

Francisco Llaneras

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CONTACT INFORMATION

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EDUCATION

2005-present: M. Sc. in Control Engineering, robotics and industrial informatics (Technical University of Valencia)

1999-2005: B. Sc. Industrial Electronics and Control Systems Engineering (Technical University of Valencia)

ACADEMIC POSITIONS HELD

April 06 - Ph. D. Scholar. Department of Systems Engineering and Control, Technical University of Valencia. Funded by the F.P.U. Grant Program of the Education and Science Ministry of Spain.

Sept 07 - Dic 07 Visitant researcher at the Centre For Systems Engineering And Applied Mechanics, Université Catholique de Louvain, Belgique. Advisor: Georges Bastin.

may 05 - april 06 Research assistant at the Department of Systems Engineering and Control, Technical University of Valencia.

Oct 04 - april 05 Final Project scholar. Department of Systems Engineering and Biopolis SL.
Title: "Design and implementation of a platform to monitoring and control of bioreactors".

RESEARCH

International Journals

- Llaneras F, Picó J: A procedure for the estimation over time of metabolic fluxes in scenarios where measurements are uncertain and/or insufficient. *BMC Bioinformatics*, 2007, 8:421. (Impact factor 2006: 3.62).
- Llaneras F, Picó J: Stoichiometric modelling of the cell metabolism. *Journal of Bioscience and Bioengineering*. (Accepted).
- Llaneras F, Picó J: An interval approach for dealing with flux distributions and elementary modes activity patterns. *Journal of Theoretical Biology* 2007, 246(2): 290-308. (Impact factor 2006: 2.264).

Workshops and conferences

- Llaneras F, Bastin G., Picó J: On metabolic flux analysis when measurements are insufficient and/or uncertain: the flux spectrum and the flux space, 2007. IAP Dysco workshop, Brussels (Belgium).
- Llaneras F, Tortajada M, Picó J: Structural analysis of metabolic pathways applied to heterologous protein production in *P. Pastoris*, *Journal of Biotechnology*. 131(2)S209, European Congress on Biotechnology, 2007.

- F. Llaneras, J. Picó. The linkage between flux distributions and elementary modes activity patterns: An interval Approach. 1st International Symposium on Systems Biology, Ed: Canovas Diaz M, ISBN (10): 84-611-1135-4. 2006.
- F. Llaneras, J. Picó, J. L. Navarro, E. Picó-Marco. Diseño e implementación de un entorno gráfico de simulación, monitorización y control de biorreactores. XXVI Jornadas De Automática, Eds: F. Torres, Q. Reinoso, ISBN: 84-689-0703-8. 2005.
- S. García-Nieto, A. Llosá, F. Llaneras, J. Sanchís. Plataforma de simulación y control distribuido bajo tiempo real. XXVI Jornadas De Automática, Eds: F. Torres, Q. Reinoso, ISBN: 84-689-0703-8. 2005.

Research Interests

- Metabolic networks: Elementary modes and extreme pathways analysis, metabolic flux analysis.
- Mathematical modelling of biological processes: macroscopic or reduced models and structured models.
- Bioreactor monitoring and control.
- Non-linear and Intelligent control.

CONGRESS, COURSES AND SEMINARS

- 2007 Seminar “Applications of advance control”. Valencia.
- 2006 “Bioprocess Engineering Course”. Supetar, Croatia. European Federation of Biotechnology.
 “1st International Symposium on Systems Biology”, Murcia. Spanish Society of Biotechnology and European Federation of Biotechnology.
 Seminar “Modelling and control Of system with dynamic friction”, Valencia. Dept. of Systems Engineering and Control, Technical University of Valencia.
- 2005 Congress” XXVI Jornadas de Automática”, Alicante. Comité Español de Automática. Alicante.
 Course “Graduate Course on Embedded Control Systems”, ARTIST2 European Network. Valencia.
 Seminar “Dynamical network systems”, Prof. George Bastin. Valencia.
 Course “Optimization and optimum control of chemical and biotechnological processes”, Julio Banga. Valencia.
- ... Course “Software development with java”. Valencia.
 Course “Intelligent facilities”. Valencia.
 Course “Object-Oriented Programming. C++”. Valencia.

OTHER MERITS

- **Honourable mention** in the “Premios nacionales de fin de carrera”, prize awarded to the most outstanding graduates in Spain during 2004 and 2005 by the Education and Science Ministry of Spain (MEC).
- **Valedictorian award** (top graduate of the class) in the IX promotion of Industrial Electronics and Control Systems Engineering, School of Industrial Engineering, Technical University of Valencia.
- "Premio extraordinario fin de carrera" prize awarded to the most outstanding graduate in the IX promotion of Industrial Electronics and Control Systems Engineering by the School of Industrial Engineering.