Fecha del CVA	14/05/2016

Parte A. DATOS PERSONALES

Nombre y apellidos	José Rodellar Benedé		
DNI/NIE/pasaporte	38.405.126-W	Edad	62 años
Núm. identificación del investigador	Researcher ID	I-8693-2014	
	Código Orcid	http://orcid.org/0000-0002-1514-7713	

A.1. Situación profesional actual

Organismo	Universitat Politècnica de Catalunya		
Dpto./Centro	Departamento de Matemáticas		
Dirección	Escuela de Ingeniería de Barcelona Este, Barcelona		
Teléfono	934137372	correo electrónico	Jose.rodellar@upc.edu
Categoría profesional	Catedrático de Universidad	Fecha inicio	Julio 1993
Espec. cód. UNESCO	120702, 331102		
Palabras clave	Teoría de control y aplicaciones, identificación de anomalías, reconocimiento automático de imágenes de microscopía de células sanguíneas.		

A.2. Formación académica *(título, institución, fecha)*

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciado en Física	Universitat de Barcelona	1976
Doctor en Física	Universitat de Barcelona	1982

A.3. Indicadores generales de calidad de la producción científica

- Número de sexenios: 5. El último concedido el día 9 de Junio de 2014.
- Número de Tesis Doctorales dirigidas en los últimos 10 años: 12.
- Indicadores Web of Science: Citas totales=1547; promedio de citas/año durante los últimos 5 años (sin incluir el año actual)=157.2; publicaciones totales en primer cuartil (Q1)=62; índice h=23.
- Google Scholar: Citas totales=3612; h=30; i10=84; 2007/ 20 / 51 desde 2011.

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

José Rodellar es Licenciado en Física (1976) y Doctor en Física (1982) en la Universidad de Barcelona (UB). Su carrera académica empezó en 1976, como profesor ayudante en la Cátedra de Física de la Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos de la Universidad Politécnica de Catalunya (UPC). Se inició en la investigación en la Facultad de Física de la UB, con una Tesina en biofísica de poblaciones bacterianas en 1978. Para el doctorado, decidió orientar su investigación hacia una línea próxima a la ingeniería para adaptarse al contexto de una universidad tecnológica como la UPC. Se introdujo así en la teoría del control automático, realizando la Tesis Doctoral en 1982.

En 1985 obtuvo plaza de Profesor Titular de Física Aplicada en la Escuela de Ingenieros de Caminos, iniciando una línea de investigación propia en teoría de control y aplicaciones, preferentemente en la ingeniería civil, donde los sistemas de control se veían entonces como algo novedoso y prometedor. Desde Agosto de 1989 hasta final de 1990 fue Fulbright Scholar en el Department of Mechanical Engineering, University of Californa-Berkeley, compaginándolo con estancias como Profesor Visitante en el Department of Civil Engineering, State University of New York en Buffalo.

En 1990 se une al recién creado Departamento de Matemática Aplicada III de la UPC, interesado éste en incorporar la línea de control de sistemas, donde obtiene plaza de del grupo de investigación Control, Dinámica y Aplicaciones (CoDAlab) en 2002. Desde 2005 el grupo ha estado reconocido y financiado ininterrupidamente por la Generalitat de Catalunya

en sucesivas convocatorias competitivas. Cuenta con 12 profesores/investigadores desarrollando líneas de investigación en teoría de control, modelización, identificación y detección de anomalías y aplicaciones en áreas como el control (activo, semiactivo y pasivo) de vibraciones en estructuras, monitorización de la salud estructural, estructuras inteligentes, gestión de recursos hídricos, sistemas aerogeneradores y reconocimiento automático de imágenes biomédicas.

J. Rodellar ha alcanzado reconocimiento internacional, publicando extensamente en estas áreas (182 referencias en JCR), incluyendo tres libros y tres patentes. Ha sido investigador principal de 26 proyectos competitivos desde 1989, sumando unos 1.5 millones de euros de financiación. Tiene gran experiencia en trabajar con jóvenes investigadores: ha dirigido 25 tesis doctorales (4 en curso) y ha supervisado una decena de post-docs y visitantes, algunos en el marco de programas como Ramón y Cajal, Juan de la Cierva y otros.

