Raphaël M. Jungers, FNRS Associate and Associate Professor at UCLouvain.

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Avenue Georges Lemaitre 4   raphael.jungers@uclouvain.be
B-1348 Louvain-la-Neuve   http://perso.uclouvain.be/raphael.jungers/
Belgium   Birth date: May 26, 1981
                                     Married, four children

Education

Ph.D. in Mathematical Engineering   2008
Thesis: *Infinite Matrix Products.*
Université catholique de Louvain. Advisor: Vincent Blondel

Engineer in Applied Mathematics, minor in Electrical Engineering   2005
Université catholique de Louvain. Summa Cum Laude (PGD+)

Generalist Engineer (Master degree)   2004
Ecole Centrale Paris (France)

Research Experience

Research Associate at FNRS (Tenure in 2012)
Université catholique de Louvain, *ICTEAM Institute*   2010-

Visiting Professor, University of L'Aquila   July 2011

Postdoctoral fellow
Massachusetts Institute of Technology, *LIDS*   2009-2010
Université Libre de Bruxelles, *Computer Science Dpt*   2008-2009

Research Assistant
Université catholique de Louvain, *Dpt of Mathematical Engineering*   2005-2008
Massachusetts Institute of Technology, *LIDS*   Spring 2006

Teaching Experience

Theses supervision	**Master** (list available upon request)	2009-
	Ph. D. Romain Hollanders	2010-2015
	Pierre-Yves Chevalier	2012-
	Matthew Philippe	2013-
	François Gonze	2014-
	Moctar Kande	2015-
Professor	UCL, Louvain School of Engineering	2010-
	ULB, Mathematics Department	2013-
Lecturer for several doctoral schools		2009-
Teaching Assistant at UCL for various classes		2005-2008

Honors and awards, membership

Fulbright Award 2016
SIAM J. on Control and Optimization Best Paper Award 2015.
Cor Baayen award (ERCIM prize) 2012 finalist (top 5 among 28 European countries)
IBM Belgium 2009 award for the best Ph. D. thesis in computer science
BAEF Fellow 2009-2010 (Belgian American Educational Foundation)
Collège des Alumni de l'Académie Royale des Sciences, des Lettres, et des Beaux-Arts de Belgique, member 2013-
FNRS Fellow 2005-2009 and 2009-2012 (Belgian National Fund for Scientific Research)
FNRS Permanent Researcher "Chercheur Qualifié" 2012

Keynote speaker at DLT'13, Paris, 2013.

SIAM member, IEEE member, ACM member

Fundings and research networks

- **Invited prof.**   -Univ. L'Aquila: July 2011, March 2013, EECI april 2016,
                           -GSSI march 2016
- **Fundings**
    o H2020-SESAR-RIA COPTRA project: 270 000€. 2015
    o MISTI Seed fund by MIT : 15 000$. 2015.
    o ARC 'Software Defined Networks' 1 100 000€ (Walloon region, with 3 other faculty). 2013-
    o Exceptional University Grants 50 000€, 100 000€ (UCLouvain). 2013
    o PAI 'Dynamical Systems, Control, Optimization' 900 000€ (Belgian State, with 9 other faculty). 2012
    o 'Research for Cooperation' funding 900 000€ (French Community of Belgium, with 6 other faculty, cooperation with UCAD Senegal). 2012-

Editorial activities

Associate Editor	Journal of Discrete Mathematics	2013-15
	Conference Editorial Board, IEEE Control Systems Soc.	2014-16
	Nonlinear Analysis: Hybrid Systems	2015-
	IEEE Transactions on Automatic Control	2015-
	Systems and Control Letters	2016-

Member of the Program Committee
MONS days 2014, ADHS 2015, RP2015, NECSYS 2015, Benelux meeting 2016.
Guest Editor for RAIRO ITA, special issue on the Mons Days 2012
Regular reviewer
For several top level journals, such as Adv. Math., Math. Proc. Cambridge, Math. Reviews, IEEE TAC, IEEE CONES, IEEE CSM, Automatica, SIMAX, SICON, J. Found. Comp. Math., SCL, LAA, TCS, Comput. Appl. Math., DMTCS, MCSS, NAHS, Algorithmica, Fund. inf., …
and conferences, among which CDC, ECC, SODA, MTNS, IFAC WC, Algotel, DLT, EuroCG, SOFSEM, WORDS…

Research visits

- University of l'Aquila, (l'Aquila, Italy, 1 month in 2016)
- Oberwolfach Research Institute for Mathematics (Germany, 1 week, 2016)
- Cambridge University (UK, <1 week, 2015)
- Princeton, US (1 week, 2015)
- Shangai Jiao tong, CH (1 week, 2015)
- TU/e, NL (<1 week, 2014)
- UCLA, US (<1 week, 2014)
- Berkeley, US (<1 week, 2014)
- Georgia Tech, US (<1 week, 2014)
- Lund University, Sweden (<1 week, 2013)
- University of l'Aquila, (l'Aquila, Italy, 1 month in 2013)
- CRAN, France (<1 week, 2013)
- MIT, US (<1 week, 2013)
- UPenn, US (<1 week, 2013)
- UIUC, US (<1 week, 2013)
- IBM Watson, US (<1 week, 2013)
- LAAS, France (<1 week, 2012)
- LIAFA-Paris 7, France (<1 week, 2012)
- T. U. Berlin, Germany (<1 week, 2012)
- Paris 11-Supelec, France (<1 week, 2012)
- University of l'Aquila, (l'Aquila, Italy, 1 month in 2011)
- University of Silesia, (Katowice, Poland, 1 week in 2011)
- University of l'Aquila, (l'Aquila, Italy, 2 weeks in 2010)
- Postdoc at LIDS, MIT, (1 year, 2009-2010)
- Postdoc at Computer Science Department, ULB, (Belgium, 1 year, 2008-2009)
- « Réunion du GDR-IM », Paris, Chevaleret (Paris, France, 1 week, 2007)

Organization of scientific events

- **Chair** of the Mons Days of Theoretical Computer Science 2012 (international conference with +/- 70 participants), Louvain-la-Neuve
- **Organizing committee** DLT2017 conference (Liège, 2017), special sessions at SIAMLA 2012, ECC 2016.

Consulting activities

Different missions in the broad field of Complex Systems control, Big Data analytics, and Optimization. Contact me for more information.

Expert reviewer for H2020 (MSCA)

Languages

French, English: Fluent
Dutch, Spanish: Intermediate

Interests and activities (past and present)

Several associative activities, travel, History, sports (tennis, squash, football, sailing, triathlon (I finished the Ironman-Nice in 11h51))

Services
To the university
Dept. of Mathematical Engineering, Vice-Chair.   2015-
Member of the Committee for the Doctoral Degree in Engineering   2014-
Secretary of the jury for the diploma in mathematical engineering   2013-
Others: ICTEAM representative at the CSSE, Member of the Ph.D. equivalence committee,

Ph.D. committee member
-Chia-Tche Chang, UCLouvain, 2012, Member
-Victor Oncklinckx, UCLouvain, 2014, President
-Arnaud Browet, UCLouvain, 2014, President
-Caroline Ego, UCLouvain, 2015, President
-Adeline Decuyper, UCLouvain, 2015, President
-Pierre Deville, UCLouvain, 2015, President
-Thibaut Giard, UCLouvain, 2015, President
-Said Naciri, U. Rouen (France), 2015, Rapporteur
-Arnaud Latiers, UCLouvain, 2016, President
-Lucien Etienne, Univ. l'Aquila, 2016, Member.

Talks and invited seminars[1]

Apr 2006 *	Graphs and joint spectral radius	**MIT**, Cambridge (MA-USA)
July 2006	Efficient algorithms for deciding the type of growth of products of integer matrices	**ILAS '06**, Amsterdam (Netherlands)
July 2006	On the complexity of computing the capacity of codes that avoid forbidden difference patterns	**MTNS '06**, Kyoto (Japan)
Aug 2006	Cruisable graphs	**Mons days '06**, Rennes (France)
Mar 2007	Observable graphs	**Benelux meeting**, Lommel (Belgium)
May 2007	On the proportion of edges that belong to shortest paths in random graphs	**Dynamo** workshop in Salerno (Italy)
Jul 2007	Is the joint spectral radius of rational matrices reachable by a finite product?	**DLT '07**, Turku (Finland)
Apr 2008 *	Observe, track, and localize : Matrix problems for autonomous agents detection	**MIT**, Cambridge (MA-USA)
Apr 2008	Computing the growth of the number of overlap-free words with spectra of matrices	**LATIN**, Buzios (Brazil)
June 2008 *	Observe, track, and localize : Matrix problems for autonomous agents detection	**ULg**, Liège (Belgium)
Sep 2008 *	Observe, track, and localize : Matrix problems for autonomous agents detection	**ULB**, Brussels
Feb 2009	Conic optimization and Bioreaction Systems	**Mathmod '08**, Vienna (Austria)
May 2009	Control on graphs and Extremal matrix products	**FPMS**, Mons (Belgium)
June 2009	Maximal products of matrices and the finiteness property (Invited Lecture)	**CANT09** Liège (Belgium)
June 2009	The Continuous Skolem-Pisot Problem	**Automatha09** Liège (Belgium)
Oct 2009	Conic programming and joint spectral radius	**SIAM ALA09** Monterey (CA-USA)
Oct 2009 *	Matrix products, networks, and autonomous agents	**IBM award ceremony** Brussels (Belgium)
Nov 2009 *	An efficient Algorithm for Partial Order Production	**MIT**, Cambridge (MA-USA)
Feb 2010 *	Joint spectral characteristics of matrices	**Courant Institute**, NY (NY-USA)
Mar 2010 *	Matrix products: A walk through applied mathematics	**UCL**,Louvain-la-Neuve (Belgium)
Sep 2010	The synchronizing probability function of an automaton	**Mons days'10**, Amiens (FRA)
Oct 2010 *	Hybrid systems	**FUNDP**, Namur (Belgium)

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[1] * = Invited presentation

Nov 2010 *	Dynamical Lyapunov functions	**Univ. of L'Aquila**, L'Aquila (Italy)
Nov 2010	Synchronizing graphs and game theory	**JGA'10**, CIRM, Marseille (FRA)
Nov 2010 *	Piecewise polynomial Lyapunov functions with guaranteed accuracy	**IEEEI'10**, Eilat (Israel)
Dec 2010 *	Weak stability of switching dynamical systems and fast computation of the p-radius of matrices.	**CDC'10**, Atlanta (USA)
Mar 2011 *	Dynamical Lyapunov functions	**Montefiore Inst. ULg**, Liège (Belgium)
Apr 2011	Analysis of the Joint Spectral Radius via Lyapunov Functions on Path-Complete Graphs	**HSCC'11** Chicago (USA)
June 2011 *	Stability of hybrid systems: a survey	**U. Silesia** Katowice (Poland)
Nov 2011 *	The synchronizing probability function of an automaton	**ULB**, Brussels (Belgium)
Jan 2012 *	Matrix products, languages and information theory	**LIAFA**, Paris (France)
Jan 2012 *	Control theory and automata	**ULB**, Brussels (Belgium)
Feb 2012 *	When does a set of LMIs imply stability of a switching system?	**TU-Berlin**, Berlin
May 2012 *	Geometric techniques for hybrid systems control	**CIMPA'12** Dakar (Sénégal)
May 2012 *	When does a set of LMIs imply stability of a switching system?	**LSS-SUPELEC**, Paris (France)
June 2012	Lifted polytopes methods for the computation of joint spectral characteristics of matrices	**SIAMLA'12**, Valencia (Spain)
June 2012 *	When does a set of LMIs imply stability of a switching system?	**ROCOND'12**, Copenhague (Denmark)
Dec 2012 *	Convex optimization for switching systems	**LAAS**, Toulouse (France)
Feb 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**MIT**, Cambridge (MA-USA)
Feb 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**UPENN**, Philadelphia (PA-USA)
Feb 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**IBM Watson** (NY-USA)
Feb 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**UIUC**, Urbana (IL-USA)
Feb 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**CRAN**, Nancy (France)
Mar 2013 *	Wireless control networks and controllability with switched delays	**GAMM'13** Novi Sad (Serbia)
Mar 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**Univ. of L'Aquila**, L'Aquila (Italy)

Jun 2013 *	Joint Spectral Characteristics: a tale of three disciplines	**DLT'13**, Paris (France)
Jul 2013 *	Wireless control networks and controllability with switched delays	**Hycon2** meeting Belgrade, (Serbia)
Jul 2013	Convex optimization methods for computing the Lyapunov exponent of matrices	**ECC'13** Zurich (Switzerland)
Oct 2013 *	Joint spectral characteristics: a tale of three disciplines	**Lund Univ.** Lund (Sweden)
Dec 2013	Is switching systems stability harder for continuous time systems?	**CDC'13.** Florence (Italy)
Dec 2013	On Primitivity of Sets of Matrices	**CDC'13.** Florence (Italy)
Apr 2014	JSR: a toolbox to compute the Joint Spectral Radius	**HSCC'14, Berlin** Germany
May 2014 *	Algebraic Techniques for Switching Systems and applications to Wireless Control Neworks	**UCLA,** Los Angeles (CA-USA)
Jun 2014 *	Algebraic Techniques for Switching Systems and applications	**UCBerkeley,** San Francisco (CA-USA)
Jun 2014	An efficient technique for solving the scheduling of appliances in smart-homes	**ACC'14,** Portland (OR-USA)
Aug 2014	Stabilizing linear systems with switching delays	**IFAC WC'14,** Cape Town (ZA)
Aug 2014	On Complexity of Lyapunov Functions for Switched Linear Systems	**IFAC WC'14,** Cape Town (ZA)
Nov 2014 *	Joint spectral characteristics: a tale of three disciplines	**TU/e,** Eindhoven (Nl)
Nov 2014 *	Linear systems with switching delays for Wireless Control Networks: analysis and design	**TU/e,** Eindhoven (Nl)
Apr 2015 *	Synchronizing automata: new techniques and results	**Jiao Tong Univ.** Shangai (CH)
Jul 2015 *	Resonance and marginal instability of switching systems	**SIAM CT'15,** Paris (FR)
Sept. 2015 *	Consensus and Synchronization of multi-agent systems	**Princeton ORFE,** Princeton (US)
Oct. 2015 *	On controllability and observability with packet dropouts	**Allerton'15,** Monticello (US)
Oct. 2015	On controllability and observability with packet dropouts	**ADHS'15,** Atlanta (US)
Nov. 2015*	Path-Complete Lyapunov Techniques	**Cambridge Univ.,** (UK)
Dec. 2015	Robust to dynamics optimization	**CDC'15,** Osaka (Japan)
Jan. 2016*	Path-Complete Lyapunov Techniques	**Inst. Henri Poincaré,** Paris (FR)
Feb. 2016*	Joint spectral characteristics: Algorithms, applications, and conjectures	**Oberwolfach Institute,** Oberwolfach (GE)
Sep. 2016*	Path-Complete Lyapunov Techniques	**UCLA,** Los Angeles (CA-USA)

Jan. 2017*   Path-Complete Lyapunov Techniques   **U Colorado,**
                                                              Boulder (CO-USA)

Publications

Books, edited volumes

[1]	R. M. Jungers. **The Joint Spectral Radius: Theory and Applications.** Vol 385 in *Lecture Notes in Control and Information Sciences, Springer-Verlag*, 2009.
[2]	R.M. Jungers, V. Bruyère, R. Hollanders, M. Rigo (Eds.). **Special Issue of RAIRO ITA in the honor of the 14th Mons Days of Theoretical Computer Science,** 48, 2014.

Papers

Preprints

[1]	D. Angeli, N. Athanasopoulos, R. M. Jungers, and M. Philippe**. Path-complete graphs and common Lyapunov functions.**
[2]	F. Forni, R. M. Jungers, R. Sepulchre**. Path-complete positivity of linear switching systems.**
[3]	R. M. Jungers, A. Kundu, W.P.M.H. Heemels**. Observability and controllability analysis of linear systems subject to packet losses.**
[4]	P.-Y. Chevalier, J. M. Hendrickx, R. M. Jungers. **Tight bounds for consensus systems convergence.**
[5]	B. Gerenczér, V. Gusev, and R.M. Jungers. **Primitive sets of matrices and synchronizing automata.**
[6]	A. Ahmadi, R. M. Jungers. **SOS-Convex Lyapunov Functions with Applications to Nonlinear Switched Systems**.
[7]	B. Gerenczér, R. Hollanders, J-C. Delvenne, R. M. Jungers. **A complexity analysis of Policy Iteration through combinatorial matrices arising from Unique Sink Orientations.**

Journal Articles (accepted or appeared)

[8]	A. A. Ahmadi, R. M. Jungers, P. A. Parrilo, and M. Roozbehani**. A Characterization of Lyapunov Inequalities for Stability of Switched Systems.** To appear in *IEEE Transactions on Automatic Control.*
[9]	R.M. Jungers, P. Mason. **On feedback stabilization of linear switched systems via switching signal control.** To appear in *SIAM Journal on Control and Optimization.*
[10]	M. Philippe, R. Essick, G. Dullerud, R. M. Jungers. **Converse Lyapunov theorems for discrete-time linear switching systems with regular switching sequences**. *Automatica,* 72, 242-250, 2016.
[11]	F. Gonze and R. M. Jungers. **On the Synchronizing Probability Function and the Triple Rendezvous Time for Synchronizing Automata.** *SIAM Journal on Discrete Mathematics*, to appear.
[12]	A. Mauroy, P. Taslakian, S. Langerman, R. M. Jungers. **The four-bars problem**. Nonlinearity, to appear.
[13]	M. Ogura, V. M. Preciado, and R.M. Jungers. **Efficient methods for computing lower bounds on the p-radius of switched linear systems.** *Systems and Control Letters,* 94, 159-164, 2016.

[14]   R. Hollanders, B. Gerenczér, J-C Delvenne, R.M. Jungers. **Improved bound on the worst case complexity of Policy Iteration**. *Operations Research Letters,* 44(2), 267-272, 2016.

[15]   M. Philippe, G. Millerioux, R. M. Jungers. **Deciding the boundedness and dead-beat stability of constrained switching systems**. *Nonlinear Analysis: Hybrid Systems, 2016.*

[16]   R. M. Jungers, A. D'Innocenzo and M. D. Di Benedetto. **Feedback stabilization of dynamical systems with switched delays.** *IEEE Transactions on Automatic Control,* 61(4), 1117-1122, 2016.

[17]   R. M. Jungers and V. Protasov. **Efficient decidability of stability of switched continuous-time systems.** *IEEE Transactions on Automatic Control,* 61(3), 795-798, 2016.

[18]   A. Ahmadi, R. M. Jungers. **Lower Bounds on Complexity of Lyapunov Functions for Switched Linear Systems.** *Nonlinear Analysis: Hybrid Systems,* 21, 118-129, 2016.

[19]   P.-Y. Chevalier, J. M. Hendrickx, R. M. Jungers. **A switched system approach to the decidability of consensus.** *SIAM Journal on Control and Optimization,* 53(5), 3104–3119, 2015.

[20]   V. Blondel, R. M. