and S. Tzafestas (Eds.), pp. 3139-3145, **2007**
21. Galvez M., De Keyser R., **Ionescu C.**, "Comparison between model-based controllers for a distributed solar collector field", in Proc. of the European Control Conference ECC07, Kos, Greece, paper 519, ISBN 978-960-89028-5-5, E. Camacho and S. Tzafestas (Eds.), pp. 3005-3010, **2007**
22. Claire-Torrice B., De Keyser R., **Ionescu C.**, Normey-Rico J., "Predictive control with robust dead-time compensation: Application to drug dosing during anesthesia", in Proc. of the 7th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2007), special session "New developments in nonlinear model predictive control", Pretoria, South Africa, paper 133, pp. 176-181, **2007**
23. Galvez M., De Keyser R., **Ionescu C.**, "Application of a Smith Predictor based Nonlinear Predictive Controller to a Solar Power Plant", in Proc. of the 7th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2007), special session "New developments in nonlinear model predictive control", Pretoria, South Africa, paper 91, pp. 188-193, **2007**
24. **Ionescu C.**, De Keyser R., "Time domain validation of a fractional order model for human respiratory system", in the 14<sup>th</sup> IEEE Mediterranean Electrochemical Conf (MELECON08), Ajaccio, Corsica, IEEE Cat Nr CFP08MEL-CDR, ISBN 978-1-4244-1633-2, pp. 89-95, **2008 (cited ISI Proceedings)**
25. Hodrea R., **Ionescu C.**, De Keyser R., "Nonlinear EPSAC predictive control of blood glucose level in diabetic patients for prandial disturbance rejection", in Proc of the IEEE-TTTC Int Conf on Automation, Quality and Testing Robotics (AQTR08), ISBN 1-4244-2577-8/08, Cluj-Napoca, Romania, 6pages, **2008 (cited ISI Proceedings)**
26. **Ionescu C.**, Nour B., De Keyser R., Dugan V., "Respiratory pressure level regulation based on a fractional-order model for subjects with chronic obstructive pulmonary disease", in IEEE Proc. 11<sup>th</sup> Int Conf on Optimization of electrical and electronic equipment (OPTIM08), IEEE Cat. Nr 08EX1996C, ISBN 1-4244-1545-4, Vol ID-04, pp.99-104, **2008 (cited ISI Proceedings)**