Los intereses de José Rodellar a medio plazo son dobles. Por un lado, continuar con la dirección del grupo CoDAlab, coordinando a nivel general las diferentes líneas de investigación y promoviendo la captación de recursos y la incorporación de personas. Por otro lado, a un nivel más personal, potenciar la línea de investigación en tratamiento y clasificación de imágenes de células sanguíneas patológicas, iniciada hace cinco años y en la que acaba de graduarse un doctor y existen tres tesis doctorales en curso y se han publicado resultados muy prometedores. La filosofía de trabajo en esta línea es similar a la que ha inspirado toda la trayectoria de José Rodellar: una combinación de rigor teórico/matemático, intuición física y una voluntad de resolver problemas de aplicación práctica colaborando con expertos del campo de aplicación.

Parte C. MÉRITOS MÁS RELEVANTES *(ordenados por tipología)*

C.1. Publicaciones

Trabajos recientes en clasificación automática de imágenes digitales de células sanguíneas

- S. Alférez, A. Merino, L.E. Mújica, M. Ruiz, L. Bigorra, J. Rodellar. Automatic classification of atypical lymphoid B cells using digital blood image processing, *International Journal of Laboratory Hematology*, Vol. 36(4), 472-80, 2014.
- S. Alférez, A. Merino, L. Bigorra, L.E. Mújica, M. Ruiz, J. Rodellar. Automatic recognition of atypical lymphoid cells from peripherical blood by digital image analysis, *American Journal of Clinical Pathology,* Vol. 143: 168-176, 2015.
- S. Alférez, A. Merino, L. Bigorra, J. Rodellar. Characterization and automatic screening of reactive and abnormal neoplastic B lymphoid cells from peripheral blood. *International Journal of Laboratory Hematology,* Vol. 38, pp. 209-219, 2016.

Trabajos recientes en identificación y clasificación de daños en estructuras

Se desarrollan y validan técnicas de reconocimiento de patrones. Son la base de las metodologías introducidas posteriormente en la clasificación de imágenes celulares.

- L.E. Mújica, J. Rodellar, A. Fernández, A. Güemes. Q-statistic and T-2-statistic PCA-based measures for damage assessment in structures, *Structural Health Monitoring-an International Journal*, Vol. 10(5), 539-553, 2011. 18 citas.
- D. Tibaduiza, M.A. Torres-Arredondo, L.E. Mújica, J. Rodellar, C.P. Fritzen. A study of two unsupervised data driven statistical methodologies for detecting and classifying damages in structural health monitoring, *Mechanical Systems and Signal Processing*, Vol. 41(1-2), 467-484, 2013. 5 citas.
- L.E Mújica, M. Ruiz, F. Pozo, J. Rodellar, A. Güemes. A structural damage detection indicator based on principal component analysis and statistical hypothesis testing, *Smart Materials and Structures*, Vol. 23(2), páginas no asignadas todavía, 2014. 3 citas.

- M.A. Torres-Arredondo, D. Tibaduiza, L.E. Mújica, J. Rodellar, C.P. Fritzen. Data-driven multivariate algorithms for damage detection and identification: Evaluation and comparison, *Structural Health Monitoring-an International Journal,* Vol.13(1), 19-32, 2014.
- F. Gharibnezhad, L. Mujica, J. Rodellar. Applying robust variant of Principal Component Analysis as a damage detector in the presence of outliers. *Mechanical Systems and Signal Processing*, Vol. 50-51, pp. 467-479, 2015.

