



**Ministry of Economy and
Competitiveness**
**Secretariat of State for Research and
Development and Innovation**

Currículum

Name: Pastora Isabel Vega Cruz

Curriculum Vitae

I, the undersigned, declare that the information contained in this curriculum vitae is true and accurate and, were it not the case, I assume all the responsibilities that may arise from the inaccuracies that may appear in it.

Name: Pastora Isabel Vega Cruz
Date: Octubre 2020

CURRICULUM VITAE

PERSONAL INFORMATION

SURNAMES: Vega Cruz
NAME: Pastora Isabel
GENDER: F
STATE ID NUMBER:
OFFICIAL NUMBER:
DATE OF BIRTH:
PERSONAL ADDRESS:
CITY:
POSTAL CODE:
PHONE NUMBER:
SPECIALIZATION UNESCO CODE): 331102, 331005, 120326, 120305

PROFESSIONAL INFORMATION

ORGANIZATION: University of Salamanca
CENTER: Faculty of Sciences
EXPERTISE AREA: Department of Systems Engineering and Automation.
DEPARTMENT: Computing and Automation
ADDRESS: Plaza de la Merced, s/n. Salamanca
PHONE NUMBER: (+34) 923 - 294450
FAX: (+34) 923 - 29 45 14
E-MAIL: pvega@usal.es
OCCUPATIONAL GROUP: Full professor
DATE OF START: May 1998

ACADEMIC BACKGROUND

ACADEMIC DEGREES	CENTER/UNIVERSITY	DATE
Degree in Physical Sciences	University of Salamanca	June 1982
Bachelor degree	University of Salamanca	Feb. 1983
PhD. in Physical Sciences	University of Valladolid	May 1987

PHD THESIS

Title: Adaptive formulations for PID controllers
Grade: Passed Cum Laude

ACTIVITIES OF SCIENTIFIC OR PROFESSIONAL NATURE

DATES	POSITION	INSTITUTION
1983-87	Assistant Professor	Univ. Valladolid
1987-89	Acting full professor	Univ. Valladolid
1989-95	Full professor	Univ. Valladolid
1995-98	Full professor	Univ. Salamanca
1998- X	Tenured professor	Univ. Salamanca

LANGUAGES INTEREST FOR SCIENTIFIC PURPOSES

LANGUAGE	SPOKEN READ	WRITTEN
ENGLISH	C	C C

RECOGNISED TEACHING AND RESEARCH PROGRAMMES

- Research six-year period: Four periods
- Tranference: Six-year period: One (All possible)
- Teaching assessment: Seven periods
- Docentia Programme: One period

SCIENTIFIC, TECHNICAL AND ACADEMIC ACTIVITY

- Member of the Committee Euro-Inf (National Agency for Quality Assessment and Accreditation, ANECA) (From 2020)
- Member of the National Research Quality Assessment Committee CENAI (Subfield 6.2) (National Agency for Quality Assessment and Accreditation, ANECA) From (2015-2019)
- Head of Department of Computer Science and Automation of the University of Salamanca (2014-2018)
- Representative of the USAL in the Committees of Governance for the elaboration of the program of thermal renewable energies of Castilla y León (PERTECAL) Junta de Castilla y León. Within the framework of the European Project "RES H/C SPREAD" (2015-30)
- Member of the Economic Commission of the USAL Senate (since 2015)
- Member of the Quality Commission for the Master in Intelligent Systems of the USAL since 2007.
- Member of the Academic Commission for the Master in Chemical Engineering since 2008
- Vice-rector for Innovation and Infrastructures. University of Salamanca (From December 2009 to December 2013)
- Director of the Foundation CEI Studii Salamantini. University of Salamanca. (November 2011-June 2013)
- Managing director of the Spanish Language Schools University of Salamanca, S.L (ELE USAL) Years 2013-2014
- Representative for USAL of the OCW consortium from 2009 to 2013
- Member of the Academic Committee of the CSEV Foundation ("Centro Superior de Enseñanza Virtual" (2019-13))
- Member of the Board of Trustees of the USAL Science Park Foundation 2009-2013
- Member of the Executive Committee CADEP-CRUE
- President of the SCOPEO e-learning Observatory of the USAL 2009-2013
- Representative for USAL of the Coimbra Group of Universities e-learning Task Force (2010)
- Member of the General Board of OCU (Office of University Cooperation) from 2009 to 2013
- Member of the Board of Directors of OCU (Office for University Cooperation) (2009-2013)
- Member of the General Board of the SL International Courses (2009-2013)
- Member of the Occupational Health and Risk Prevention Commission of the USAL 2010
- President of the Innovation Commission Delegate of the Governing Council of the USAL. (2009-2013)

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- Member of the Innovation Commission Delegate of the Governing Council of the USAL. (2009-2013)
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- Universia Coordinator for the USAL. (2009-2013)
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- Member of the Regional Council for the Information Society (2009-2013)
-
- Member of the Electronic Administration Commission of the USAL (2009-2013)
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- Member of the Electronic Administration Commission of the Universities of S&L (2009-2013)
-
- Head of Department of Computer Science and Automation of the University of Salamanca (2008-2010)
-
- Member of the Research Council of the University of Salamanca, (2007-2010)
-
- Member of the ETSII Grade Reform Commission, (Department of Computer Science and Automation, USAL), 2008-2009
-
- Member of the Reform Committee of the Master's Studies in Intelligent Systems (Department of Computer Science and Automation, USAL, 2008)
-
- Member of the Advisory Board of the Center for Brazilian Studies of the University of Salamanca (from 2008-12)
-
- Head of the Section for the Faculty of Sciences Department of Systems and Automation Engineering (1993-1995)
-
- Member of the Board of the Sugar Technology Centre CTA, UVA, Sociedad General Azucarera de España and Ebro Agrícolas. (1993-1996)
-
- Coordinator of the European Network ENTREE (European Network for Training and Research in Electrical Engineering). 1993-1995
-
- Coordinator of the postgraduate course Industrial Computing (University of Valladolid), in the Department of Systems Engineering and Automation. Year 1994-95
-
- Member of the Expert Commission of the National Industrial Design and Production Programme of the Ministry of Science and Technology May 2004-05,
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- Member of the Expert Commission of the National Industrial Design and Production Programme of the Ministry of Science and Technology, 2007
-
- Member of the Monitoring Committee (Conference on Project Monitoring of the National Plan for the National Industrial Design and Production Programme of the Ministry of Science and Technology). Madrid, June 2007
-
- Member of the Scientific Committee of EnRED journal (University of Salamanca), 2007-10
-
- Evaluator of European Research Projects (LTR Programme), 1995, 1996
-
- Evaluator of Research Projects of the National Program of the CICYT since 1991
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- CYTED Research Projects Evaluator year 2006-07

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- Reviewer of articles in prestigious journals since 1991:

Control Theory and Applications of IEE.
Journal of Process Control,
Automática (IFAC),
Control Engineering Practice (IFAC),
Engineering Application of Artificial Intelligence,
Computers and Chemical Engineering,
Control Engineering Practice etc.

PARTICIPATION IN RESEARCH PROJECTS, THEMATIC NETWORKS AND SPECIAL ACTIONS FUNDED

1989-90	Coordinated research project An intelligent, computer-aided package of biotechnological process control systems Universities: Valladolid, Autónoma Barcelona, País Vasco CICYT, Key: ROB-479/89 Head researcher
1991	Concerted Research Action Development of an advanced control system for laboratory processes DGICYT, AC-514A640 Head researcher
1989-91	Research project IA Techniques in Industrial Control Centres in Argentina, Chile, Venezuela, Brazil and Spain CYTED-D, VII.3 Researcher
1991-94	Research project Development and implementation of an integrated process control system Universities: Valladolid, Autónoma Barcelona CICYT, ROB 91 Head researcher
1991-93	Coordinated research project Development of robust controllers in the process industry Univ. of Valladolid and Pontificia Católica de Chile, CEDAI (Cuba) Scientific Cooperation Program with Latin America. MEC/MAE Researcher
1992-04	Thematic network Industrial Computing Systems CYTED-D 1992-95 Centres in Argentina, Brazil, Cuba, Chile, Mexico, Portugal, Spain, Venezuela and Mexico Researcher
1994-97	Research project Dynamic production planning and control in the process industry Dpt. Of SEA (UVA), Dpts of Computing (UVA and UAB) CICYT, TAP387/94 C01 Researcher
1994-97	Research project Development of a knowledge-based system for the monitoring and (re)design of biotechnological processes: application to biological purification processes Dpts. Chemical Engineering (UAB), Chemical Engineering (UPV) Department of Systems Engineering and Automation (UVA) CICYT, BIO94-0679-C02-02 Researcher in charge (UVA)

1996-97	Integrated action Developments of Predictive Control Algorithms and study of their properties Dpt. Systems Engineering and Automation UVA Oxford University. MEC / British Council Researcher
1995-6	Action ESPRIT-PACE Total Integrated Optimization Tool (HITO) PACE project INITEC, Azucarera Española (sgae) UNED, UVA, IGC, CPI Researcher
1994-97	Research project Artificial Intelligence techniques for supervision, diagnosis and process control Univ. Simón Bolívar (Venezuela), Univ. Nacional de San Juan (Argentina), Univ. of Oporto (Portugal), UVA and USAL (Spain) Electronic and Applied Computing Subprogram. CYTED Head researcher (USAL group)
1996-97	Special action Planning and dynamic control of robotic manipulators Department of Computing and Automation (USAL) TAP programme from CICYT Head researcher
1996-98	Coordinated project Experimental integration of planning and control techniques of a distributed robotic system Department of Computing and Automation (USAL), Department of SEA (UVA) and Dpt. Of Computing (UVA) Support Program for Research Projects Junta de Castilla y León Head researcher
1996-98	Research project Automation and optimisation of dryer and cold rooms For the Castilian-Leonese Industry Support Program for Research Projects Junta de Castilla y León Researcher
1998-99	Development project Development of a computer-assisted Automatic Control program Assistance for the development of resources to support university education. Junta de Castilla y León. Participant
1999-00	Development project Development of a LIMS system for the management of laboratory samples of water Dept. of Computing and Automation, ETSII (USAL), Centre for Research and Technological Development of Water (CIDTA) and IBERDROLA Researcher

2000-01	Development project Integration of the computer in an Engineering Laboratory Department of Electronic Engineering, Department of Computing and Automation and Department of Mechanics, ETSII (USAL) Researcher
2001 -02	Coordinated research project Development of an intelligent control system for monitoring, Diagnosis and fault-tolerant control for purification-related biotechnological processes Research support programme of the Regional Government of Castilla y León Department of Computing and Automation ETSII (USAL) and department of Systems Engineering and Automation (UVA) Head researcher
2000-01.1	Research project Planning and dynamic control of manipulators Program of the Samuel Solórzano Foundation Dpt of Mechanical Eng., Dpt of Computing and Automation, Dpt of Electronics, (USAL) Researcher
2001-03	Coordinated research project Optimal Synthesis Techniques and Integrated Process Design: Application to water purification plants. DPI programme. Department of Computing and Automation (USAL) Department of Systems Engineering and Automation (UVA) and Department of Chemical Engineering Head researcher
2001 -03	Research project Global operating strategies for hybrid systems in the process industry Program of Industrial Design and Production MCYT Dpt of Computing and Automation (ETSII ,USAL) , Dpt Systems Engineering and Automation (UVA), Dpt Systems Engineering and Automation (UAB) Researcher
2003-04	Research project Design and implementation of a system to control an ACMA X58 robot Program of the Samuel Solórzano Foundation Department of Electronic Mechanics, Department of Computing and Automation and Department of Electronics, ETSII (USAL) Researcher
2003	Special action Thematic network in Control Engineering Reference: DPI2002-10940-E Ministry of Science and Technology Researcher
2003-04	Coordinated research project Development of a decision support system for the integrated design of WWTP DPI2003-09392-C02-02 Department of Computing and Automation (USAL, UdG), Head researcher

2004 -06	Coordinated research project Advanced control strategies and intelligent monitoring for the process industry Programme of Industrial Design and Production MCYT Department of Computing and Automation (ETSII ,USAL) , department of Systems Engineering and Automation (UVA), Department of Systems Engineering and Automation Head Researcher
2005-06	Complimentary actions Complex Systems Fault Detection and Diagnostic Network Reference: DPI2005-23815 Ministry of Science and Technology Researcher
2006 -09	Thematic network Automation and control network for the sugar cane processing industry. CYTED Thematic network. (506RT0303). Thematic Area of Information and Communication Technologies. Coordinator of USAL Group
2006 -09	Coordinated research project Advanced Supervision and Control Technologies for the optimal operation of WWTP Project for the National Plan DPI. Ref. DPI2006-15716-C02-01 USAL, UVA Coordinator and head researcher
2007-08	Complimentary actions Complex Systems Fault Monitoring and Diagnostic Network Reference: DPI206-28369-E Ministry of Science and Technology Researcher
2007 -09	Coordinated research project Advanced Thermal Control Techniques for Buildings: Energy Saving And Confort (SA 108A07) Research support programme of the Regional Government of Castilla y León Head researcher
2008-09	Research project Optimization and control of wastewater treatment plants: a real case study Programme of the Samuel Solórzano Foundation YACU Head researcher
2008 -09	Complimentary actions Thematic network in Control Engineering Reference: DPI2007-30811-E Ministry of Science and Technology From 1 May 2008-30 April 2009 (€ 18,000) Researcher
2009-11	Complimentary actions Complex Systems Fault Monitoring and Diagnostic Network Reference: DPI2009-06124-E Ministry of Science and Technology Execution period: from 10/01/2009 to 12/31/2011 Economic dossier: PIA42009-1 Total granted: € 24,000.00 Researcher

