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Jean-Pierre RICHARD

Full Professor at the Ecole Centrale de Lille – France
CS 20048 – 59651 Villeneuve d'Ascq Cedex, France
Assistant (INRIA) +33 3 59 57 79 45
Assistant (EC Lille) +33 3 20 33 54 01
E-mail: jean-pierre.richard@ec-lille.fr
Website: <http://researchers.lille.inria.fr/~jrichard>

Biography

Jean-Pierre Richard was born in Montpellier (France) in 1956. He is successively Dipl. Eng. (IDN, French "Grande Ecole") and M.Sc. (DEA) in Electronics in 1979, Ph.D. in Automatic Control in 1981, D.Sc. in Physical Sciences in 1984 (University of Lille). After starting his research and teaching activities in 1979, he joins in 1981 the Ecole Centrale de Lille as an Assistant Professor and moves up to Professor in 1989. He is presently a Professor "Classe Exceptionnelle 2" (which is the highest degree in the French University) at the Ecole Centrale de Lille (French "Grande Ecole"). Since 1993 he is awarded the French "prime d'excellence scientifique" (national competition every 4 year).

Elected as a Member of the Russian Academy of Nonlinear Sciences (1996), Senior Member IEEE (1998) and Senior Member of the SEE (2003), member of the IFAC Technical Committees *Linear Systems* (1998-present) and *Networked Systems* (2005-present), he was awarded the "Automatica best survey paper prize" for the period 2002-2005 (due to a survey paper on time delay systems). The same paper got a Thomson Award: "Highly cited article" and is Top 1 of the *Automatica Top 25 Hottest papers* (Science Direct) since July 2009. Three other "Highly cited article" awards follow for papers from 1999 to 2004. In 2005, he was awarded the French "Palme Académiques" (national decoration for academic excellence).

He served as a chairman of 4 international IEEE or IFAC conferences, participated in 44 IEEE/IFAC IPCs (including 8 as associate editor) and was awarded an IEEE SMC Outstanding Award 2005 for the organisation of the international conference CIFA2004, Tunisia (IEEE-CNRS). From 2000 to 2012 he belongs to the editorial board of the *Int. J. of Systems Science* (Taylor & Francis). He is a referee for control journals and conferences. He was invited as a plenary speaker in 3 international conferences (IEEE in 1998 and 2015, and IFAC in 2000) and as a lecturer in various International Schools and Institutes. He serves as an expert for the several French agencies (Ministry of Higher Education and Research, CNRS, National Agency for Research, evaluation agency AERES...), as well as for several international institutions (Belgium, Israel, Mexico, Sweden, Tunisia, USA).

Research

Since 2011, Jean-Pierre Richard is leading the project-team *NON-A* "Non-Asymptotic estimation for on-line systems" <http://www.inria.fr/en/teams/non-a> at the INRIA Research Center in Lille (INRIA is the French Institute for Research in Computers Appl. Math. and Control Sciences). Since 2015, he also in charge of the group CO2 (control and scientific computing) of the CNRS lab CRIStAL <http://cristal.univ-lille.fr/> Until 2010, he has headed the team SyNeR (French acronym for "Systems with Nonlinear and Retarded effects") of the LAGIS CNRS (Laboratory of Automatic control, Information & Signal, UMR 8219) and was the permanent head of the INRIA project-team ALIEN (Algebra for digital Identification and Estimation) led by Michel Fliess.

His personal research fields concern the analysis and control of complex, linear or nonlinear systems, and in particular to the linked stabilization issues. Since 1991, he is invested in the study of time delay systems (stability, control, observation, identification) and their applications to networked control systems, remote and collaborative control, robotics for transportation, aeronautics, biology... He is involved in various research programs (see the section "Collective responsibilities") and has successfully advised 28 PhD and 3 HDR (French D.Sc.) and published over 330 works, including about 110 papers in journals or collective volumes. He was the guest editor of 5 special issues devoted to Time Delay Systems and co-wrote a monograph on stability domains for nonlinear systems (CRC press) and 9 other monographs in French, aimed at mathematics and control students. For a list of his personal publications, see [here](#).

Collective Responsibilities

From 1996 to the end of 2012, Prof. Richard is the General Chairman of the GRAISyHM, <http://www.univ-valenciennes.fr/graisyhm/>, French acronym for Research Federation in Integrated Automation and Man-Machine Systems, grouping about 260 researchers from 11 Institutes of North France. This research federation is sponsored by the Region Council "Nord-Pas de Calais" since November 1996, by the French Ministry of Research on 2006-2010 and by the Ministry of Foreign Affairs for 2007-2010.

From 1999 to 2001, Jean-Pierre Richard is in charge of a network devoted to "Time-delay systems" supported by the French CNRS. From 2001 to 2003, he is heading a national program entitled "Automatic Control and Communication Networks", co-sponsored by the French Ministry of Research and the CNRS. From 2002 to 2004, he takes part to a NSF-CNRS program "Delay Systems" (2002-2004). From 2003 to 2005, he co-chairs a Multidisciplinary CNRS Thematic Network devoted to "Control Systems and Communication Networks". From 2000 to 2008, he is the general manager of a research grant on Automation, Optimization and Man-Machine Systems for Transport, sponsored by the European Community, the French Government and the Region Nord - Pas de Calais.

Since 2007, he serves as a member of the Projects Bureau of the INRIA Research Center in Lille. On January, 1st, 2015, he will be in charge of the research group CO2 (for "Control and scientific Computing") at the new CNRS Research Center in Informatics, Signal and Automatic control in Lille (CRISTAL).

He participates to several Scientific Committees (ENSEA Cergy nominated since 2009, EC Lille elected since 1994) and Recruiting Committees (EC Lille, Univ.Valenciennes, Univ.Nantes-EC Nantes, Grenoble-INP). He belongs (2001-2005, 2009-2013) to the Governing Board of the national research network "MACS" (CNRS, Modelling, Analysis and Control of dynamical Systems <http://www.univ-valenciennes.fr/GDR-MACS/>) and serves as a member of the Scientific Committee of its research group ARC (control and communication networks) since 2009. From 2005 to 2009, he has belonged to Expert Committee "Control systems" of the CNRS. He has participated to 100 PhD and DSc. committees (France, Morocco, Mexico, Sweden, Tunisia).

Concerning teaching responsibilities, since 2003 he is the Director of the Professional Training « Research » of Ecole Centrale de Lille (training for last-year students of EC Lille who are aiming at a research career). From 2000 to 2003 he heads the Doctoral Researches Training in Automatic Control, University of Lille and Ecole Centrale de Lille. He has been an invited Professor at the Hassan II University of Casablanca (Morocco), the Tulane University in New Orleans (USA), the Ecole Nationale d'Ingénieurs de Tunis (Tunisia) as well as in CICESE Ensenada (Mexico) and KTH Stockholm (Sweden).

A selection of journal papers

On time-delay systems – stability

Weighted homogeneity for time-delay systems: Finite-time and independent of delay stability"

D. EFIMOV, A. POLYAKOV, W. PERRUQUETTI, J.P. RICHARD

IEEE TAC, to appear

Implicit Lyapunov-Krasovskii Functionals for stability analysis and control design of Time Delay Systems

A. POLYAKOV, D. EFIMOV, W. PERRUQUETTI, J.P. RICHARD

IEEE TAC, to appear

Comments on finite-time stability of time-delay systems.

D. EFIMOV, A. POLYAKOV, E. FRIDMAN, W. PERRUQUETTI, J.P. RICHARD,

Automatica 2014 <http://hal.archives-ouvertes.fr/hal-00986004>

Development of homogeneity concept for time-delay systems.

D. EFIMOV, W. PERRUQUETTI, J.P. RICHARD.

SIAM J. Ctrl & Opt. 2014 <http://hal.archives-ouvertes.fr/hal-00956878>

"Stability of some linear systems with delay.

V.B. KOLMANOVSKII, J.P. RICHARD,

IEEE TAC 1999

On time-delay systems – control & estimation

Output stabilization of time-varying input delay systems using interval observation technique.

A. POLYAKOV, D. EFIMOV, W. PERRUQUETTI, J.P. RICHARD.

Automatica 2013 <http://hal.inria.fr/hal-00847565>

On observation of time-delay systems with unknown inputs.

G. ZHENG, J.P. BARBOT, D. BOUTAT, T. FLOQUET, J.P. RICHARD

IEEE TAC 2011, <http://hal.inria.fr/inria-00637164/fr/>

Robust control of systems with variable delay: A sliding mode control design via LMI.

F. GOUAISBAUT, M. DAMBRINE, J.P. RICHARD

Syst. & Ctrl. Letters 2002 <http://hal.archives-ouvertes.fr/hal-00369230>

On time-delay systems – survey

Time Delay Systems: An overview of some recent advances and open problems.

J.P. RICHARD

Automatica 2003

On sampled-data & networked control systems

A robust stability framework for time-varying sampling

C. FITER, L. HETEL, W. PERRUQUETTI, J.P. RICHARD

Automatica, 45: 56-64, 2015

A state dependent sampling for linear state feedback.

C. FITER, L. HETEL, W. PERRUQUETTI, J.P. RICHARD,

Automatica 2012 <http://hal.archives-ouvertes.fr/hal-00685345/fr/>

A switched system approach to exponential stabilization through communication network.

A. KRUSZEWSKI, W.J. JIANG, E. FRIDMAN, J.P. RICHARD, A. TOGUYENI.

IEEE TCST 2012 <http://hal.inria.fr/inria-00602327/fr/>

Discrete and intersample analysis of systems with aperiodic sampling.

L. HETEL, A. KRUSZEWSKI, W. PERRUQUETTI, J.P. RICHARD

IEEE TAC 2011, <http://hal.archives-ouvertes.fr/hal-00576366/fr/>

Delay-dependent sampled-data control based on delay estimates.

L. HETEL, J. DAAFOUZ, J.P. RICHARD, M. JUNGERS

Syst. & Ctrl. Letters 2011 <http://hal.archives-ouvertes.fr/hal-00556635/fr/>

Robust sampled-data stabilization of linear systems: An input delay approach.

E. FRIDMAN, A. SEURET, J.P. RICHARD

Automatica 2004 <http://hal.inria.fr/inria-00131031/fr/>

On algebraic estimation

Multivariate numerical differentiation.

S. RIACHY, M. MBOUP, J.P. RICHARD.

JCAM 2011 <http://hal.inria.fr/inria-00637164/fr/>

Parameters estimation of systems with delayed and structured entries.

L. BELKOURA, J.P. RICHARD, M. FLIESS,

Automatica 2009 <http://hal.inria.fr/inria-00343801/fr/>

On mechanical systems

Second order sliding mode control of underactuated mechanical systems - Parts I & II.

S. RIACHY, Y. ORLOV, T. FLOQUET, R. SANTIESTEBAN, J.P. RICHARD

IJRNL 2008 <http://hal.inria.fr/inria-00179854/fr/> <http://hal.inria.fr/inria-00179854/fr/>

Design of a pressure control system with dead band and time delay.

J. ANTHONIS, A. SEURET, J.P. RICHARD, H. RAMON

IEEE TCST 2007, <http://hal.inria.fr/inria-00131415/fr/>

Citation metrics

H-index = 32, Total cites = 5817, Max cite = 1962 (source *Google Scholar 09/06/2015*).

Erdős nb. = 4.