Trabajos en modelización y control de sistemas con histéresis

- M. ismail, F. Ikhouane, J. Rodellar. The hysteresis Bouc-Wen model, a survey, *Archives of Computational Methods in Engineering*, Vol. 16(2), 161-188, 2009. 84 citas.
- F. Ikhouane, V. Mañosa, J. Rodellar. Adaptive control of a hysteretic structural system, *Automatica*, Vol. 41(2), 225-231, 2005. 55 citas.
- F. Ikhouane, V. Mañosa, J. Rodellar. Dynamic properties of the hysteretic Bouc-Wen model, *Systems and Control Letters*, Vol. 56(3), 197-205, 2007. 57 citas.
- F. Ikhouane, J. Rodellar. A linear controller for hysteretic systems, *IEEE Transactions Automatic Control*, Vol. 51(2), 340-344, 2006. 31 citas.

C.2. Proyectos

Título: Caracterización y clasificación morfológica de células leucémicas mediante procesamiento digital de imágenes y reconocimiento de patrones para el soporte al diagnóstico. Enero 2016 – Diciembre 2018.
Entidad financiadora: MINECO - DPI2015-64493-R.
Proyecto en colaboración con el Hospital Clinic de Barcelona. Cuantía: 91.600 €
Tipo de participación: Investigador Principal.

Título: Estructuras inteligentes, sistemas de monitorización e identificación de daños con aplicaciones en aeronáutica y en plantas eólicas marinas. Enero 2012 – Diciembre 2015.
Entidad financiadora: MINECO - DPI2011-28033-C03-01.
Proyecto Coordinado con la UPM y el Centro Tecnológico IKERLAN. Cuantía: 84.700 €
Tipo de participación: Investigador Principal de Subproyecto y Coordinador del Proyecto.

Título: Aislamiento Sísmico. Desarrollo y Validación de Prototipos Experimentales y Posibilidades de Mercado. Enero 2010 - Octubre 2012.
Entidad financiadora: Generalitat de Catalunya. Programa Accio10 de Competitividad para la Empresa. Valorización Tecnológica. VALTEC 09 – 2 – 0022. Cuantía: 83.880 €
Tipo de participación: Investigador principal.

Título: Estructuras aeronáuticas inteligentes: desarrollo y validación de técnicas de detección de defectos basadas en reconocimiento de patrones. Enero 2009 - Diciembre 2011.
Entidad financiadora: Ministerio de Ciencia e Innovación - DPI2008-06564-C02-02.
Proyecto Coordinado con UPM. Coordinador Proyecto: Alfredo Güemes. Cuantía: 144.474 €
Tipo de participación: Investigador principal.

Título: Control de fuerza de alta precisión para soldaduras bajo la influencia de la fricción.
Entidad financiadora: Ministerio de Ciencia e Innovación – PROFIT CIT-02000-2008-40.
Enero 2008 - Diciembre 2009. Cuantía: 68.765 €. Investigador principal: Fayçal Ikhouane.
Tipo de participación: Investigador.

Título: Análisis, identificación y control de sistemas mecatrónicos con histéresis y/o fricción. Aplicación a actuadores piezoeléctricos y magnetoreológicos. Dic 2005 - Dic 2008.
Entidad financiadora: Ministerio de Ciencia e Innovación - DPI2005-08668-C03-01.
Proyecto coordinado con Universitat de Girona y Centro CITCEA-UPC. Cuantía 77.350 €
Tipo de participación: Investigador Principal de Subproyecto y Coordinador del Proyecto.

Título: Smart structural diagnostics using piezo-generated elastic waves.
Febrero 2002 - Enero 2005.
Entidad financiadora: Unión Europea (Programa Growth). Cuantía: 177.935 €
Proyecto con 7 grupos europeos. Tipo de participación: Coordinador de equipo UPC/CIMNE.