2010 -12	Coordinated research project Optimal operation of Wastewater Treatment Plants (WWTPs). Project for the National Plan DPI of the MICINN. Reference DPI2009-14410-C02-01 USAL, UVA Coordinator and head researcher
2010 -12	Research project Non-linear estimation and control of wastewater treatment processes. Spanish-Moroccan AECID Project, within the framework of the Inter-University Cooperation and Scientific Research Programme (PCI-Mediterranean) Reference A/024016/09 USAL, University of Cadi Ayyad (Marrakech) Coordinator and head researcher
2012 – 2015	Inter-University Cooperation Project IDELE: Innovation and Development in Spanish as a Second Language TEMPUS Inter-University Cooperation Programme European Commission EACEA - Education, Audiovisual and Culture Executive Agency. USAL, University of Bologna, Association of Hispanists of Egypt, Institute of Islamic Studies of the Egyptian Embassy in Spain, Ain-Shams University, Cairo University, Alexandria University, Helwan University, Al-Azhar University, Minia University. Aid granted: €893,000 Researcher
2010 – 2013	R+D+i Project DEPOLIGEN. Energy efficiency in "zero-emission" buildings through improved energy demand, poly-generation and comprehensive energy management. INNPACTO Plan – call 2010 (June 2010) Ministry of Economy and Competitiveness Collaborating organizations: University of Salamanca, CIEMAT Scientific and technical coordination), University of Salamanca, INZAMAT University of Valladolid, IBERDROLA Ingeniería y Construcción S.A. (Project coordination), IBERDROLA Geneación, S.A., IDEAS TX Ingeniería, S.L., TECOPY, S.A., INZAMAC Asistencias Técnicas, S.A. and undación CARTIF. Total funding granted: € 5,900,141.22 USAL Funding: €484,450 Head researcher USAL
2012 – 2015	R+D+i Project SMARTZA. Develop technologies to enable progress in the application of the 'smart' concept in cities INNPACTO Plan Ministry of Economy and Competitiveness Collaborating organizations: COFELY-GDFSUEZ (Coordination), UiE3 - CIEMAT (Scientific/technical coordination), INZAMAC, IDEAS TX, ICCA, CARTIF, University of Salamanca Total funding granted: € 4,160,359.20 USAL funding: € 338,289 Ministry of Economy and Competitiveness Head researcher

2013 -16	Coordinated research project Methodology for the design of hierarchical and distributed control systems based on MPC for integrated systems and distribution networks Collaborating organizations: MINECO, University of Salamanca. University of Valladolid UNAM of Colombia and University Simón Bolívar (Venezuela) Coordinator and Main Researcher
2015-16	Excellence networks Thematic on Control Engineering. State Programme for the Promotion of Scientific and Technical Research of Excellence, State Subprogramme for the Generation of Knowledge, (State Plan for Scientific and Technical Research and Innovation). Ministry of Economy and Competitiveness, in this General Subdirection for Research Projects DPI2014-51731-REDT. Researcher
2016-17	Transfer project Validation and implementation of economic control techniques based on predictive controllers in a real WWTP (WWTP in Salamanca). General Foundation of the University of Salamanca Call for proof of concept and protection of USAL research results Head researcher € 9000
2016 -20	Coordinated research project Design methodology of hierarchical and distributed control strategy systems based on multi-agent systems for large-scale systems. (DPI2015-67341-C2-1-R) Collaborating organizations: MINECO, University of Salamanca. University of Valladolid UNAM of Colombia and University Simón Bolívar (Venezuela) Coordinator and Main Researcher. €130,000
	Research project 2015-16 Development of hierarchical and distributed control strategies applied to water treatment plants. Samuel Solórzano Foundation project: FS/21-2015. Researcher
2020 -24	Coordinated research project Sustainable operation of integrated water systems through intelligent and distributed supervision and control methodologies (DPI 7939105434-105434-4-19) Collaborating organizations: MINECO, University of Salamanca. University of Valladolid, Autonomous University of Barcelona, UNAM of Colombia and University Simón Bolívar (Venezuela) Coordinator and Main Researcher. €140,000

Projects as Vice-Chancellor

- R+D+i Project**
 2008 – 2012 VITOR project: El sueño de Nebrija
 Avanza Plan – Subprogramme Avanza Contenidos – call 2008 (March 2008)
 Ministry of Industry, Tourism and Trade
 Aid granted: € 4,518,474
 Researcher in charge 2009 -2012
- R+D+i Project**
 2008 – 2010 Creation of the Digital and Audiovisual Production Centre of the University of Salamanca
 Programme “Promotion of the Digital Content Industry from Universities” - call 2009
 (October 2008) Red.es
 Aid granted: €126,000 (plus €54,000 co-funded by the USAL)
 Researcher in charge 2009 -2012
- R+D+i Project**
 2009-11 Project Ecosistema Media for Spanish
 Campus Programme for international excellence. - Subprogramme R+ D + i and Transfer -
 call 2009 (July 2009)
 Ministry of Science and Innovation
 Aid granted: €1,000,000
 Researcher in charge 2009 -2012
- R+D+i Project**
 2010 – 2011 Los Ecos de una Lámpara Maravillosa
 Aid for audiovisual works with the use of new technologies - call 2010 (March 2010)
 Institute of Cinematography and Audiovisual Arts. Ministry of Culture.
 Aid granted: €29,700
 Head researcher
- Preparatory action**
 2011 – 2012 Innovación and Development in Spanish as a Second Language ((IDELE)
 Programa de Cooperación Interuniversitaria e Investigación Científica – 2011 call (April
 2011)
 Agencia Española de Cooperación Internacional para el Desarrollo
 Aid granted: 18,556.64
 Head researcher
- Campus project for international excellence**
 2010 – 2012 Campus Studii Salamantini. 800 Years of Innovation
 Campus Programme for international excellence. Subprogramme for consolidation 2010
 Call Ministry of Education
 Aid granted: €555,000
 Researcher in charge
- Campus project for international excellence**
 2010 – 2013 Campus Studii Salamantini. 800 Years of Innovation
 Campus Programme for international excellence. Subprogramme for excellence 2010 Call
 Ministry of Education
 Aid granted: €3,000,000
 Researcher in charge

Campus project for international excellence
2011 – 2013 Campus Studii Salamantini. 800 Years of Innovation
Campus Programme for international excellence. Subprogramme for consolidation 2011
Call Ministry of Education
Aid granted: €800,000
Researcher in charge

RESEARCH CONTRACTS

TITLE OF THE CONTRACT: Desarrollo de técnicas avanzadas para control Industrial. (Art., 11- LRU)
COMPANIES AND BODIES: Cooperativa Azucarera Onésimo Redondo (ACOR)/CAICYT
UNIVERSITIES: UVA
RESEARCHER IN CHARGE: César de Prada **DURATION:** 2 years (1986-88)

TITLE OF THE CONTRACT: Técnicas avanzadas de control y supervisión de procesos mediante un sistema experto
COMPANY: Sociedad General Azucarera (SGAE)
UNIVERSITIES: UVA, UNED
RESEARCHER IN CHARGE: César de Prada **DURATION:** 3 years (1993-96)

TITLE OF THE CONTRACT: Desarrollo de un sistema de análisis de operación de Centrales en situación de avería
COMPANIES: Consejo de Seguridad Nuclear, USAL
TECHNICAL DIRECTION: Pastora Vega Cruz **DURATION:** 2 years (1998-99)

TITLE OF THE CONTRACT: Desarrollo de una aplicación informática para la gestión de laboratorios (BDGL)
BODIES AND COMPANIES: ETSII (USAL) and Centro de Investigación y Desarrollo Tecnológico del Agua (CIDTA) Iberdrola
DURATION: 2 years (1998-2000)
RESEARCHER IN CHARGE: Eladio Sanz García
FUNDING: Convenio Iberdrola CIDTA **REF:** I+DT 99-00

TITLE OF THE CONTRACT: Ampliación de la aplicación BDGL para la gestión de laboratorios
BODIES: ETSII (USAL), CIDTA and Iberdrola
DURATION: 3 years (2000-03)
RESEARCHER IN CHARGE: Pastora Vega Cruz
FUNDING: Convenio Iberdrola CIDTA **REF:** I+DT 00-03

TITLE OF THE CONTRACT: Desarrollo de una herramientas multimedia para la Síntesis, Diseño Integrado y Gestión de plantas de depuración de aguas
BODIES AND COMPANIES: USAL, CIDTA and IBERDROLA
RESEARCHER IN CHARGE: Pastora Vega Cruz
FUNDING: Convenio Iberdrola CIDTA **REF:** I+DT 02-03
DURATION: 1 year (2002-03)

TITLE OF THE CONTRACT: Integración de técnicas para la optimización, control avanzado y diseño de procesos. Aplicación a plantas de depuración de aguas residuales (EDAR)
BODIES AND COMPANIES: USAL, Diskette Informática (Javier Rodríguez Ramos)
DURATION: 1 year (from 09/01/2004 to 08/31/2005)
RESEARCHER IN CHARGE: Pastora Vega Cruz

TITLE OF THE CONTRACT:	Diseño y desarrollo de un sistema de simulación del comportamiento de líneas subterráneas
BODIES AND COMPANIES:	Iberdrola Distribución Eléctrica
DURATION:	18 months (1st June 2008 - November 2010)
RESEARCHER IN CHARGE:	Francisco Martín Labajos
AMOUNT:	€148,000
ID KEY:	LCRY

TITLE OF THE CONTRACT:	Realización de un informe sobre la incidencia del e-learning en el ámbito universitario
BODIES AND COMPANIES:	Centro Internacional de Tecnologías Avanzadas (Germán Sánchez Ruipérez Foundation)
RESEARCHER IN CHARGE:	Pastora Vega Cruz
AMOUNT:	€7080.00

TITLE OF THE CONTRACT:	Servicio de Inteligencia Competitiva Tecnológica
BODIES AND COMPANIES:	Iberdrola
DURATION:	18 months (June 2011 - September 2011)
RESEARCHER IN CHARGE:	Pastora Vega Cruz
AMOUNT:	€27,224.96

TITLE OF THE CONTRACT:	Elaboración de Mapas Tecnológicos para el afianzamiento de un observatorio estable del Sector Eléctrico.
BODIES AND COMPANIES:	Iberdrola
DURATION:	18 months (January 2012 - September 2012)
RESEARCHER IN CHARGE:	Pastora Vega Cruz
AMOUNT:	€34,059.08

TITLE OF THE CONTRACT:	Instalación fotovoltaica de demostración de la tecnología UMG y la monitorización del rendimiento de la instalación.
RESEARCHER IN CHARGE:	Sánchez, E.
BODIES AND COMPANIES:	FERROATLANTICA S.A..
DURATION:	Start year: 2013, End year: 2016
RESEARCHER IN CHARGE:	Esteban Sánchez
PARTICIPANTS:	Gómez, P. A.; Sánchez, E.; Torreblanca, J.; Vega, P.

PATENT Intellectual property

INVENTORS (by order of contribution):

Prada Moraga, C. Alvarez Alvarez, M.T., Zamarreño Cosme, J. M., Jesús Alvarez Pérez, T. Mañoso Hierro, m.A., Dormido Bencomo, S., Pérez de Madrid Pablo, A., Vega Cruz, P., Valentín Zaera, A., Sanzo Gómez, M., Ontanilla Sandoval, J.C., Cristea, S.

TITLE: HITO/HIDEN Herramienta Integrada para Total Optimización. Sistema de control predictivo multivariable con restricciones. Toolbox gráfica de identificación de Sistemas

APPLICATION NUMBER: 1998/47/13143. Intellectual Property Registry, Valladolid, # VA-1657

PRIORITY COUNTRY: Spain

PRIORITY DATE:

OWNING BODY: 30Th June 1998

COUNTRIES REACHED: Spain

PUBLICATIONS IN JOURNALS

TITLE: Control Digital de una fábrica azucarera
AUTHORS: C. Prada, V. Aleixandre, P. Vega
JOURNAL: RACEFN, 1985, Vol. 79, cuad. 3, pp 421-422
ID KEY: A

TITLE: A Computer Control Software Package for Continuous Industrial Processes
AUTHORS: C. Prada, R. Fernández, E. Sánchez, P. Vega
JOURNAL: Microcomputers Applications Journal Vol. 8, ISSUE 3, pp 131-136, 1988
ID KEY: A

TITLE: Resolución de Integrales Complejas
AUTHORS: P. Vega, C. Prada, R. Fernández
JOURNAL: Informática y Automática A.E.I.A. Vol. XXII. Iss. 1, pp 37-45, 1989
ID KEY: A

TITLE: A comparative study of Automatic Tuning Methods for industrial PID controllers
AUTHORS: P. Vega, J. Serrano, C. Prada
JOURNAL: Control and Computers, Vol. 17, Iss., pp 67-70, 1989
PUBLISHER: Acta Press
ID KEY: A

TITLE: Control Multivariable de un evaporador industrial
AUTHORS: C. Prada, M. Arranz, P. Vega
JOURNAL: Informática y Automática, Vol. XXII Iss.1, pp 36-44, 1990
ID KEY: A

TITLE: Control de procesos no lineales: Aplicación al caso del pH
AUTHORS: I. Serra, C. Prada, P. Vega
JOURNAL: Automática e Instrumentación, iss. 206, pp 97-101, 1990
ID KEY: A

TITLE: A self-tuning predictive PID controller
AUTHORS: P. Vega, C. Prada, V. Aleixandre
JOURNAL: Control Theory and Applications, IEE Vol 138, Iss. 3, pp 303-311, May, 1991
ID KEY: A (Indexed in ISI, Q1)

TITLE:	Control en cascada (1): Fundamentos
AUTHORS:	P. Vega
JOURNAL:	Automática e Instrumentación. Iss. 209, pp 105-108, 1991
ID KEY:	A
TITLE:	Control en Cascada (2): Realización básica
AUTHORS:	P. Vega
JOURNAL:	Automática e Instrumentación, Iss. 210, pp 77-79, 1991
ID KEY:	A
TITLE:	Un regulador PID adaptativo de asignación de polos y varianza reducida
AUTHORS:	P. Vega, C. Prada, V. Aleixandre
JOURNAL:	Informática y Automática. Vol. 3 Iss.4, pp 5-14, 1993
ID KEY:	A
TITLE:	Fault Detection in a Wastewater treatment plant using parameter estimation
AUTHORS:	M. J. Fuente, P. Vega, M.B. Zarrop, M. Poch
JOURNAL:	Control Engineering Practice Vol. 4, Iss. 8, pp. 1089-1098. August 1996
PUBLISHER:	Pergamon Press (Elsevier Science)
KEY:	A (Q2, Indexed in ISI)
TITLE:	Two algorithms for Robust Fault Detection and Diagnosis of an industrial plant
AUTHORS:	P. Vega, M. J Fuente, C. M. Domínguez
JOURNAL:	Microcomputers applications, 1996 Vol. 24, Iss. 3, pp. 93-101.
PUBLISHER:	Acta Press
ID KEY:	A
TITLE:	Identification and Predictive Control of a Melter Unit used in the sugar Industry
AUTHORS:	J. M. Zamarreño, P. Vega
JOURNAL:	Journal of Artificial Intelligence in Engineering pp 365-33 Vol. 11, 1997
PUBLISHER:	Elsevier Science
ID KEY:	A (Q1, Indexed in ISI)
TITLE:	l1-optimal regulation of a pH control plant
AUTHORS:	F. Tadeo, T. Hologan, P. Vega
JOURNAL:	Computers and Chemical Engineering Vol. 22, Suppl., pp S459-S466, 1998
PUBLISHER:	Pergamon Press (Elsevier Science)
ID KEY:	A (Q1, Indexed in ISI) Impact index: 2.07
TITLE:	State Space Neural Networks. Properties and application
AUTHORS:	J. M. Zamarreño, P. Vega
JOURNAL:	Neural Networks. Official Journal of the European and Japanese Neural Nets Society, 11 (1998) 1099-1112, 1998
PUBLISHER:	Pergamon Press
ID KEY:	A (Q1 Indexed in ISI)