27. **Ionescu C.**, De Keyser R., "Correlations between fractional-order model parameters and the effect of geometrical changes in human respiratory airways", in Proc of the 8<sup>th</sup> Int Conf on Technical Informatics (CONTI08), Timisoara, Romania, vol I, pp. 41-46, **2008**
28. **Ionescu C.**, Hodrea R., De Keyser R., "Impact of disturbance filter in nonlinear EPSAC predictive control of blood glucose level in type I diabetic patients", in Proc. of the IEEE - Multi Conference on Systems & Control, ISSN 978-1-4244-4/08, San Antonio, Texas USA, 672-677, **2008 (cited ISI Proceedings)**
29. Syafiie S., Nino J., **Ionescu C.**, De Keyser R., "NMPC for Propofol Drug Dosing during Anesthesia Induction", NMPC08, Intern. Workshop on Assessment and Future Directions of NMPC, Pavia Italy, P18, (Eds.: Magni, Raimoindo, Algowyer), 8 pages, **2008 (cited ISI Proceedings)**
30. **Ionescu C.**, Tun M., De Keyser R., Lazar C., "A Frequency response tool for CACSD in Matlab with generalized order transfer function", in CD-Rom Proc. of the 3<sup>rd</sup> IFAC Int Conf - FDA08 Fractional Differentiation and Applications, 5-7 Nov **2008**, Ankara, Turkey
31. Muntean I., **Ionescu C.**, Nascu I., "Inverse modeling of the respiratory tree using continued fractions expansions", Proc of the Bio-Inspired computational methods used for difficult problems-solving. Development of Intelligent and Complex Systems (BICS08), pp. 185-191, ISSN 2065-0418, Eds: Iantovics B, Enachescu C, Filip F., 5-7 Nov **2008**, Tg Mures, Romania
32. Muntean I., **Ionescu C.**, Nascu I., "Morphology-based ladder network modeling of the respiratory mechanics", Proc of the Int Conf "Complexity and Intelligence of the Artificial and Natural Complex Systems. Medical Applications of the Complex Systems. Biomedical Computing (CANS08), pp. 131-137, ISSN 2065-0426, Eds: Iantovics B, Enachescu C, Filip F., 8-10 Nov **2008**, Tg Mures, Romania
33. **Ionescu C.**, Oustaloup A., Levron F., Melchior P, Sabatier J, De Keyser R., " A model of the lungs based on fractal geometrical and structural properties", in the Proceedings of the 15<sup>th</sup> IFAC System Identification SYSID09 conference, St. Malo, France, 6-8 July 2009, pp. 994-999, **2009**
34. Hodrea R., Nour B., **Ionescu C.**, De Keyser R., "Model Reduction for Adaptation in Surgery Anaesthesia", accepted for publication in the Proceedings of the 7th IFAC Symposium on Modelling and Control in Biomedical Systems, Aalborg, Denmark, 12-14 August, pp. 240-245, **2009**
35. **Ionescu C.**, De Keyser R., "Flow controlled artificial ventilation of a COPD patient", accepted for publication in the Proceedings of the European Control Conference ECC09, Budapest, Hungary, 23-26 August 2009, pp. 2476-2481, **2009**
36. De Geeter N., **Ionescu C.**, De Keyser R., "A mechanical model of soft biological tissue – an application to lung parenchyma", *Proceedings of the 31<sup>st</sup> Annual Int Conf of the IEEE Engineering in Medicine and Biology Society*, Minneapolis, USA, 2-6 September, ISBN 978-1-4244-3296-7, pp. 2863-2866, **2009**
37. **Ionescu C.** Muntean I., De Keyser R., "The respiratory impedance in an asymmetric model of the lung structure", in Proceedings of the Int Conf on Understanding Intelligent and Complex Systems, Tg Mures, Romania, 6pages, **2009**
38. Naumovic M., De Keyser R., Robayo F., **Ionescu C.** "Developing a frequency response analyzer in MatLab-Simulink environment", Proc. 17th Telecommunication Forum (TELFOR2009), ISBN 978-86-7466-375-2, pp. 701-704, November 24-26, Belgrade, Serbia, **2009**
39. Hodrea R. , Iulianetti S., **Ionescu C.**, De Keyser R. , "Model development for Propofol and Remifentanil management during ICU anesthesia", In Proceedings of the 3<sup>rd</sup> Int. Conf.on Bio-inspired Systems and Signals Processing (Biosignals 2010), pp. 145-150, 20-23 January, Valencia, Spain, **2010**

40. Robayo F., Sendoya D., Hodrea R., **Ionescu C.**, De Keyser R., "Correlation analysis between Remifentanyl and other signals recorded during ICU anesthesia", accepted for publication at the 7<sup>th</sup> IASTED Int. Conf. on Biomedical Engineering (BioMed 2010), to be held on 17-19 February, Innsbruck, Austria, **in press 2010**
41. Robayo F., Sendoya D., Hodrea R., **Ionescu C.**, De Keyser R., "Estimating the time delay for predictive control in general anaesthesia", accepted for publication at the 22nd Chinese Control and Decision Conference, to be held on May 26-28, 2010 in Xuzhou, China, **2010**
42. Hodrea R., **Ionescu C.**, De Keyser R., "Predictive control strategy with online time delay estimation applied in general anaesthesia", submitted to the 9<sup>th</sup> IFAC Workshop on Time Delay Systems, to be held 7-9 June, Prague, Czech Republic, **2010**
43. **Ionescu C.**, "A view upon the fractal structure and dynamics of the glycogen molecule" submitted for the 9<sup>th</sup> International Symposium on Dynamics and Control of Process Systems, to be held 5-7 July, Leuven, Belgium, **2010**
44. **Ionescu C.**, Robayo F., De Keyser R., Naumovic M., "The frequency response analysis revisited", submitted to the 18<sup>th</sup> Mediterranean Conference on Control and Automation, to be held 23-25 June, Marrakesh, Morocco, **2010**
45. De Keyser R., **Ionescu C.**, "A novel auto-tuning control algorithm", submitted to the 12th IASTED International Conference on Control and Applications, to be held 15-17 July, Banff, Canada, **2010**

#### **D Abstracts ( 1-2 page papers, incl. national contests and symposia)**

1. **Ionescu C.**, Dugan V., "Design for 1<sup>st</sup> and 2<sup>nd</sup> degree of freedom systems in the general scheme, using loop-shaping methods" **awarded** with *Mention*, Student Scientific Research Session, of "Dunarea de Jos" University of Galati, Romania, May **2001**.
2. **Ionescu C.**, Dugan V., "Design methods for robust automated systems, using optimal control techniques  $H_{\infty}$ " **awarded** with *1st Prize*, National Student Scientific Research Session SECOSAFT 2001, Military Academy Sibiu, Romania, May **2001**
3. **Ionescu C.**, De Keyser R., "Real-time identification applied: recursive least squares method" **awarded** with *1st Prize*, Student Scientific Research Session, of "Dunarea de Jos" University of Galati, Romania, May **2002**
4. **Ionescu C.**, De Keyser R., "A novel parametric model for the human respiratory system" the 22nd Benelux Meeting 2003 on Systems and Control – Biomedical Section, Lommel, Belgium, Mar **2002**
5. **Ionescu C.**, De Keyser R., "Nonlinear model of the human respiratory system" **awarded** with *3rd Prize*, Student Scientific Research Session, of "Dunarea de Jos" University of Galati, Romania, May **2003**
6. **Ionescu C.**, De Keyser R., "A novel parametric model for the human respiratory system - revisited" the 6th Nat. Cong. on Th. & Applied Mechanics – Biomechanics Section, Gent, Belgium, May **2003**
7. **Ionescu C.**, De Keyser R., "Investigation on human respiratory mechanics", 4<sup>th</sup> National Day on Biomedical Engineering, Royal Academy Brussels, Belgium, Oct **2004**
8. **Ionescu C.**, De Keyser R., "Human respiratory mechanics", 5<sup>th</sup> FTW-UGent PhD Symposium, Ghent, Belgium, Dec **2004**

9. **Ionescu C.**, De Keyser R., "Respiratory mechanics assessed by pressure-volume loops with forced oscillations", J Comp Meth in Biomechanics and Biomed Eng – Vol. 8, Supplement 1: 30<sup>th</sup> Congress of Biomechanics Society, **2005**, Brussels, Belgium, 143-144
10. Vazquez-Seisdedos C., Valdés-Pérez F., **Ionescu C.**, De Keyser R., "Automated correction method of artifacts on heart rate times series", J Comp Meth in Biomechanics and Biomed Eng – Vol. 8, Supplement 1: 30<sup>th</sup> Congress of Biomechanics Society, **2005**, Brussels, Belgium, 277-278
11. Isoc D., Pop M., Ignat A., **Ionescu C.**, De Keyser R., "Integrated intelligent system for functional diagnosis" , J Comp Meth in Biomechanics and Biomed Eng – Vol. 8, Supplement 1: 30<sup>th</sup> Congress of Biomechanics Society, **2005**, Brussels, Belgium, 147-148
12. **Ionescu C.**, De Keyser R., "Control of Paralyzed skeletal muscles: a neural prosthesis", J Comp Meth in Biomechanics and Biomed Eng – Vol. 8, Supplement 1: 30<sup>th</sup> Congress of Biomechanics Society, **2005**, Brussels, Belgium, 145-146
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