C.3. Contratos

C.4. Patentes

Inventores (p.o. de firma): M. Ismail, J. Rodellar, F. Ikhouane
Título: Sistema de aislamiento sísmico de un objeto soportado.
N. de solicitud: P200802043. País de prioridad: España. Fecha de prioridad: 03/07/2008
Entidad titular: Universidad Politécnica de Cataluña
Empresa/s que la están explotando: -

Inventores (p.o. de firma): M. Ismail, J. Rodellar
Título: Un dispositivo mecánico para la plataforma Stewart.
N. de solicitud: P201331348. País de prioridad: España . Fecha de prioridad: 17/09/2013
Entidad titular: Universidad Politécnica de Cataluña
Empresa/s que la están explotando: -

Inventores (p.o. de firma): S. Alférez, A. Merino, J. Rodellar, L. Mujica, M. Ruiz
Título: Método implementado por ordenador para reconocimiento y clasificación de células sanguíneas anormales y programas informáticos para llevar a cabo el método.
N. de solicitud: P201331348. País de prioridad: España. Fecha de prioridad: 9 Mayo 2013
Entidad titular: Universidad Politécnica de Cataluña y Hospital Clinic de Barcelona
Empresa/s que la están explotando: -

C.5 Dirección de trabajos

- Dirección de 20 Tesis Doctorales leídas y de 4 Tesis Doctorales en curso.
- Dirección de 20 Tesinas de final de carrera.

C.6 Comités Internacionales

- IEEE: Senior Member (desde 2008).
- International Association for Control of Structures: Miembro del Board of Directors (2004-2011) y Presidente (desde Diciembre de 2012 hasta ahora).
- Comité Ejecutivo del Programa “Innovative Control Technologies for Vibration Sensitive Civil Engineering Structures (CONVIB)”. European Science Foundation. Representante español (desde Enero 2001 hasta Junio 2005).
- Presidente del Comité Conjunto de IEEE (España) Control Systems Society and Industrial Applications Society (desde 2015).

C.7 Comités Editoriales

- Journal of Structural Control and Monitoring: Miembro del Editorial Board (desde 2003 hasta ahora).
- Journal of Vibration and Control: Associate Editor (desde Marzo de 2014 hasta ahora).
- Revisor habitual de una quincena de revistas y miembro habitual del Comité Científico de diversos congresos.

C.8 Tareas de evaluación

- Vocal de la Comisión de Ingeniería y Arquitectura. Programa Verifica-Doctorado. ANECA. Desde Marzo de 2012 hasta Marzo de 2016.

C.9 Responsabilidades de gestión

- Subdirector de Planificación y Servicios y Director del Centro de Cálculo de la Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos de Barcelona (Junio 1994 hasta Noviembre 1997).
- Director del Departamento de Matemática Aplicada III (Febrero 2007 hasta Marzo 2013).

C.10 Organización de eventos científicos

- Chairman del 6th World Conference on Structural Control and Monitoring, Barcelona, 15-17 de Julio de 2014. 360 participantes.
- Co-organizador (con F. Casciati) del Symposium Active, Semiactive and Passive Vibration Control, parte del 8th International Conference on Structural Dynamics (Eurodyn 2011), Leuven, 4-6 de Julio de 2011. 80 participantes.
- Organizador y profesor del Advanced Course on Structural Health Monitoring. Barcelona, 1-4 de Diciembre de 2009. 9 profesores y 40 alumnos.
- Organizador del 15th International Workshop on Dynamics and Control. Tossa (Barcelona), 31 de Mayo – 3 de Junio de 2009. 30 investigadores.

CoDAlab
Control, Dynamics and Applications
Matemàtica Aplicada III - Universitat Politècnica de Catalunya

PRESENTATION
RESEARCH LINES
GROUP MEMBERS
PROJECTS
PUBLICATIONS
Books
Journals
Conferences
RELATED GROUPS
LABORATORY
POSITIONS AND GRANTS
SEMINARS

News

May 5, 2015

Santiago Alférez is winner of the Young Investigator Award (2015) from the International Society of Laboratory Hematology

The recognition is for the work "Method for automatic recognition of neoplastic lymphoid cells using peripheral blood cell images".