TITLE:	Neural Predictive Control: Application to a highly nonlinear system
AUTHORS:	J. M. Zamarreño, P. Vega
JOURNAL:	Engineering applications of Artificial Intelligence. IFAC Assoc. Journal, pp 149-158, 12. 1999
PUBLISHER:	Pergamon Press (Elsevier Science),
ID KEY:	A (Q1 Indexed in ISI)
TITLE:	Neural Networks applied to fault detection of a biotechnological process
AUTHORS:	M. J. Fuente, P. Vega
JOURNAL:	Engineering applications of Artificial Intelligence. IFAC Assoc. Journal. 12, pp 570-584, 12, 1999
PUBLISHER:	Pergamon Press (Elsevier Science)
ID KEY:	A (Q1 Indexed in ISI)
AUTHORS:	J.M. Zamarreño, P. Vega, L. D. García , M.Francisco
TITLE:	State space neural network for modelling, prediction and control.
JOURNAL:	Control Engineering Practice Vol 8 p.1063-1075. (2000)
PUBLISHERS:	Pergamon Press (Elsevier Science)
ID KEY:	A (Q1 Indexed in ISI)
TITLE:	Recurrent neuro-fuzzy modelling of a wastewater treatment plant
AUTHORS:	G. I. Sainz, M. J. Fuente and P.Vega
JOURNAL:	European Journal of Control Vol 10 Iss. 1 pp 84-96, year 2004 ISSN: 0947-3580 ISBN 2-7462-908
PUBLISHER:	Hermes Science, Lavosier. Copyright European Union Control Association
ID KEY:	A (Q1 Indexed in ISI)
TITLE:	Diseño Integrado con realimentación robusta de estados vía Desigualdades Lineales Matriciales
AUTHORS:	O. Pérez, P. Vega, W. Colmenares, M. Francisco
BOOK:	Revista del IEEE América latina Volumen 2 Issue:3 ISSN: 1548-0992. September, 2004
PUBLISHER:	Digital publication.
ID KEY:	A (Q4,Indexed in ISI) (Impact index: 0.2)
TITLE:	Diseño Integrado de Sistemas utilizando controladores PID robustos vía Desigualdades Lineales Matriciales Lineales Matriciales
AUTHORS:	O. Pérez, P. Vega, , W. Colmenares, M. Francisco, E. Granado
BOOK/JOURNAL:	Revista Ciencia e Ingeniería ULA. 2004 ISSN: 1316-7081. iss. 25, pp. 43-49.
PUBLISHER:	University of Los Andes
ID KEY:	A (Indexed in REVENCYT)
TITLE:	Diseño Integrado de Procesos de Depuración de Aguas Utilizando Control Predictivo Basado en Modelos
AUTHORS:	M. Francisco, P. Vega
BOOK:	Revista Iberoamericana de Automática e Informática Industrial Vol. 3, issue. 4, October 2006 . ISSN: 1697-7912 (printed version); ISSN: 1697-7920 pp 88-98 (electronic version)
PUBLISHER:	CEA/IFAC
ID KEY:	A (Q4, Indexed in ISI)

TITLE:	Síntesis óptima de procesos de fangos activados
AUTHORS:	G. Gutiérrez, P. Vega and C. Prada
BOOK/JOURNAL:	Revista Ingeniería Química , July 2007 ISSN: 0210-2064
PUBLISHER:	Sección Española de ISA
ID KEY:	A
AUTHORS:	P. Vega
TITLE	Review of the book Técnicas de Predicción con Aplicaciones en Ingeniería. Manuel Ruiz Arahal, Manuel Berenguel Soria, Francisco Rodríguez Díaz. (ISBN: 84-472-1060-X.)
BOOK/JOURNAL:	Revista Iberoamericana de Automática e Informática Industrial Ref. ISSN: 1697-7912 ISSN: 1697-7920. Vol. 4 iss. 4
Pp.	From: 121 to: 122 Date: October 2007
PUBLISHER:	CEA/IFAC
ID KEY:	Book review
AUTHORS:	H. Alvarez, R. Lamanna, S. Revollar y P. Vega
TITLE:	Metodología para la Obtención de Modelos Semifísicos de Base Fenomenológica Aplicada a una Sulfitadora de Jugo de Caña de Azúcar
BOOK/MAGAZINE:	Revista Iberoamericana de Automática e Informática Industrial, 6, 3:10-20. (2009). ISSN: 1697-7912 ISSN: 1697-7920.
PUBLISHER:	CEA/IFAC
ID KEY:	A (Q4, Indexed in ISI)
AUTHORS:	Lamanna, R., Vega, P., Revollar, S., Alvarez, H.
TITLE:	Diseño Simultáneo de Proceso y Control de una Torre Sulfitadora de Jugo de Caña de Azúcar.
BOOK/MAGAZINE:	Revista Iberoamericana de Automática e Informática Industrial, 6,3:32-43 (2009). ISSN: 1697-7912 ISSN: 1697-7920.
PUBLISHER:	CEA/IFAC
ID KEY:	A (Q4 Indexed in ISI)
AUTHORS:	Revollar S., Francisco M., Vega P., Lamanna R.
TITLE:	Stochastic Optimization for the Simultaneous Synthesis and Control System Design of an Activated Sludge Process
BOOK/MAGAZINE:	Latin American Applied Research, vol 40, pp: 137-146 (2010)
EDITOR:	José A. Bandoni ISSN 0327-0793
ID KEY:	A (Q4 Indexed in ISI)
AUTHORS:	M. Francisco, P. Vega
TITLE:	Automatic Tuning of Model Predictive Controllers Based on multiobjective optimization
BOOK/JOURNAL:	Latin American Applied Research, Vol 40,pp: 255-265. (2010)
EDITOR:	José A. Bandoni ISSN (paper version): 0327-0793,ISSN (digital version): 1851-8796
ID KEY:	A (Q4 Indexed in ISI)
AUTHORS:	A. Gajate, R. Haber, P. Vega (R1)
TITLE:	A Transductive Neuro-Fuzzy Control. An Application to a Drilling Process
BOOK/JOURNAL:	IEEE Transactions on Neural Networks. Vol 21 Issue:7, pp: 1158 – 1167 ISSN: 1045-9227. INSPEC Accession Number: 11402152 Digital Object Identifier: 10.1109/TNN.2010.2050602 Date of Publication: 28th june (2010) PubMed ID: 20659865 Sponsored by: IEEE Computational Intelligence Society. ID KEY: A (Q1 Indexed in ISI) Impact index: [3.726]

AUTHORS:	A. Gajate, R. Haber, R. del Toro, P. Vega
TITLE:	Tool Wear Monitoring Using Neuro-Fuzzy Techniques. A Comparative Study in a Turning Process
BOOK/JOURNAL:	Journal of Intelligent Manufacturing ISSN: 0956-5515 DOI: 10.1007/s10845-010-0443-y. On-line version (2010) J Intell Manuf (2012) 23:869–882 DOI 10.1007/s10845-010-0443-y
ID KEY:	A (Q2, Indexed in ISI) Impact index [1.018]
AUTHORS:	M. Francisco , P. Vega P., H. Álvarez
TITLE:	Robust Integrated Design of Processes with terminal penalty model predictive controllers
BOOK/JOURNAL:	Chemical Engineering Research and Design 89, 1011-1024 ISSN: 0959-1524. Year: 2011 DOI: 10.1016/j.cherd.2010.11.023
ID KEY:	A (Q2 Indexed in ISI) Impact index [1.081]
AUTHORS:	Elbahja, H., P. Vega
TITLE:	Nonlinear Feedback Control Based on Positive Invariance for A Nutrient Removal Biological Plant,
BOOK/JOURNAL:	International Journal of Innovative Computing, Information and Control, Vol.10, Issue 3, ISSN 1349-4198 2014
ID KEY:	A Indexed Ei Compendex (Elsevier), Scopus (Elsevier), INSPEC (IET) Impact index: [1.2]
AUTHORS:	Vega P. , Revollar S., M. Francisco, J. M. Martin
TITLE:	Integration of set point optimization techniques into nonlinear MPC for improving the operation of WWTPs”.
BOOK/JOURNAL:	Computers and Chemical Engineering, Date: 4 -9 2014 ISSN: 0098-1354 , 10.1016/j.compchemeng.2014.03.027 vol: 68 pp 78-95
ID KEY:	A (Q1 Indexed in ISI). Impact index: [2.09]
AUTHORS:	Vega P. , Lamanna R., Revollar S., M. Francisco
TITLE:	Simultaneous design and control of chemical processes – part I : revision and classification.
BOOK/JOURNAL:	Computers and Chemical Engineering Date: 4-12- 2014 ISSN: 0098-1354. doi:10.1016/j.compchemeng.2014.05.010 vol: 71. pp: (+34)602- 617
ID KEY:	A (Q1 Indexed in ISI). Impact index: [2.09]
AUTHORS:	Vega P. , Lamanna R., Revollar S., M. Francisco
TITLE:	Simultaneous design and control of chemical processes – part II: An illustrative example
BOOK/JOURNAL:	Computers and Chemical Engineering (4-12- 2014) ISSN: 0098-1354. DOI. 10.1016/j.compchemeng.2014.09.019 vol: 71. pp:618- 635
ID KEY:	A (Indexed in ISI) Q1 Impact index: [2.09]

AUTHORS:	M. Francisco, S. Skogestad, P. Vega
TITLE:	Model predictive control for the self-optimised operation in Wastewater treatment plants: Analysis of dynamic issues
BOOK/JOURNAL:	Computers and Chemical Engineering ISSN: 0098-1354. DOI. 10.1016/j.compchemeng.2014.09.019 Vol. 82. Pp:259-272(. Publication date 2 Nov 2015
ID KEY:	A (Indexed in ISI) Q1 . Impact index: [2.09]
AUTHORS:	Revollar, S.; Vega, P.; Vilanova, R.; Francisco, M.
TITLE:	Optimal Control o Wastewater Treatment Plants Using Economic-Oriented Model Predictive Dynamic Strategies
BOOK/JOURNAL:	Applied Sciences 7(8):813. August, 2017 . DOI: 10.3390/app7080813
ID KEY:	A (Indexed in ISI) Q3 . Impact index: [1.69]
AUTHORS:	Elbahja, H., S.; Vega, P.; Revollar, S. ; Francisco, M.
TITLE:	One Layer nonlinear Economic closed loop predictive Control of Wastewater Treatment Plants
BOOK/JOURNAL:	Applied Sciences (2076-3417) . Vol. 8 Issue 5. May 2018 ,
ID KEY:	A (Indexed in ISI) Q3 . Impact index: [1.69]
AUTHORS:	El bahja, H., Vega, P., Tadeo, F., & Francisco, M
TITLE:	A constrained closed loop MPC based on positive invariance concept for a wastewater treatment plant
BOOK/JOURNAL:	International Journal of Systems Science, Volume 49, Issue 10.. 2018
ID KEY:	A (Indexed in ISI) Q1 . Impact index: [2.185]
AUTHORS:	P. Vallejo, P. Vega
TITLE:	Analytical Fuzzy Predictive Control applied to wastewater treatment biological processes
BOOK/JOURNAL:	Complexity Volume January 2019 , Article ID 5720185, 29 pages https://doi.org/10.1155/2019/5720185 , ISSN: 1076-2787. Pub. Date : January 2019 .
iD KEY:	A (Indexed in ISI) Q1 Impact index: [4.1]
AUTHORS:	M. Francisco, Y. Mezquita, S. Revollar, P. Vega, J.F de Paz,
TITLE:	Multi-agent distributed model predictive control with fuzzy negotiation
BOOK/JOURNAL:	Expert Systems With Applications, Volume 129, Pages 68-83. https://doi.org/10.1016/j.eswa.2019.03.056 . PD: 1 September 2019
ID KEY:	A (Indexed in ISI) Q1 . Impact index: [3.768]
AUTHORS:	A. Sánchez; M. Martín; P. Vega
TITLE:	Biomass based sustainable Ammonia production: Digestion vs Gasification
BOOK/JOURNAL:	ACS Sustainable Chemistry & Engineering Design Pub Publication Date : 2019-05-16 , DOI: 10.1021/acssuschemeng.9b01158
ID KEY:	A (Indexed in ISI) Q1 IF:4
AUTHORS:	S. Revollar, , R. Vilanova, P. Vega, M. Francisco and M. Meneses
TITLE:	Wastewater Treatment Plant Operation: Simple Control Schemes with a Holistic Perspective
BOOK/JOURNAL:	<i>Sustainability</i> 2020, 12(3), 768; https://doi.org/10.3390/su12030768 - 21 Jan 2020
ID KEY:	A (Indexed in ISI) Q2

Impact index: [2.59]

AUTHORS: S. Revollar, M. Meneses, R. Vilanova, P. Vega and M. Francisco
TITLE: Quantifying the Benefit of a Dynamic Performance Assessment of WWTP
BOOK/JOURNAL: Processes **2020**, 8(2), 206; doi:10.3390/pr8020206.
Publication Date February **2020**
ID KEY: A (Indexed in ISI) **Q2**
Impact index: [1.9]

AUTHORS: R Casado-Vara, I Sittón-Candanedo, F De la Prieta, S Rodríguez, P. Vega
TITLE: Edge Computing and Adaptive Fault-Tolerant Tracking Control Algorithm for Smart Buildings: A Case Study
BOOK/JOURNAL: Cybernetics and Systems 51 (7), 685-697. JCR Q2 (**2020**)
ID KEY: A A (Indexed in ISI) **Q2**

ACEPTADOS

AUTHORS: H. El bahja, P.Vega, F.Tadeo
TITLE: Integrating Dynamic Economic Optimization and Nonlinear Closed Loop MPC: application to a WWTP.
BOOK/JOURNAL: ISA Transaction (Elsevier)
Impact index: [3.370]
ID KEY: A (Indexed in ISI) Q1
Enero **2019 (ACEPTADO)**

AUTHORS: R. Casado-Vara, J. L. Calvo-Rolleb, G. Kumar Venayagamoorthy, P. Vega, J. Prieto
TITLE: Robust adaptive fault-tolerant tracking control for IoT systems with uncertainties external disturbances
BOOK/JOURNAL: Future Generation Computer Systems (Elsevier)
ID KEY: A (Indexed in ISI) Q1 (**ACEPTADO**)
Impact index: [4.639]
ENVIADO Enero **2019**

ENVIADOS

AUTHORS: K. Morales, M. Francisco; H. Álvarez; P. Vega; S. Revollar
TITLE: Collaborative control applied to BSM1 for wastewater treatment plant
BOOK/JOURNAL: Processes MDPI Journal. Manuscript ID: processes-969018
ID KEY: A (Indexed in ISI) Q2
Octubre **2020**

AUTHORS: E. Masero, M. Francisco, , J.M. Maestre, S. Revollar and P. Vega
TITLE: A hierarchical distributed MPC based on fuzzy negotiation for multiple agent
BOOK/JOURNAL: Expert Systems With Applications
ID KEY: A (Indexed in ISI) Q1
ENVIADO Enero **2020**

AUTHORS: A. Cembellín, M. Francisco, P. Vega
TITLE: Distributed Model Predictive Control applied to a sewer system
BOOK/JOURNAL: Processes MDPI Journal Manuscript ID: processes-973974
ID KEY: A (Indexed in ISI) Q1
ENVIADO: Octubre 2020

AUTHORS: P. Vallejo, P. Vega
TITLE: Practical computational approach for the stability analysis of fuzzy model-based predictive control of substrate and biomass in activated sludge processes.
BOOK/JOURNAL: Processes MDPI Journal
ID KEY: A (Indexed in ISI) Q2
ENVIADO Octubre **2020**

PUBLICATIONS OF BOOKS AND BOOK CHAPTERS

TITLE: A Computer System for the design and training on advanced control techniques
 AUTHORS: P. Vega, C. Prada, F. Prada
 BOOK: Simulation on Control Systems. IFAC/IMACS Proceed. series Iss. 13
 PUBLISHER: Pergamon Press, 1986
 ID KEY: CL

TITLE: Robust Multivariable Regulator Design Based on Passivity: Two Examples
 AUTHORS: P. Vega, Z. Xu, R. G. Cameron, F Li
 BOOK: Applications of Multivariable System Techniques pp 63-70, 1990
 PUBLISHER: Pergamon Press (Elsevier Science) Editor R. Whalley
 ID KEY: CL

TITLE: Optimal Approaches to Self-tuning PID Control
 AUTHORS: P. Vega, M. B. Zarrop
 BOOK: Adaptive Systems in Control and Signal Processing. pp 47-251, 1990
 PUBLISHER: Pergamon Press
 ID KEY: CL

TITLE: An adaptive PID controller for process control
 AUTHORS: P. Vega, C. Prada
 BOOK: 1st European Control Conference, Proceedings Vol. 3, pp. 2440-2446. ISBN 2-86601-280-1. 1991
 PUBLISHER: Editions Hermes
 ID KEY: CL

TITLE: Detección y Diagnóstico de Fallos basados en modelos
 AUTHORS: P. Vega
 PUBLISHER: Asoc. Española de Informática y Automática AEIA, 1993
 ID KEY: L

TITLE: Neural Networks Based Modelling and Simulation of a nonlinear Process
 AUTHORS: P. Vega, S. D'Amico, L. Alonso
 BOOK: International Conference of Applied Informatics Proceedings pp. 56-59. ISBN 0-88986-175-7. 1993
 EDITOR: M.H. Hamza
 ID KEY: CL

TITLE: Fault Detection and Diagnosis in an Evaporation Station
 AUTHORS: P. Vega, M. B. Zarrop, M. J. Fuente
 BOOK: Proceedings of the 2nd European Control Conference pp. 1342-1347, Vol. 3. ISBN 90367037431993
 ID KEY: CL

TITLE: Modelling, Simulation, Control and Neural Networks based Failure Detection of a steam generation and electrical process
 AUTHORS: J. M. Zamarreño, P. Vega
 BOOK: Simulation of Continuous Systems SCS Proceed. pp 769-773. ISBN 1-56555-028-51994
 ID KEY: CL

TITLE: A comparative study of GPC and DMC controllers
 AUTHORS: C. Prada, J. Serrano, P. Vega, M. A. Piera
 BOOK: Advances in Model Based Predictive Control, pp 38-52, ISBN 0 19 856292 6, 1994
 PUBLISHER: Oxford University Press. Editor D. W. Clarke
 ID KEY: CL

TITLE: Robust Control of a milk of lime blending for tank
 AUTHORS: F. Tadeo, P. Vega, R. G. Cameron
 BOOK: Applications of Multivariable System Techniques
 pp 110-117, ISBN 0 85298 828 1, 1994
 PUBLISHER: Pergamon Press (Elsevier Science) R. Whalley Ed
 ID KEY: CL

TITLE: Modelling and Control of an industrial process using Neural Networks
 AUTHORS: S. D'Amico, P. Vega, L. Alonso, J. M. Zamarreño
 BOOK: Intelligence Engineering Systems through Artificial Neural Networks Vol. 4, pp 029-1034, ISBN 0 85298 828, 1994
 PUBLISHER: ASME Press
 ID KEY: CL

TITLE: Use of Neural Nets for Dynamic Modelling and Predictive Control in an Evaporation Station.
 AUTHORS: L.F Acebes, P. Vega
 BOOK: Simulation of Continuous Systems Proceed.
 pp 774-778. ISBN 1-56555-028-5 1994
 ID KEY: CL

TITLE: A comparison of Identification Algorithms for rapidly time varying parameters on a real process
 AUTHORS: M. J. Fuente, P. Vega
 BOOK: Adaptive Systems in Control and Signal Processing. IFAC Proc., pp 141-146. ISBN 963 331 344 X, 1995
 PUBLISHER: AKAPRINT. Editor Cs Bányász
 ID KEY: CL

TITLE: A neural network based approach for Fault Detection and diagnosis: Application to a real process
 AUTHORS: M. J. Fuente, P. Vega
 BOOK: IEEE Conference on Control Applications , Proceed.
 pp 188-193. ISBN 0-7803-2550-8 1995
 ID KEY: CL

TITLE: Robust Control of a pH control plant
 AUTHORS: O. Pérez, F. Tadeo, P. Vega
 BOOK: IEEE Conference on Control Applications , Proceed.
 pp 854-855. ISBN 0-7803-2550-8 1995
 ID KEY: CL

TITLE: Techniques for classifying sugar crystallization images, based on spectral analysis and the use of neural networks
AUTHORS: E. S. González, P. Vega
BOOK: Advances in Computational Intelligence. IEEE Proceedings pp 641-645, ISBN 0-444-82587-8, 1996
PUBLISHER: Pergamon Press (Elsevier Science)
ID KEY: CL

TITLE: Application of neural nets to dynamical modeling and path planning of robotics arms
AUTHORS: P. Vega, A. Restrepo, B. Curto, V. Moreno
JOURNAL/BOOK: Conference publication (Proceedings of Engineering benefits from neural networks ISBN 951-97868-0-5, 1998)
ID KEY: CL

AUTHORS: P. Vega, L.D. García
TITLE: Fault tolerant modelling and prediction of a real waste water plant using recurrent neural networks
JOURNAL/BOOK: Conference publication (Proceedings of Engineering benefits from neural networks) ISBN 951-97868-0-5, 1998
ID KEY: CL

TITLE: Aplicación de las redes neuronales a la detección y diagnóstico de fallos
AUTHORS: M. J. Fuente, P. Vega
BOOK: Aplicaciones de las Redes Neuronales en Control y Supervisión, 1999
PUBLISHER: University Simón Bolívar
ID KEY: CL

TITLE: Modelado del proceso de difusión en la industria azucarera: Aplicación de redes neuronales recurrentes
AUTHORS: J. M. Zamarreño, P. Vega
BOOK: Aplicaciones de las Redes Neuronales en Control y Supervisión, 1999
PUBLISHER: University Simón Bolívar
ID KEY: CL

TITLE: Control Predictivo Neuronal de una unidad de refundición de azúcar
AUTHORS: J. M. Zamarreño, P. Vega
BOOK: Aplicaciones de las Redes Neuronales en Control y Supervisión, 1999
PUBLISHER: University Simón Bolívar
ID KEY: CL

TITLE: Integrated design of a pH processes
AUTHORS: A. Gil , P. Vega, M. Francisco
BOOK: Modelling, Identification, and Control Conference Proceedings
 Vol 1 pp. 226-229 February 2001
 ISBN: 0-88986-316-4, ISSN:1025-8973
PUBLISHER: Acta Press
ID KEY: CL

TITLE: Fermenter Modelling using local linear models
AUTHORS: M. Francisco, P. Vega, A. Gil
BOOK: Modelling, Identification, and Control Conference Proceedings
 Vol. 1 pp. 308-313. Year 2001
 ISBN: 0-88986-316-4 ISSN:1025-8973
PUBLISHER: Acta Press
ID KEY: CL

TITLE: Algorithmic Synthesis And Integrated Design of Chemical Reactor Systems Using Genetic Algorithms
AUTHORS: S. Revollar, R. Lamanna and P. Vega
BOOK: WAC Book series, Volume 17, pp: 453- 458
ISBN : 1-889335 (IEEE Catalog No: 04EX832C)
PUBLISHER: TSI-Press, **2004**
ID KEY: CL

TITLE: Integrated System Design with Standard Industrial Controllers via LMIS
AUTHORS: O. Pérez, W. Colmenares, E. Granado, P. Vega and M. Francisco
BOOK: WAC book series, Volume 16 pp 403-406
ISBN : 1-889335. (IEEE Catalog No: 04EX832C)
PUBLISHER: TSI-Press, **2004**
ID KEY: CL
AUTHORS: A. Gajate, R. Haber, P. Vega

TITLE: A Transductive Neuro-Fuzzy Force Control. An Ethernet-based Application to a Drilling Process
BOOK/JOURNAL: Neural Information Processing. Lecturer Notes in Computing Sciences
Volume 5864/2009, 573-582 (**2009**)
DOI: 10.1007/978-3-642-10684-2_64
EDITOR: Springer- Verlag
ID KEY: CL

AUTHORS: Agustín Gajate, Rodolfo E. Haber, José R. Alique and Pastora I. Vega
TITLE: Transductive-Weighted Neuro-Fuzzy Inference System for Tool Wear Prediction in a Turning Process
BOOK/JOURNAL: Lecturer Notes in Computing Sciences. Hybrid Artificial Intelligence Systems. Volume 5572/2009, 113-120, DOI: 10.1007/978-3-642-02319-4_14 (**2009**)
EDITOR: Springer- Verlag
ID KEY: CL

AUTHORS: S. Revollar, M. Francisco, P. Vega, R. Lamanna.
TITLE: Genetic Algorithms for the Synthesis and Integrated Design of Processes Using Advanced Control Strategies
BOOK/JOURNAL: Lecturer Notes in Computing Sciences. Advances in Soft Computing. International Symposium on Distributed Computing and Artificial Intelligence. 50/2009, 205-214. 2009.
EDITOR: Springer- Verlag
ID KEY: CL

AUTHORS: H. Álvarez, R. Lamanna, P. Vega, S. Revollar
TITLE: Libro blanco del control automático en la industria de la caña de azúcar
CHAPTER: Purificación y clarificación del jugo de caña de azúcar
ISBN: 978-84-614-8008-1, Legal deposit: VA-385-2011
EDITOR: CYTED. Printing press: Diazzo Plotter Suministros. Year: **2011**
ID KEY: CL

AUTHORS: E. Hicham, P. Vega, O. Bakka
TITLE: Investigation of Different Control Strategies for the Waste Water Treatment Plant
BOOK: Remote Sensing of Biomass: Principles and Applications
EDITOR: Ed. S. Shahid Shaukart. INTECH pp: 179-194 Book 3", ISBN 978-953-307-491-7. pp: Año: **2011**
Indexed in Thomson Reuters' ISI Web of Science Book Citation Index (BKCI).
ID KEY: CL

AUTHORS: Alejandro Goldar, Silvana R. Revollar, Rosalba Lamanna, Pastora Vega
TITLE: Neural Network Identification of N-Removal Process in Waste Water Treatment Plants From Proceeding (809) Modelling, Identification and Control - 201403/**2014**; DOI: 10.2316/P.2014.809-051
ID KEY: CL

AUTHORS: R. Casado-Vara, F. de la Prieta, S. Rodríguez, J. L. Calvo, S. Marquez Venayagamoorthy, P. Vega, J. Prieto
TITLE: Adaptive fault-tolerant tracking control algorithm for IoT systems: smart building case study
BOOK: Advances in Intelligent Systems and Computing book series, Volume 950/951. ISBN 978-3-030-20054-1 ISBN 978-3-030-20055-8 (eBook) Springer. <https://doi.org/10.1007/978-3-030-20055-8>. ISSN 2194-5357 ISSN 2194-5365 (electronic). May **2019**
ID KEY: CL

RESEARCH STAYS IN CENTERS ABROAD

READING KEYS: (D) PhD, (P) Postdoc, (I) Invited, (C) Hired, (O) Others (specify)

CENTER: University of Bradford. School of Control Engineering

CITY: Bradford, United Kingdom

DURATION: 5 months

TOPIC: Robust control and multi-variable control

POSITION: RESEARCHER KEY: I

YEAR: 1986

CENTER: UMIST. Control Systems Centre

CITY: Manchester, United Kingdom

DURATION: 2 months

TOPIC: Autotuning/Adaptive Control

POSITION: Researcher, KEY: P

YEAR: 1988

CENTER: UMIST. Control Systems Centre

CITY: Manchester, United Kingdom

DURATION: 6 months

TOPIC: Fault detection and diagnosis

POSITION: Researcher, KEY: P

YEAR: 1990-91

CENTER: UMIST. Control Systems Centre

CITY: Manchester, United Kingdom

DURATION: 4 months

TOPIC: Fault detection and diagnosis

POSITION: RESEARCHER KEY: I

YEAR: 1992

CENTER: University of Newcastle upon Tyne,
Dpt Chemical Engineering and Process Control