March 27, 2015

Our colleague Victor Mañosa and co-workers are winners of the 2014 Best Paper Prize of the Journal Difference

Contact: José Rodellar
email: jose.rodellar@upc.es
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Campus Nord-UPC
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José Rodellar

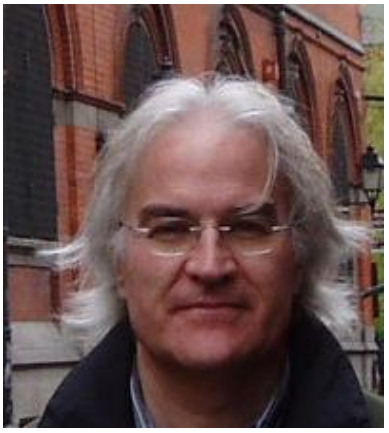
CONTACT INFORMATION

Grup de Dinàmica, Control i Aplicacions (CoDAlab)
Departament de Matemàtiques

Universitat Politècnica de Catalunya
Escola d'Enginyeria de Barcelona Est

Barcelona, Spain
Phone: + 34 93 4317313

e-mail: jose.rodellar@upc.edu



CURRENT POSITION

Professor (Catedrático de Universidad)

EDUCATION

Degree in Physics, Universitat de Barcelona (1976)
Dr. in Physics, Universitat de Barcelona (1982)

RESEARCH INTERESTS

System modelling, Control theory,
Blood cell image analysis and characterization,
Predictive control,

Smart structures and structural control,
Control of open channel flow.

RECENT PUBLICATIONS

Books

J.M. Martín Sánchez, J. Rodellar. *ADEX Optimized Adaptive Controllers and Systems. From Research to Industrial Practice*, Springer, Advances in Industrial Control Series, 2015. ISBN 978-3-319-09793-0.

Click here for more INFO

J. Rodellar. Imágenes y reconocimiento de patrones para el diagnóstico hematológico. In: *Panorama de Investigación en Ingeniería Biomédica* 2015 (C.O.S. Sorzano, editor). ISBN 978-1-326-41806-9.

http://biocomp.cnb.csic.es/~coss/Articulos/Sorzano2015e.pdf

http://www.lulu.com/commerce/index.php?fBuyContent=16280631

F. Pozo, M. Zapateiro, J. Rodellar, P. Balsa (eds). Proceedings of the IV Seminar for Advanced Industrial Control Applications. *Departament de Matemàtica Aplicada III, Universitat Politècnica de Catalunya*, 2011. (ISBN 978-84-7653-762-6)

F. Pozo, J. Rodellar, L. Acho. Vibration control of structures based on acceleration measurements in: Advances in Mechanics: Dynamics and Control. *Nauka*, 2008. (ISBN 978-5-02-036667-1)

F. Ikhouane, J. Rodellar. Systems with hysteresis: Analysis, identification and control using the Bouc-Wen model. *John Wiley & Sons, 2007.*

Click here for more INFO.

J. M. Martín Sánchez, J. Rodellar, *Control Adaptativo Predictivo Experto. Metodología, Diseño y Aplicación,* Universidad Nacional de Educación a Distancia - UNED, Madrid, 2005.

J. Rodellar, A.H. Barbat, F. Casciati (editors), *Advances in Structural Control*, Centro Internacional de Métodos Numéricos en Ingeniería, Barcelona, 2000.

J. Holnicki, J. Rodellar (editors), Smart Structures, Kluwer Publishing, 1999.

J. M. Martín Sánchez, J. Rodellar, *Adaptive Predictive Control. From the Concepts to Plant Optimization*, Prentice Hall, 1995.

Journals

D.A. Tibaduiza, L.E. Mujica, J. Rodellar, A. Güemes. Structural damage detection using principal component analysis and damage indices, *Journal of Intelligent Materials, Systems and Structures*, Vol. 27(2), pp. 233-248, 2016, DOI: 10.1177/1045389X14566520.

S. Alférez, A. Merino, L. Bigorra, J. Rodellar. Characterization and automatic screening of reactive and abnormal neoplastic B lymphoid cells from peripheral blood. *International Journal of Laboratory Hematology,* to appear.

M. Torres-Arredondo, J. Sierra, D. Tibaduiza, M. McGugan, J. Rodellar, C.P. Fritzen. Signal based nonlinear modelling for damage assessment under variable temperatura conditions by meabs of acousto-ultrasonics. *Structural Control and Health Monitoring*, 2015. DOI: 10.1002/stc.1735.