CITY: Newcastle upon Tyne, United Kingdom

DURATION: 2 months

TOPIC: Neuronal network-based fault detection and diagnostics

POSITION: RESEARCHER KEY: I

YEAR: 1995

CENTER: University of Princeton

CITY: Dpt of Chemical Engineering
Princeton (New Jersey), USA

DURATION: 1 month

TOPIC: Optimization and integrated design

POSITION: RESEARCHER KEY: I

YEAR: 1999

CENTER: Control Systems Centre. University of Manchester

CITY: Manchester, United Kingdom

DURATION: 1 month

TOPIC: Agent based Consensus Control

POSITION: Researcher, KEY: I

YEAR: 2018

COMMUNICATIONS IN INTERNATIONAL CONGRESSES

AUTHORS: C. Prada, P. Vega, L. Alonso
TITLE: Modelling and Simulation of a sulfitation tower for Ph adaptive control
CONGRESS: XI Int. Conf. on Applied Modelling and Simulation IASTED. pp 132-135
LOCATION/YEAR: Nice (France), 1984
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, C. Prada, F. Prada
TITLE: A computer system for design and training on advanced control techniques
CONGRESS: Symposium on Simulation on control systems, IFAC/IMACS. pp 613-618
LOCATION/YEAR: Vienna (Austria), 1986
TYPE OF PARTICIPATION: Talk

AUTHORS: C. Prada, P. Vega
TITLE: A reduced-variance pole-assignment PID controller
CONGRESS: Conference on Identification, Modelling and Simulation IASTED. pp 242-246
LOCATION/YEAR: Paris (France), 1987
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, C. Prada, E. Martínez
TITLE: Identification methods and input-output signals: a comparative study by simulation
CONGRESS: AMSE International Conference, Vol. 1A pp 3-14
LOCATION/YEAR: Karlsruhe, (Germany), 1987
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, R. G. Cameron, S. Mossaheb
TITLE: Application of a robust multivariable regulator
CONGRESS: International Symposium on applied control, filtering and signal processing. IASTED
LOCATION/YEAR: Geneve, (Switzerland), 1987
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Arranz, R. Panera, P. Vega, C. Prada
TITLE: An interactive package for multivariable control design in the frequency domain
CONGRESS: 36th Conference on Mini and Micro computers, ISMM pp 616-620
LOCATION/YEAR: Gerona (Spain), 1988
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, J. Serrano, C. Prada
TITLE: A comparative study of Automatic Tuning methods for industrial PID controllers
CONGRESS: 8th Int. Symp. on Modeling, Simulation and Control, IASTED pp 198-201. Ed. M Hamza Acta Press. ISBN 0-88986-113-7
LOCATION/YEAR: Grindelwald (Switzerland), 1989
TYPE OF PARTICIPATION: Talk

-
- AUTHORS: P. Vega, M. B. Zarrop
 TITLE: Optimal approaches to Self-tuning PID control
 CONGRESS: IFAC Symp: ACAPS 89, pp 371-374
 LOCATION/YEAR: Glasgow (UK), 1989
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: C. Prada, J. Serrano, P. Vega
 TITLE: A method for designing PID regulators
 CONGRESS: 9th Int. Symp. on Modelling Identification and Control, IASTED pp 233-236
 Ed. M Hamza Acta Press. ISBN 0-88986-144
 LOCATION/YEAR: Innsbruck (Austria), 1990
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, Z. Xu, R. G. Cameron, F. Li
 TITLE: Robust multivariable regulator desing based on passivity: wo examples
 CONGRESS: AMST 90 4th International Symposium
 LOCATION/YEAR: Bradford, (UK), 1990
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: C. Prada, P. Vega
 TITLE: GPC control of a pulp dryer
 CONGRESS: 9th Symposium in Identification and System Parameter Estimation, IFAC/FORS
 pp 714-719. ISBN 963 311 331 8
 LOCATION/YEAR: Budapest (Hungary), 1991
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, C. Prada
 TITLE: An adaptive PID controller for process control
 CONGRESS: 1st European Control Conference, ECC, 91, GRA.
 Vol. 3, pp. 2440-2446. Editions Hermes.
 ISBN 2-86601-280-1
 LOCATION/YEAR: Grenoble, (France), 1991
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: M. J. Fuente, C. Prada, P. Vega
 TITLE: Optimization Tool in a Continuous Dynamic Simulation Language
 CONGRESS: European Simulation Symposium, SCS, pp 475-479
 LOCATION/YEAR: Berlin (Germany), 1992
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, S. D'Amico, L. Alonso
 TITLE: Neural Networks Based Modelling and Simulation of a nonlinear Process
 CONGRESS: 11th IASTED International Conference of Applied
 Informatics. Pp. 56-59. Editor M.H. Hamza
 ISBN 0-88986-175-7
 LOCATION/YEAR: Annency (France), 1993
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, M. B. Zarrop, M. J. Fuente
 TITLE: Fault Detection and Diagnosis in an Evaporation Station
 CONGRESS: 2nd European Control Conference, ECC'93,
 pp. 1342-1347, Vol. 3. ISBN 90 367 0374 3
 LOCATION/YEAR: Groningen (The Netherlands), 1993
 TYPE OF PARTICIPATION: Talk
-

AUTHORS: A. Wilson, C. de Prada, P. Vega
TITLE: Simulated Predictive Control of an industrial process
CONGRESS: Summer Computer Simulation Conference, SCS pp.813-818
LOCATION/YEAR: Boston, (USA), 1993
TYPE OF PARTICIPATION: Talk

AUTHORS: C. de Prada, F. Morilla, S. Dormido, P. Vega
TITLE: Simulation and Control of the condensate circuit in a nuclear power station
CONGRESS: Summer Computer Simulation Conference, SCS pp 807-812
LOCATION/YEAR: Boston, (USA), 1993
TYPE OF PARTICIPATION: Talk

AUTHORS: C. Prada, J. Serrano, P. Vega
TITLE: A comparative study of GPC and DMC controllers.
CONGRESS: Advances in Model Based Predictive Control, CIM-Europe. pp 220-232
LOCATION/YEAR: Oxford, (U.K), 1993
TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, P. Vega, R. G. Cameron
TITLE: The Robust control of a milk of lime blending tank
CONGRESS: International Symposium on Applications of Multivariable System Techniques. AMST'94
LOCATION/YEAR: Bradford, (United Kingdom), 1994
TYPE OF PARTICIPATION: Talk

AUTHORS: A. Aragón, C. Prada, P. Vega, G. Gutierrez
TITLE: Experiencias de regulación de una caldera termoeléctrica
CONGRESS: INFORMATICA'94, CONAI'94. ENE089
LOCATION/YEAR: La Habana (Cuba), 1994
TYPE OF PARTICIPATION: Talk

AUTHORS: C. Prada, P. Vega
TITLE: A level control problem in an evaporation station
CONGRESS: INFORMATICA'94; CONAI'94. ENE089
LOCATION/YEAR: La Habana (Cuba), 1994
TYPE OF PARTICIPATION: Talk

AUTHORS: M.J. Fuente, P. Vega, M.B. Zarrop
TITLE: Fault Detection of large parameter changes in a waste water plant
CONGRESS: IFAC Symposium on Fault Detection Supervision and safety for technical process. SAFEPROCESS'94. pp 159-164. Vol. 1
LOCATION/YEAR: Helsinki, (Finland), 1994
TYPE OF PARTICIPATION: Talk

AUTHORS: J. M. Zamarreño, P. Vega
TITLE: Modelling, Simulation, Control and Neural Networks based Failure Detection of a steam generation and electrical process
CONGRESS: Simulation of Continuous Systems, SCS-ESM'94, SCS. pp 769-773. ISBN 1-56555-028-5
LOCATION/YEAR: Barcelona (Spain), 1994
TYPE OF PARTICIPATION: Talk

- AUTHORS: L.F Acebes, P. Vega
 TITLE: Use of Neural Nets for Dynamic Modelling and Predictive Control in an Evaporation Station.
 CONGRESS: Simulation of Continuous Sytems, SCS-ESM'94, SCS pp 774-778. ISBN 1-56555-028-5
 LOCATION/YEAR: Barcelona (Spain), 1994
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, A. Cipriano, C. Prada, J. Tancara, M. Guarini, A. Aragón
 TITLE: Evaluation of Advanced regulators for an Evaporation Station
 CONGRESS: IEEE Conf. on Fuzzy Systems, pp. 648-654, Vol. 1
 IEEE World Congress on Computational Intelligence
 LOCATION/YEAR: Orlando, (USA), 1994
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: S.D'Amico, P. Vega, L. Alonso, J.M. Zamarreño
 TITLE: Modelling and Control of an industrial process using Neural Networks
 CONGRESS: ANNIE'94. Vol 4, pp. 1029-1034, ASME Press
 LOCATION/YEAR: Rolla, (USA), september 1994
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: M. J. Fuente, P. Vega
 TITLE: A comparison of Identification Algorithms for rapidly time-varying parameters on a real process
 CONGRESS: IFAC Symp: ACAPS 95. pp 141-146
 LOCATION/YEAR: Budapest (Hungary), 1995
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: P. Vega, M. H. Randeree, C. Prada
 TITLE: Robust Control of an Evaporation Station
 CONGRESS: 3rd European Control Conference, ECC 95, Vol. 4, pp 3869-3874
 LOCATION/YEAR: Rome (Italy), 1995
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: M. J. Fuente, P. Vega
 TITLE: A neural network based approach for Fault Detection and diagnosis: Application to a real process
 CONGRESS: 4th IEEE Conference on Control Applications
 pp 188-193. ISBN 0-7803-2550-8
 LOCATION/YEAR: Albany, New York, (USA), 1995
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: O. Pérez, F. Tadeo, P. Vega
 TITLE: Robust Control of a pH control plant
 CONGRESS: 4th IEEE Conference on Control Applications. pp 854-855
 LOCATION/YEAR: Albany, New York, (USA), 1995
 TYPE OF PARTICIPATION: Talk
-
- AUTHORS: F. Tadeo, P. Vega, C. Prada
 TITLE: Diseño de Controladores Robustos para una Caldera Industrial
 CONGRESS: First Congress of Matlab users UNED
 LOCATION/YEAR: Madrid (Spain), 1995
 TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, T. Alvarez, P. Vega
TITLE: Control con restricciones de una caldera industrial
CONGRESS: II Conferencia Internacional de Control Automático en Ahorro de energía. CONAI'96.
INFORMATICA 96
LOCATION/YEAR: La Habana, (Cuba), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: J. M. Zamarreño, P. Vega
TITLE: Red Dinámica Recurrente: Modelo de Identificación
CONGRESS: II Conferencia Internacional de Control Automático en Ahorro de energía. CONAI'96.
INFORMATICA 96
LOCATION/YEAR: La Habana, (Cuba), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, G. Gutiérrez
TITLE: Análisis de interacción entre diseño y la controlabilidad de plantas de depuración de aguas residuales
CONGRESS: II Conferencia Internacional de Control Automático en Ahorro de energía. CONAI'96.
INFORMATICA 96
LOCATION/YEAR: La Habana, (Cuba), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: J.M. Zamarreño, P. Vega
TITLE: Identification and Predictive Control of a Melter Unit from the sugar Industry using recurrent neural nets
CONGRESS: EANN'96. Engineering Application of Neural Network
ISBN 952-90-7517-0, pp119-126
LOCATION/YEAR: London (UK), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: J.M. Zamarreño, P. Vega
TITLE: Neural Predictive Control: Application to a highly nonlinear system
CONGRESS: IFAC World congress
LOCATION/YEAR: San Francisco, USA, 1996
TYPE OF PARTICIPATION: Poster

AUTHORS: F. Tadeo, P. Vega
TITLE: Optimal Control of a Laboratory Plant
CONGRESS: UKAC International Conference on CONTROL'96,
Conference Publication Iss. 426, IEE. Pp 953-958
LOCATION/YEAR: England, 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, P. Vega
TITLE: Design of Robust Controllers for an industrial MIMO plant
CONGRESS: UKAC International Conference on CONTROL'96
Conference Publication Iss. 426, IEE, pp 799-804
LOCATION/YEAR: England, 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: E. S. González, P. Vega
TITLE: Techniques for classifying sugar crystallization images based on spectral analysis and the use of neural networks
CONGRESS: 3rd International Workshop on Image and Signal processing LOCATION/YEAR: Manchester (UK), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Mediavilla, L. J. De Miguel, P. Vega
TITLE: Isolation of multiplicative faults in an industrial actuator benchmark
CONGRESS: Safeprocess'97
LOCATION/YEAR: Hull (UK), 1997
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, G. Gutiérrez
TITLE: Effect of the process design on the controllability of water treatment plants
CONGRESS: AICHE'97
LOCATION/YEAR: Los Angeles (USA), 1997
TYPE OF PARTICIPATION: Poster

AUTHORS: P. Vega, G. Gutiérrez
TITLE: Optimization of objective functions for the control and operation of activated sludge processes
CONGRESS: AICHE'97
LOCATION/YEAR: Los Angeles (USA), 1997
TYPE OF PARTICIPATION: Talk

AUTHORS: V. Moreno, P. Vega, B. Curto
TITLE: Design, control and supervision of a real pilot plant for batch filtering of industrial wastewater
CONGRESS: AICHE'97
LOCATION/YEAR: Los Angeles (USA), 1997
TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, P. Vega, T. Hologan
TITLE: 2 DOF I1 Optimal control of a pH pilot plant
CONGRESS: AICHE'97
LOCATION/YEAR: Los Angeles (USA), 1997
TYPE OF PARTICIPATION: Poster

AUTHORS: F. Tadeo, A.M. Holohan, P. Vega
TITLE: I1 regulation of a PH control plant
CONGRESS: ESCAPE'98
LOCATION/YEAR: Brussels (Belgium), 1998
TYPE OF PARTICIPATION: Talk

AUTHORS: G. Gutiérrez, P. Vega
TITLE: Influencia del diseño de las plantas en la controlabilidad en lazo cerrado y en el coste de explotación de las mismas
CONGRESS: II Conferencia Internacional de Control Automático en Ahorro de energía. CONAI'98. INFORMATICA 98
LOCATION/YEAR: La Habana (Cuba), 1998
TYPE OF PARTICIPATION: Talk