M. Ismail, J. Rodellar, F. Pozo. Passive and hybrid mitigation of potential near-fault inner pounding of a self-braking seismic isolator, *Soil Dynamics and Earthquake Engineering*, Vol. 69, pp. 233-250, 2015.

S. Alférez, A. Merino, L.E. Mujica, M. Ruiz, L. Bigorra, J. Rodellar. Automatic recognition of atypical lymphoid cells from peripheral blood by digital image analysis, *American Journal of Clinical Pathology*, Vol. 143(2), pp. 168-176, 2015, doi:10.1309/AJCP78IFSTOGZZJN.

F. Gharibnezhad, L. Mujica, J. Rodellar. Applying robust variant of Principal Component Analysis as a damage detector in the presence of outliers. *Mechanical Systems and Signal Processing*, Vol. 50-51, pp. 467-479, 2015.

J. Soler, P. Gamazo, J. Rodellar, M. Gómez. Operation of irrigation canal by means of the passive canal control. *Irrigation Science*, DOI: 10.1007/s00271-014-0450-4, 2015.

K. Horvath, E. Galvis, M. Gómez, J. Rodellar. Is it better to use gate opening as control variable than discharge to control irrigation canals? *Journal of Irrigation and Drainage Engineering ASCE*, Vol. 141(3), 04014054, 2015. DOI: 10.1061/(ASCE)IR.1943-4774.0000798

Y. Vidal, C. Tutivén, J. Rodellar, L. Acho. Fault diagnosis and fault tolerant control of wind turbines via a discrete time controller with disturbance compensator. *Energies*, Vol. 8(5), pp. 4300-4316, 2015. URL: http://www.mdpi.com/1996-1073/8/5/4300.

K. Horvath, E. Galvis, M. Gómez, J. Rodellar. New offset-free method for model predictive control of open channels, *Control Engineering Practice*, Vol. 41, pp. 13-25, 2015. doi:10.1016/j.conengprac.2015.04.002.

G. De Mari, M. Domaneschi, M. Ismail, L. Martinelli, J. Rodellar. Reduced-order coupled bidirectional modeling of the Roll-N-Cage isolator with application to the updated bridge benchmark, *Acta Mechanica,* Vol. 226, pp.3533–3553 (2015). DOI 10.1007/s00707-015-1394-3.

K. Horvath, E. Galvis, J. Rodellar, M. Gómez. Experimental comparison of canal models

for control purposes using simulation and laboratory experiments, *Journal of Hydroinformatics*, Vol. 16(6), pp. 1390-1408, 2014.

M. Ismail, J. Rodellar, F. Pozo. An isolation device for near-fault ground motions, *Journal of Structural Control and Health Monitoring*, Vol. 21(3), pp. 249-268, 2014.

L.E. Mujica, M. Ruiz, F. Pozo, J. Rodellar, A. Güemes. A structural damage detection indicator based on principal component analysis and statistical hypothesis testing, *Smart Materials and Structures,* Vol. 23, no. 2, doi:10.1088/0964-1726/23/2/025014, 2013.

M. Anaya, D.A. Tibaduiza, M. Torres, F. Pozo, M. Ruiz, L.E. Mujica, J. Rodellar, C. Fritzen. Data-driven methodology to detect and classify structural changes under temperature variations, *Smart Materials and Structures,* vol. 23(4), doi: 10.1088/0964-1726/23/4/045006, 2014.

B. Basu, O.S. Bursi, F. Casciati, S. Casciati, A.E. Del Grosso, M. Domaneschi, L. Faravelli, J. Holnicki, H. Irschik, M. Krommer, M. Lepidi, A. Martelli, B. Ozturk, F. Pozo, G. Pujol, Z. Rakicevic, J. Rodellar. An EACS joint perspective. Recent studies in civil structural control across Europe, *Structural Control and Health Monitoring,* vol. 21(12), pp. 1414-1436, 2014.

S. Alférez, A. Merino, L.E. Mujica, M. Ruiz, L. Bigorra, J. Rodellar. Automatic classification of atypical lymphoid B cells using digtial blood image processing. *International Journal of Laboratory Hematology*, Vol. 36(4), pp. 472-480, 2014, DOI: 10.1111/ijlh.12175.

J. Soler, J. Rodellar, M. Gómez. A feedforward control algorithm for irrigation canals based on sequential quadratic programming, *Journal of Drainage and Irrigation Engineering*. Vol. 139(1), pp. 41-54, 2013. Doi: 10.1061/(ASCE)IR.1943-4774.0000507.

J.M. Rossell, J. Rodellar, F. Palacios, J. Rubió. A mathematical framework for structural control integration, *Advances in Science and Technology*, Vol. 83, pp. 49-58, 2013. Doi:10.4028.

M. Ismail, J. Rodellar, G. Carusone, M. Domaneschi, L. Martinelli. Characterization, modeling and assessment of roll-n-cage isolator using the cable-stayed bridge benchmark, *Acta Mechanica,* Vol. 224, pp. 525–547, 2013.

L. Bigorra, S. Alférez, A. Merino, M. Ruiz, L. Mujica, J. Rodellar. Blast cell detection and lineage classification using mathematical morphology and fuzzy clustering on digital blood image analysis, *International Journal of Laboratory Hematology*, Vol. 35, pp. 100-101.

S. Alférez, A. Merino, L. Bigorra, M. Ruiz, L. Mujica, J. Rodellar. Atypical lymphoid cells detection and classification on digital blood image analysis, *International Journal of Laboratory Hematology*, Vol. 35, pp. 100-101, 2013.

J. Soler, M. Gómez, J. Rodellar, P. Gamazo. Application of the feedforward GoRoSo algorithm to compute the gate trajectories for a quick canal closing in the case of an emergency. *Journal of Irrigation and Drainage Engineering, ASCE*, Vol. 139, pp. 1028-1036, DOI: 10.1061/(ASCE)IR.1943-4774.0000640.

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M. A. Torres-Arredondo, D. Tibaduiza, M. McGugan, H. Toftegaar, K.K. Borum, L.E. Mujica, J. Rodellar, C.P. Fritzen. Multivariate data-driven modelling and pattern recognition for damage detection and identification for acoustic emission and acousto-ultrasonics. *Smart Materials and Structures*, Vol. 22, doi:10.1088/0964-1726/22/10/105023. 2013.

A. Rodríguez, F. Pozo, A. Bahar, L. Acho, Y. Vidal, J. Rodellar. Force-derivative feedback semi-active control of base-isolated buildings using large-scale MR fluid dampers, *Structural Control and Health Monitoring,* Vol. 19(1), pp. 120-145, 2012. Doi: 10.1002/stc.430.

N. Aguirre, F. Ikhouane, J. Rodellar, R. Christenson. Parametric identification of the Dahl model for large scale MR dampers, *Journal of Structural Control and Health Monitoring,* Vol. 19, pp. 332-347, 2012.

M. Ismail, J. Rodellar, F. Ikhouane. Seismic protection of low-to moderate-mass buildings using RNC isolator, *Structural Control and Health Monitoring*, Vol. 19, pp. 22-42, 2012.

F. Pozo, J. Rodellar, M. Ismail. Discrete-time adaptive control of nonlinear base isolated structures, *International Journal of Innovative Computing, Information and Control,* Vol. 8(9), pp. 6357-6370, 2012.

F. Casciati, J. Rodellar, U. Yildirim. Active and semi-active control of structures–theory and applications: A review of recent advances, *Journal of Intelligent Material Systems and Structures,* Vol. 23, pp. 1181-1195, 2012.

J.M. Martín-Sánchez, J.M. Lemos, J. Rodellar. Survey of industrial optimized adaptive control, *International Journal of Adaptive Control and Signal Processing*, Vol. 26, pp- 881-918, 2012.

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