AUTHORS:	R. Cordón, E. Sanz, P. Vega
TITLE:	Robust control in robotic manipulators with DC motors
CONGRESS:	5th Workshop on Advanced Motion Control. (IEEE)
LOCATION/YEAR:	Coimbra (Portugal), 1998
TYPE OF PARTICIPATION:	Talk
AUTHORS:	F. Tadeo, P. Vega, A. M. Holohan
TITLE:	Independent Joint Control using Two-Degrees-of-Freedom Structures
CONGRESS:	IEEE Conference on Control Applications '98
LOCATION/YEAR:	Trieste, Italy. September, 1998
TYPE OF PARTICIPATION:	Talk
AUTHORS:	P. Vega, G. Gutiérrez
TITLE:	Optimization of objective functions for the Design, Control and Operation of wastewater treatment plants
CONGRESS:	European Control Conference ECC' 99
LOCATION/YEAR:	Karlsruhe Germany, 1999
TYPE OF PARTICIPATION:	Talk
AUTHORS:	G. Gutiérrez, P. Vega
TITLE:	Integrated design of Activated Sludge Processes taking into account the closed loop controllability
CONGRESS:	ESCAPE 2000
LOCATION/YEAR:	Florence, Italy 2000
TYPE OF PARTICIPATION:	Talk
AUTHORS:	F. Tadeo, M.J. Grimble, P. Vega
TITLE:	Design of a l1 Optimal Controller for a Hydrogen Reformer Plant
CONGRESS:	American Control Conference, ACC
LOCATION/YEAR:	USA, 2000
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. Gil , P. Vega, M. Francisco
TITLE:	Integrated design of a pH processes
CONGRESS:	Modelling, Identification, and Control IASTED International Conference
LOCATION/YEAR:	Innsbruck (Austria), February 2001
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, P. Vega, A. Gil
TITLE:	Fermenter Modelling using local linear models
CONGRESS:	Modelling, Identification, and Control IASTED International Conference
LOCATION/YEAR:	Innsbruck (Austria), February 2001
TYPE OF PARTICIPATION:	Talk
AUTHORS:	G. I. Sainz, M.J. Fuente, P. Vega
TITLE:	Recurrent Neuro Fuzzy Modelling of a biotechnological process
CONGRESS:	European Control Conference ECC'01
LOCATION/YEAR:	Porto (Portugal) September 2001
TYPE OF PARTICIPATION:	Talk

AUTHORS: T. Alvarez, Y. Martin, S. Pérez, F. Santos, F. Tadeo, S. González,
J.L. Arribas, P. Vega

TITLE: Classification of Microorganisms using Image Processing Techniques

CONGRESS: IEEE International Conference on Image Processing

LOCATION/YEAR: Thessaloniki, Greece, October 2001

TYPE OF PARTICIPATION: Talk

AUTHORS: G. Gutierrez and P. Vega

TITLE: Integrated Design of Biological Processes and their Control System
including Closed Loop Properties for Disturbances Rejection

CONGRESS: 15th IFAC World Congress

LOCATION/YEAR: Barcelona (Spain) July 2002

TYPE OF PARTICIPATION: Talk

AUTHORS: G. Gutierrez and P. Vega

TITLE: Process Synthesis applied to Activated Sludge Processes: A
framework with MINLP optimisation models

CONGRESS: 15th IFAC World Congress

LOCATION/YEAR: Barcelona (Spain) July 2002

TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, R. Lammana, P. Vega

TITLE: Aplicación de Algoritmos genéticos para el diseño integrado de
reactores

CONGRESS: VIII Iberoamerican Conference on Artificial Intelligence
(IBERAMIA 2002)

LOCATION/YEAR: Sevilla November 2002

TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega, O. Pérez, M. Poch

TITLE: Dynamic Optimization for Activated Sludge Process Integrated Design

CONGRESS: European Control Conference (ECC '03)

LOCATION/YEAR: Cambridge (UK), 2003

TYPE OF PARTICIPATION: Talk

AUTHORS: O. Pérez, P. Vega, W. Colmenares,

TITLE: Linear Matrix Inequalities for the Integrated Design of Processes

CONGRESS: European Control Conference (ECC '03)

LOCATION/YEAR: Cambridge (UK), 2003

TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, M.J. Fuente, P. Vallejo, G. Sainz

TÍTULO: A comparative study of neural and neural-fuzzy models to identify a
real system

CONFERENCE: Engineering Application of Artificial Intelligence ANN'03

LOCATION: Spain, 2003

TYPE OF PARTICIPATION: Talk

AUTHORS: I. Rodríguez-Roda, M. Poch, P. Vega, R. Bañares-Alcántara, M. Francisco

TITLE: Development and validation of a decision support system for integrated design of
biological wastewater treatment processes

CONGRESS: ECCE '03 European Conference in Chemical Engineering

LOCATION/YEAR: Spain, 2003

TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega, M.Poch, I. Rodríguez-Roda
TITLE: Non-linear optimisation for the integrated design of activated sludge processes .
CONGRESS: ECCE '03 European Conference in Chemical Engineering,
LOCATION/YEAR: Spain, 2003
TYPE OF PARTICIPATION: Poster

AUTHORS: O. Pérez, W. Colmenares, P. Vega, M. Francisco
TITLE: Diseño Integrado de Sistemas utilizando controladores PID via Desigualdades lineales Matriciales
CONGRESS: IV Congreso de Automatización y control, CAC'2003
LOCATION/YEAR: Mérida (Venezuela). November 2003
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, R. Lammana, P. Vega
TITLE: Síntesis y diseño integrado de un sistema de reactores químicos con criterios d lazo abierto.
CONGRESS: IV Congreso de Automatización y control, CAC'2003
LOCATION/YEAR: Mérida (Venezuela). November 2003
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, R. Lamanna and P. Vega
TITLE: Algorithmic Synthesis And Integrated Design of Chemical Reactor Systems Using Genetic Algorithms
CONGRESS: 5th International Symposium on Soft Computing for Industry, World Automation Congress. IFMIP, WAC 2004 . pp:453-7
LOCATION/YEAR: Sevilla, (Spain) june 2004.
TYPE OF PARTICIPATION: Talk

TITLE: Integrated System Design with Standard Industrial Controllers via LMIS
AUTHORS: O. Pérez, W. Colmenares, E. Granado, P. Vega and M. Francisco
CONGRESS: ISAC, World Automation Congress WAC 2004, Volume 2 pp 403-406
LOCATION/YEAR: Sevilla (Spain) 2004
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, P. Vega , R. Lamanna
TITLE: Algorithmic Synthesis and Integrated Design for Activated Sludge Processes Using Genetic Algorithms
CONGRESS: ESCAPE15 , p 725-29
LOCATION/YEAR: Barcelona June 2005
TYPE OF PARTICIPATION: Poster

AUTHORS: M. Francisco, S. Revollar, P. Vega , R. Lamanna
TITLE: A comparative study of deterministic and stochastic optimization methods for the Integrated design of processes
CONGRESS: 16th IFAC World Congress
LOCATION/YEAR: Prague, 2005
TYPE OF PARTICIPATION: Talk

AUTHORS:	M. Francisco, P. Vega, O. Pérez
TITLE:	Process Integrated design within a Model Predictive Control framework
CONGRESS:	16th IFAC World Congress
LOCATION/YEAR:	Prague, 2005
TYPE OF PARTICIPATION:	Talk
AUTHORS:	Silvana Revollar, Rosalba Lamannaa, Pastora Vega
TITLE:	Synthesis and integrated design of Activated Sludge Processes Using Evolutive Algorithms
CONGRESS:	PASI' 2005,
LOCATION/YEAR:	Argentina. August 2005
TYPE OF PARTICIPATION:	Talk
AUTHORS:	Silvana Revollara, Rosalba Lamannaa, Pastora Vega
TITLE:	A Genetic Algorithm for the Synthesis of Activated Sludge Processes
CONGRESS:	7th World Congress of Chemical Engineering.
LOCATION/YEAR:	Glasgow (UK), 2005
TYPE OF PARTICIPATION:	Poster
AUTHORS:	S. Revollar, R. Lamanna, P. Vega, M. Libretti, L. Lozada, J. Ñáñez
TITLE:	Aplicación de un algoritmo evolutivo en el diseño integrado de una planta de fangos activados
CONGRESS:	V Congreso de Automatización y control, CAC'2005
LOCATION/YEAR:	Caracas (Venezuela), Noviembre 2005
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, P. Vega
TITLE:	Sintonía automática de controladores predictivos aplicada al proceso de fangos activados
CONGRESS:	V Congreso de Automatización y control, CAC'2005
LOCATION/YEAR:	venezuela., 2005
TYPE OF PARTICIPATION:	Talk
AUTHORS:	S. Revollar, R. Lammana, P. Vega
TITLE:	Genetic Algorithms for the simultaneous design and control of continuous stirred tank reactor systems
CONGRESS:	Chemical Process Control CPC'7
LOCATION/YEAR:	Lake Louise, Alberta (Canada) January 2006
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, P. Vega
TITLE:	Optimal Automatic Tuning of Model Predictive Controllers for the Activated Sludge Process
CONGRESS:	Chemical Process Control CPC'7
LOCATION/YEAR:	Lake Louise, Alberta (Canada) January 2006
TYPE OF PARTICIPATION:	Talk
AUTHORS:	R. Valle, B. Pérez-Lancho, E. Sanz, P. Vega
TITLE:	Learning control strategies in building heating systems
CONGRESS:	Advance in Control Education (ACE2006)
LOCATION/YEAR:	Madrid (Spain), 2006
TYPE OF PARTICIPATION:	Talk

AUTHORS: Fawzat Alawneh, P. Vega, Mario Francisco, Roberto Sandín
TITLE: An Integrated Tool for the Activated Sludge Processes Integrated Design
CONGRESS: 7th Portuguese Conference on Automatic Control, 2006
LOCATION/YEAR: Lisbon (Portugal), 2006
TYPE OF PARTICIPATION: Talk

AUTHORS: Pérez, O.; Colmenares, W.; Granado, E; Vega P.; Mario F..
TITLE: Integrated System Design with PID Controllers via LMIs.
CONGRESS: IEEE PES T & D 2006
LOCATION/YEAR: Caracas, Venezuela. August 2006. CD
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega
TITLE: Integrated Design of Wastewater Treatment Processes using Model Predictive Control
CONGRESS: European Control Conference 07 ,
Proceedings ISBN 976-960-89028-5-5 pp 5333-5340
LOCATION/YEAR: Greece, 2007
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, F. Alawneh, L. González, M. Francisco, B. Pérez
TITLE: A Computer Based Tool for Integrated Design of Wastewater Treatment Plants and
Advanced Control Systems
CONGRESS: European Congress of Chemical Engineering – 6
LOCATION/YEAR: Copenhagen (Denmark), 2007
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega
TITLE: Norm-based Approaches for Automatic tuning of Model Based
Predictive Control
CONGRESS: European Congress of Chemical Engineering – 6
LOCATION/YEAR: Copenhagen (Denmark), 2007
TYPE OF PARTICIPATION: Poster

AUTHORS: M. Francisco, P. Vega, E. Sanz
TITLE: Norm-based Approaches for Integrated Design of WWTP
CONGRESS: European Congress of Chemical Engineering – 6
LOCATION/YEAR: Copenhagen (Denmark), 2007
TYPE OF PARTICIPATION: Talk

AUTHORS: G. Gutiérrez, P. Vega, C. Prada
TITLE: Integrated Close Loop Control and Process Design
CONGRESS: DYCOPS'2007
LOCATION/YEAR: Cancun (Mexico), 2007
TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, A. Hologan, P. Vega
TITLE: Two-degrees-of-freedom compensators for systems with commands
bounded in slope
CONGRESS: 3rd IFAC SYMP.on System, Structure and Control SSSC'07
LOCATION/YEAR: Foz do Iguazú, Brazil October, 2007
TYPE OF PARTICIPATION: Talk

AUTHORS:	M. Francisco, P.Vega.
TITLE:	Multi-model approaches for Integrated Design of Wastewater Treatment plants with Model Predictive Control
CONGRESS:	XVII IFAC World Congress
LOCATION/YEAR:	Seoul (South Korea), 2008
AUTHORS:	P.Vega. M. Francisco, F. Tadeo
TITLE:	Multiobjective optimization for automatic tuning of robust model based predictive controllers
CONGRESS:	XVII IFAC World Congress
LOCATION/YEAR:	Seoul (South Korea), 2008
AUTHORS:	S. Revollar, M. Francisco, P. Vega, R. Lamanna
TITLE:	Genetic Algorithms for the Synthesis and Integrated Design of Processes Using Advanced Control Strategies
CONGRESS:	International Symposium on Distributed Computing and Artificial Intelligence (DCAI 2008) Pub. Springer Verlag. ISSN: 1615-3871 (Print) 1860-0794 (Online), ISBN: 978-3-540-85862-1, DOI: 10.1007/978-3-540-85863-8 Book series Advances in Soft Computing
LOCATION/YEAR:	Salamanca (Spain), 2008
TYPE OF PARTICIPATION:	Talk
AUTHORS:	S. Revollar, D. Domínguez, Z. Ramírez, P.Vega, R. Lamanna, H. Alvarez
TITLE:	Diseño Integrado de la planta de sulfitación en un ingenio azucarero
CONGRESS:	Book: XIII Congreso Latinoamericano de Control Automático LOCATION/YEAR: Mérida (Venezuela), 2008
TYPE OF PARTICIPATION:	Talk
AUTHORS:	Domínguez D.; Revollar, S. ; Francisco, M. ; Lamanna R.; Vega, P.
TITLE:	Simultaneous Synthesis and Integrated Design of Chemical Processes Using IMC PID Tuning Methods
CONGRESS:	ICHEAP-09
LOCATION/YEAR:	Rome, Italy Date: May 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, P. Vega , M. J. Fuente
TITLE:	Model Predictive Control tuning considering l1 norm for disturbance rejection
CONGRESS:	ECC'09
LOCATION/YEAR:	Budapest, Hungary, Date August 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	D. Garcia-Alvarez, M.J. Fuente, P. Vega
TITLE:	Fault Detection in Processes with Multiple Operation Modes Using Switch-PCA and Analysis of Grade Transition
CONGRESS:	ECC'09
LOCATION/YEAR:	Budapest, Hungary, Date August 2009
TYPE OF PARTICIPATION:	Talk

AUTHORS:	D. Garcia-Alvarez, M.J. Fuente, P. Vega, G. Sainz
TITLE:	Fault detection and diagnosis using multivariate statistical techniques in a Wastewater Treatment plant
CONGRESS:	ADCHEM'09
LOCATION/YEAR:	Istambul, Turkey, Date: July 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	Francisco, M. ; Revollar, S.; Vega, P. ; Lamanna, R.
TITLE:	Simultaneous Synthesis, Design and Control of Processes Using Model Predictive Control
CONGRESS:	ADCHEM'09
LOCATION/YEAR:	Istambul, Turkey Date: July 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	H. Elbahja, O.Bakka, P.Vega and F.Mesquine
TITLE:	Modelling, estimation and optimal control design of a biological wastewater treatment process
CONGRESS:	14th International conference on methods and Models in Automation and Robotics (MMAR'2009),
LOCATION/YEAR:	Szczecin, Poland, 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	O.Bakka, H.Elbahja, P.Vega and F.Mesquine
TITLE:	Non linear GPC of a nutrient removal biological plant
CONGRESS:	14th IEEE International Conference on Emerging Techonologies and Factory Automation, (ETFA'09),
LOCATION/YEAR:	Mallorca, Spain. 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. Gajate, R. Haber, P. Vega
TITLE:	A Transductive Neuro-Fuzzy Force Control: An Ethernet-Based Application to a Drilling Process
CONGRESS:	16th International Conference on Neural Information Processing - ICONIP 2009 (Tailandia, 2009), LNCS 5864, Part II, pp. 573-582 (ISBN: 978-3-642-10682-8)
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. Gajate, R. Haber, J.R. Alique, P. Vega
TITLE:	Transductive-Weighted Neuro-fuzzy Inference System for Tool Wear Prediction in a Turning Process
CONGRESS:	4th International Conference on Hybrid Artificial Intelligence Systems – HAIS 2009 (Spain, 2009), LNAI 5572, pp. 113-120 (ISBN: 978-3-642-02318-7)
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. Gajate, R. Haber, J.R. Alique, P. Vega
TITLE:	Evolving Neuro-Fuzzy Systems for Controlling Complex Electromechanical Systems. A Case Study on the Drilling Force Control
CONGRESS:	IEEE World Congress on Computational Intelligence – WCCI Spain, 2010
TYPE OF PARTICIPATION:	Talk

AUTHORS: Francisco, M. ; Álvarez, H. ; Vega, P. ; Revollar, S.
TITLE: Stable model predictive control tuning considering asymmetric bounded signals
CONGRESS: European Symposium on Computer Aided Engineering (ESCAPE20)
LOCATION/YEAR: Ischia, Italy Date: June **2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: Revollar, S.; Álvarez, H.; Lamanna, R.; Vega, P. ; Francisco, M.
TITLE: Multiobjective Genetic Algorithms for the Integrated Design of Chemical Processes Using Advanced Control Techniques
CONGRESS: European Symposium on Computer Aided Engineering (ESCAPE20)
LOCATION/YEAR: Ischia, Italy Date: June **2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, A. Rodríguez, R. Lamanna, M. Francisco, P. Vega.
TITLE: Multiobjective genetic algorithms for the simultaneous design and control of the activated sludge process.
CONGRESS: Congress of Chemical and Process Engineering (CHISA 2010)
LOCATION/YEAR: Prague, Czech Republic November **2010**
TYPE OF PARTICIPATION: Poster

AUTHORS: J.F. De Paz, S. Rodríguez, A. Gil, J. M. Corchado, P. Vega
TITLE: Enhanced Self Organized Dynamic Tree Neural Network.
CONGRESS: Proceedings of the 5th International Conference on Hybrid Artificial Intelligence Systems.
LOCATION/YEAR: San Sebastián, Spain, in June of **2010**.
TYPE OF PARTICIPATION: Talk

AUTHORS: Revollar S., Francisco M., Lamanna R. y Vega P.
TITLE: Comparison of Classic and Multi-objective Genetic Algorithms for Optimal Design and Control of Chemical Processes
CONGRESS: 24-th European Conference on Operational Research (EURO XXIV)
LOCATION/YEAR: Lisboa, Portugal, Julio,**2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: H. Elbahja, O. Bakka, P. Vega, F.Mesquine
TITLE: Investigation of Different Control Strategies for the Waste Water Treatment Plant
CONGRESS: STA'2010
LOCATION/YEAR: Monastir, Tunisia, 19-21th December,**2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: F.Mesquine, O. Bakka, H. Elbahja, P. Vega
TITLE: Observer based Regulator Problem for WWTP with Constraints on Control,
CONGRESS: Emerging Technologies and Factory Automation (ETFA 2010)
LOCATION/YEAR: Bilbao, Spain, September **2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega, H. Elbahja, H. Álvarez, S. Revollar
TITLE: Integrated Design of Processes with Infinity Horizon Model
Predictive Controllers
CONGRESS: Emerging Technologies and Factory Automation (ETFA 2010)
LOCATION/YEAR: Bilbao, Spain, September **2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Rodríguez, O. Gil, F. de la Prieta, C. Zato, J.M. Corchado,
P. Vega, M. Francisco
TITLE: People detection and stereoscopic analysis using MAS
CONGRESS: 14th International Conference on Intelligent Engineering Systems (INES). IEEE Xplore
Digital Library. pp. 159-164. ISBN 978-1-4244-7650-3
LOCATION: Las Palmas de Gran Canaria (Spain), Mayo **2010**
TYPE OF PARTICIPATION: Talk

AUTHORS: M. Francisco, P. Vega, S. Revollar
TITLE: Model Predictive Control of BSM1 benchmark of wastewater treatment process: a
tuning procedure.
CONGRESS: ECC 2011
LOCATION/YEAR: Orlando (EE.UU.), November **2011**
TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, F. Almaraz, O. Gil
TITLE: Massive Multiplayer on line game for Spanish learning
CONGRESS: Proceedings 4th International Conference ICT for Language
Learning. ISBN 9788876476778.
LOCATION: Florence, Italy (October, **2011**)
TYPE OF PARTICIPATION: Talk

AUTHORS: J. Pittol, Y. Sánchez, R. Lammana, S. Revollar, P. Vega
TITLE: A fuzzy virtual sensor for substrate concentration in a wastewater
treatment plant.
CONGRESS: IASTED
LOCATION: USA (**2011**)
TYPE OF PARTICIPATION: Talk

AUTHORS: H. Elbahja, F. Tadeo, P. Vega, O. Bakka
TITLE: Stabilization under constrained states and controls of positive 2-D systems described
by a general model
CONGRESS: nDS'11.
LOCATION: Poitiers (France) (**2011**)
TYPE OF PARTICIPATION: Talk

AUTHORS: José M. Martín, Pastora Vega, Silvana Revollar
TITLE: Nonlinear MPC for the optimal operation of the N-Removal Process
CONGRESS: Mediterranean Control Conference
LOCATION: Barcelona (**2012**)
TYPE OF PARTICIPATION: Talk

AUTHORS: L. Pérez, H. Alvarez, P. Vega, S. Revollar, M. Francisco.
 TITLE: An Innovative Non Linear Model Predictive Controller for the Optimal Operation of the Activated Sludge Process
 CONGRESS: Ecotechnologies for Wastewater Treatment. Technical, Environmental and Economic Challenges
 LOCATION: Santiago de Compostela, Spain (**2012**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, R. Lamanna, A. Rodríguez, P. Vega, M. Francisco.
 TITLE: Integrated design methodology for improving the economics and dynamical performance of the activated sludge process
 CONGRESS: Ecotechnologies for Wastewater Treatment. Technical, Environmental and Economic Challenges
 LOCATION: Santiago de Compostela, Spain (**2012**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: Hicham El bahja, Pastora Vega Cruz, Silvana Revollar
 TITLE: A closed Loop Paradigm for NLGPC with Constraints on Control Variables.
 CONGRESS: World Automation Conference **2012**
 LOCATION: Puerto Vallarta, Mexico (**2012**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: José M. Martín, Pastora Vega, Silvana Revollar, Mario Francisco
 TITLE: Set-point Optimization for Enhancing the MPC Control of the N-Removal Process in WWTP's..
 CONGRESS: World Automation Conference
 LOCATION: Puerto Vallarta, Mexico (**2012**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: P. Vega, S. Revollar, J.M. Martín, M. Francisco.
 TITLE: Static and dynamic set point optimization techniques for optimal operation of wastewater treatment plants
 CONGRESS: Conference: European Control Conference (ECC), 2013
 LOCATION: Zurich, Switzerland (**2013**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: H.El bahja and P Vega,
 TITLE: Closed Loop Paradigm Control Based on Positive Invariance for a Wastewater Treatment Plant ,
 CONGRESS: 3th International Conference on Systems and Control (ICSC'13),
 LOCATION: Algiers, Algeria (**2013**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: I. Alaayad, H. Elbahja and P. Vega
 TITLE: A Sliding Mode Based on Fuzzy Logic Control for Photovoltaic pow System using DC-DC Boost Converter,
 CONGRESS: 3th International Conference on Systems and Control (ICSC'13),
 LOCATION: Algiers, Algeria (**2013**)
 TYPE OF PARTICIPATION: Talk

AUTHORS: Alejandro Goldar, Silvana R. Revollar, Rosalba Lamanna, Pastora Vega
TITLE: Neural Network Identification of N-Removal Process in Waste Water Treatment Plants
CONGRESS: (MIC 2014) IASTED Conference
LOCATION: Innsbruck (Austria) Algiers (**2014**)
TYPE OF PARTICIPATION: Talk

AUTHORS: H. El bahja, P. Vega, S. Revollar.
TITLE: Economic Optimization Based on Nonlinear Parametric GPC for a Wastewater Treatment Plant.
CONGRESS: IEEE Conference on Decision and Control (CDC 2014).
LOCATION: Los Angeles. December, **2014**
TYPE OF PARTICIPATION: Talk

AUTHORS: A. Goldar, S. Revollar, R. Lamanna, P. Vega.
TITLE: Neural-MPC for N-Removal in Activated-Sludge Plants.
CONGRESS: European Control Conference (ECC), 2014.
LOCATION: Strasbourg, France. June **2014**
TYPE OF PARTICIPATION: Talk

AUTHORS: Mario Francisco, Sigurd Skogestad, Pastora Vega
TITLE: Model predictive control for the self operation of wastewater treatment plants
CONGRESS: 12th International Symposium on Process Systems Engineering and 25th European Symposium on Computer Aided Process Engineering.
LOCATION: Copenhagen, Denmark 31 May – 4 June **2015**
TYPE OF PARTICIPATION: Talk

AUTHORS: Mario Francisco, Sigurd Skogestad, Pastora Vega
TITLE: Nonlinear offset free MPC for self-optimizing control in wastewater treatment plants
CONGRESS: 19th International Conference on System Theory, Control and Computing
LOCATION: Cheile Gradistei - Fundata Resort, Romania
October 14 - 16, **2015**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revolla, P. Vega, R. Vilanova
TITLE: Economic optimization of wastewater treatment plants using Non Linear Model Predictive Control
CONGRESS: 19th International Conference on System Theory, Control and Computing
LOCATION: Cheile Gradistei - Fundata Resort, Romania
October 14 - 16, **2015**
TYPE OF PARTICIPATION: Talk

AUTHORS: A. Goldar Dávila, S. Revolla, R. Lamanna, P. Vega
TITLE: Neural NLMP schemes for the control of the activated sludge process
CONGRESS: 11th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems.
LOCATION: Trondheim, Norway, **2016**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, P. Vega, R. Villanova, I. Santín

TITLE: Optimization of Economic and Environmental Objectives in a Non Linear Model Predictive Control Applied to a Wastewater Treatment Plant (I)
CONGRESS: 20th International Conference on System Theory, Control and Computing
LOCATION: Sinaia (Romania)
October 13 - 15, **2016**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, P. Vega, R. Villanova, M. Francisco
TITLE: Wastewater treatment plants operation optimization using economic dynamic real time optimization strategies
CONGRESS: Symposium on Computer Aided Process Engineering – ESCAPE 27
LOCATION: Barcelona, Spain October 1st - 5th, **2017**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, R. Villanova, M. Francisco, P. Vega,
TITLE: A hierarchical plant-wide operation in wastewater treatment plants: overall efficiency index control and event-based reference management
CONGRESS: 22th International Conference on System Theory, Control and Computing
LOCATION: Sinaia (Romania)
October 13 - 15, **2018**
TYPE OF PARTICIPATION: Talk

AUTHORS: Silvana Revollar, Ramón Vilanova, Mario Francisco, Pastora Vega
TITLE: PI/PID DO Control in WWTP for Plantwide Nitrogen Removal Efficiency
CONGRESS: 3rd IFAC Conf. on Advances in Proportional-Integral-Derivative Control. IFAC-PapersOnLine. Volume 51, Issue 4, 2018, Pages 450-455
LOCATION: Ghent, Belgium, May 9-11, **2018**.
TYPE OF PARTICIPATION: Interactive Poster

AUTHORS: K. Morales R., H. Alvarez, M. Francisco, S. Revollar, P. Vega
TITLE: Collaborative Control Strategy Applied to an Aerobic Reactor
CONGRESS: Proceedings of the XVII Latin American Conference in Automatic Control
LOCATION: Quito, 24 - 26, Octubre, **2018**
TYPE OF PARTICIPATION: Talk

AUTHORS: S. Revollar, H. Álvarez, R. Lamanna, P. Vega y A. Goldar
TITLE: Economic Model Predictive Control of a Wastewater Treatment Plant using Neural and Fuzzy models
CONGRESS: 28th European Symposium on Computer Aided Process Engineering, 2018
TYPE OF PARTICIPATION: Talk

AUTHORS: R. Casado-Vara, F. de la Prieta, S. Rodríguez, J. L. Calvo, S. Marquez, G. Kumar Venayagamoorthy, P. Vega, J. Prieto
TITLE: Adaptive fault-tolerant tracking control algorithm for IoT systems: smart building case study
CONGRESS: Conference: SOCO 2019: 14th International Conference on Soft Computing Models in Industrial and Environmental Applications Sevilla, Spain. May **2019**
TYPE OF PARTICIPATION: Talk

AUTHORS: K. Morales - Rodelo, P. Vega, M. Francisco, S. Revollar
TITLE: Influence of fuzzy layer in distributed control structure applied to four coupled tanks

CONGRESS: IEEE 4th Colombian Conference on Automatic Control (CCAC), **2019**.
TYPE OF PARTICIPATION: Talk

AUTHORS: A. Sánchez, M. Martín, P. Vega
TITLE: Biomass Based Sustainable Ammonia Production
CONGRESS: AIChE annual Meeting. 13th November, **2019**
TYPE OF PARTICIPATION: Talk

AUTHORS: Alvar Sanchez Fernnandez, Maria Jesus De La Fuente, Gregorio Sainz and Pastora Vega
TITLE: Distributed Fault Detection for Large-scale Industrial Processes
CONGRESS: 21st IFAC World Congress, 2020, (Contributed paper),**2020**
TYPE OF PARTICIPATION: Talk

AUTHORS: Silvana Revollar, Montse Meneses, Ramon Vilanova, Pastora Vega, Mario Francisco
TITLE:: Activated Sludge Process Control Strategy Based on the Dynamic Analysis of Environmental Costs
CONGRESS: Conference: 2020 24th International Conference on System Theory, Control and Computing (ICSTCC). Romania. October **2020**
TYPE OF PARTICIPATION: Talk Contributed paper

AUTHORS: Antonio Sáncheza*, Qi Zhangb, Mariano Martína and Pastora Vega
TITLE:: Integrating Energy Storage in Power Production: a Powerful Tool for the Implementation of Renewable Energies
CONGRESS: The 14th International Symposium on Process Systems Engineering (PSE **2021**, Kyoto) ENVIADO
TYPE OF PARTICIPATION: Talk Contributed paper

AUTHORS: Keidy Luz Morales Rodelo, Eva. Masero, Mario Francico, Jose M. Maestre, Pastora Vega, Silvana Revollar (24852)
TITLE: A distributed predictive control strategy applied to a real plant of four coupled tanks
CONGRESS: Submitted to the 21st IFAC World Congress, 2020, (IFAC 2020), Contributed paper)
TYPE OF PARTICIPATION: Talk

COMMUNICATIONS IN NATIONAL CONGRESSES AND CONFERENCES

AUTHORS: P. Vega, C. Prada, J. Gatón
TITLE: Estudio de una torre de sulfitación
CONGRESS: G.E.M. (R.S.E.F.) pp 288-293.
LOCATION/YEAR: Sevilla, (Spain), 1984
TYPE OF PARTICIPATION: Talk

AUTHORS: C. Prada, P. Vega, L. Alonso
TITLE: Diseño asistido por ordenador de sistemas de control
CONGRESS: 6º Congreso Nacional de Automática e Informática A.E.I.A., pp 197-200
LOCATION/YEAR: Madrid (Spain), 1985

TYPE OF PARTICIPATION: Talk
AUTHORS: J. M. Zamarreño, P. Vega, C. Prada
TITLE: Methodology of control systems with MMS and CACSD
CONGRESS: MMS European Users Group Meeting, UNED
LOCATION/YEAR: Madrid (Spain), 1993
TYPE OF PARTICIPATION: Talk

AUTHORS: F. Tadeo, P. Vega
TITLE: Constrained Robust Control of an Industrial System
CONGRESS: Seminario anual de Automática y Electrónica Industrial (SAAEI'96), pp 626-631. ISBN: 84-8499-564-X
LOCATION/YEAR: Saragossa (Spain), 1996
TYPE OF PARTICIPATION: Talk

AUTHORS: G. Gutiérrez, P. Vega
TITLE: Síntesis de procesos aplicado al proceso de fangos activados
CONGRESS: XX Jornadas de Automática
LOCATION/YEAR: Salamanca, 1999

AUTHORS: P. Vega, M. Francisco
TITLE: Fault tolerant modelling and prediction of a real waste water plant using recurrent neural networks
CONGRESS: XX Jornadas de Automática
LOCATION/YEAR: Salamanca, 1999
TYPE OF PARTICIPATION: Poster

AUTHORS: M. Francisco, P. Vega
TITLE: Identificación mediante redes neuronales de un fermentador
CONGRESS: XX Jornadas de Automática
LOCATION/YEAR: Salamanca, 1999
TYPE OF PARTICIPATION: Poster

AUTHORS: P. Vallejo, P. Vega, A.M. Grande, D. Jiménez
TITLE: Identificación mediante técnicas clásicas y neuronales: Desarrollo de una herramienta de software en tiempo real basada en MATLAB
CONGRESS: XX Jornadas de Automática
LOCATION/YEAR: Salamanca, 1999
TYPE OF PARTICIPATION: Poster

AUTHORS:	M. Francisco, P. Vega, F.J. Blanco
TITLE:	Diseño y desarrollo de una aplicación informática para la gestión de laboratorios
CONGRESS:	Jornadas Interacción Persona Ordenador, pp.270-277.
LOCATION/YEAR:	Granada (Spain), June 2000
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. B. Gil , P. Vega , A. Cembellín, M. Francisco
TITLE:	Herramienta basada en una metodología para diseño integrado
CONGRESS:	XXII Jornadas de Automática
LOCATION/YEAR:	Barcelona (Spain) September 2001
TYPE OF PARTICIPATION:	Poster
AUTHORS:	T. Alvarez, F. Tadeo, S. González, P. Vega
TITLE:	Técnicas de Procesado de Imagen para la Clasificación de Diatomeas
CONGRESS:	XXII Jornadas de Automática.
LOCATION/YEAR:	Barcelona (Spain) September 2001
TYPE OF PARTICIPATION:	Talk
AUTHORS:	S. Revollar, R. Lammana and P. Vega
TITLE:	Diseño integrado de reactores basado en el uso de algoritmos genéticos
CONGRESS:	Taller Iberoamericano CYTED
LOCATION/YEAR:	Salamanca, 2002
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, P. Vega, O. Pérez
TITLE:	Optimización para el Diseño Integrado de procesos en Lazo Cerrado
CONGRESS:	XXIII Jornadas de Automática.
LOCATION/YEAR:	Tenerife, September 2002
TYPE OF PARTICIPATION:	Poster
AUTHORS:	O. Pérez, W. Colmenares, P. Vega, M. Francisco
TITLE:	Ecuaciones lineales Matriciales para el diseño integrado de procesos.
CONGRESS:	XXIII Jornadas de Automática.
LOCATION/YEAR:	Tenerife, September 2002
TYPE OF PARTICIPATION:	Poster
AUTHORS:	M. Francisco, P. Vega
TITLE:	Diseño Integrado en el marco del control predictivo basado en modelos
CONGRESS:	Jornadas sobre Automatización y Control en los Ingenios de Azúcar
LOCATION/YEAR:	Santa Cruz de la Sierra (Bolivia), 2007
TYPE OF PARTICIPATION:	Talk
AUTHORS:	M. Francisco, S. Revollar, P. Vega, R. Lammana
TITLE:	Síntesis y Diseño Integrado de procesos con métodos estocásticos
CONGRESS:	Jornadas sobre Automatización y Control en los Ingenios de Azúcar
LOCATION/YEAR:	Santa Cruz de la Sierra (Bolivia), 2007
TYPE OF PARTICIPATION:	Talk
AUTHORS:	B. Pérez-Lancho, E. Sanz, P. Vega
TITLE:	Modelado y simulación de sistemas HVAC
CONGRESS:	I Simposio en Modelado y Simulación de Sistemas Dinámicos. SIMOSI07 (CEA)
LOCATION/YEAR:	Zaragoza (Spain), 2007
TYPE OF PARTICIPATION:	Talk

AUTHORS:	M. Francisco, P. Vega
TITLE:	Técnicas de Diseño Integrado de procesos con controladores predictivos basado en modelos
CONGRESS:	XXVIII Jornadas de Automática.
LOCATION/YEAR:	Huelva (España), 2007
TYPE OF PARTICIPATION:	Poster
AUTHORS:	Elbajha, H., Vega, P.
TITLE:	Estimation and Optimal Control Design of a Biological Wastewater Treatment Process
CONGRESS:	Workshop Sistemas Inteligentes
LOCATION/YEAR:	Salamanca (Spain) , 2008
TYPE OF PARTICIPATION:	Talk
AUTHORS:	Francisco, M.; Álvarez, H.; Vega, P.; Revollar, S.
TITLE:	Sintonía Automática de Controladores Predictivos con Estabilidad Garantizada
CONGRESS:	XXX Jornadas de Automática.
LOCATION/YEAR:	Valladolid (Spain) , 2009
TYPE OF PARTICIPATION:	Poster
AUTHORS:	A. Gajate, R. Haber, P. Vega
TITLE:	Control Neuro borroso de Proceso de Taladrado de alto rendimiento
CONGRESS:	Workshop Sistemas Inteligentes
LOCATION/YEAR:	Salamanca (Spain) , 2009
TYPE OF PARTICIPATION:	Talk
AUTHORS:	A. Gajate, P. Vega, R. Haber
TITLE:	Modelado y Control Neuroborroso de Procesos de Taladrado de Alto Rendimiento
CONGRESS:	XV Congreso Español sobre Tecnologías y Lógica Fuzzy - ESTYLF
LOCATION/YEAR:	Huelva, Spain 2010) ISBN: 978-84-9294-4026
TYPE OF PARTICIPATION:	Talk
AUTHORS:	J. M. Noguerol, S. Revollar, P. Vega, M. Francisco.
TITLE:	Cancelación de Offset en un proceso de fangos activados (Offset Cancellation in an Activated Sludge Process)
CONGRESS:	XXXII Jornadas de Automática
LOCATION/YEAR:	Sevilla, September 2011
TYPE OF PARTICIPATION:	Talk
AUTHORS:	P. Vega, J. M. Noguerol, S. Revollar, M. Francisco.
TITLE:	Operación óptima de un proceso de fangos activados mediante MPC no lineal
CONGRESS:	XXXIII Jornadas de Automática
LOCATION/YEAR:	Vigo, September 2012
TYPE OF PARTICIPATION:	Poster
AUTHORS:	D. Garcia-Alvarez, M. Francisco, M.J. Fuente, P. Vega,
TITLE:	Monitorización de controladores predictivos
CONGRESS:	XXXIII Jornadas de Automática
LOCATION/YEAR:	Vigo, September 2012
TYPE OF PARTICIPATION:	Poster

AUTHORS:	P. Vallejo LLamas, P. Vega,
TITLE:	Control predictivo de sistemas complejos basado en modelos Fuzzy. Aplicación al control y supervisión de procesos de depuración de aguas residuales.
CONGRESS:	XV Simposio CEA de Ingeniería de Control
LOCATION/YEAR:	Salamanca, February 2017
TYPE OF PARTICIPATION:	Contributed paper

AUTHORS:	P. Vallejo LLamas, P. Vega,
TITLE:	Control predictivo fuzzy con aplicación a procesos de fangos activados
CONGRESS:	XXXVIII Jornadas de Automática.
LOCATION/YEAR:	Gijón, 2017
TYPE OF PARTICIPATION:	Poster

AUTHORS:	L. Fargallo, S. Revollar, M. Francisco, P. Vega, A. Cembellín
TITLE:	Control predictivo distribuido utilizando modelos difusos para la negociación entre agentes.
CONGRESO:	XXXVIII Jornadas de Automática.
LOCATION/YEAR:	Gijón, 2017

AUTHORS:	S. Revollar, P. Vega, M. Francisco, R. Lammana, R. García
TITLE:	Optimización dinámica de plantas depuradoras usando técnicas de control predictivo económico
CONGRESO:	XXXIX Jornadas de Automática.
LOCATION/YEAR:	Badajoz, 2018
TYPE OF PARTICIPATION:	paper

AUTHORS:	A. Cembellín, M. Francisco, P. Vega
TITLE:	Centralized and distributed model-based Predictive Control applied to a sewer network
CONGRESO:	XXXX Jornadas de Automática.
LOCATION/YEAR:	Ferrol, 2019
TYPE OF PARTICIPATION:	paper

SUPERVISED PHD THESES

TITLE: Técnicas robustas de detección y diagnóstico de fallos basadas en modelos
AUTHOR: M^a Jesús de la Fuente Aparicio
BODY: University of Valladolid April, 1994
GRADE: Passed Cum Laude

TITLE: Modelizacion Bond-Graph y Control Robusto de Estructuras Robóticas Flexibles Experimentales
AUTHOR: Joseba Landaluze
BODY: University of Valladolid July 1995
GRADE: Passed Cum Laude

TITLE: Técnicas de Control Robusto basadas en optimización l1 y l1
AUTHOR: Fernando Tadeo
BODY: University of Valladolid July 1996
GRADE: Passed Cum Laude

TITLE: Identificación y Control Predictivo basado en modelos mediante red neuronal en el espacio de estados
AUTHOR: Jesús M Zamarreño Cosme
BODY: University of Valladolid September, 1996
GRADE: Passed Cum Laude

TITLE: Diseño integrado y síntesis de procesos de lodos activados
AUTHOR: Gloria Gutiérrez
BODY: University of Valladolid February 2000
GRADE: Passed Cum Laude

TITLE: Modelado y control neuroborroso de sistemas complejos. Aplicación A procesos de mecanizado de alto rendimiento
AUTHOR: Agustín Gajate
DIRECTORS: Rodolfo Haber, Pastora Vega
BODY: University of Salamanca June 2010
GRADE: Passed Cum Laude

TITLE: Algoritmos genéticos para el diseño integrado de procesos químicos
AUTHOR: Silvana Revollar
DIRECTORS: Rosalba Lammana, Pastora Vega
BODY: University Simón Bolívar, 2011
GRADE: Passed

TITLE: Diseño simultáneo de procesos y control predictivo basados en normas y técnicas de control predictivo
AUTHOR: Mario Francisco Sutil
BODY: University of Salamanca, October 2011
GRADE: Passed Cum Laude

TITLE: Advanced control techniques based on positive invariance theory and economic predictive control. Application to a wastewater treatment plant
AUTHOR: Hicham E. Bajha
BODY: University of Salamanca, September 2017
GRADE: Passed Cum Laude

Scientific societies

- IFAC Member (International Federation of Automatic Control)
 - Member of the IFAC Working Group on Adaptive Control and Signal Processing
 - Member of CEA (Comité Español de Automática)
-

Research lines

- AI techniques for process supervision, control and optimization
 - Model-based Predictive Control
 - Integrated process design
 - Advanced control of complex water purification systems and distribution networks
 - Optimization of process operation
 - Hierarchical Control
 - Collaborative control
 - Distributed Predictive Control based on multi-agent systems
-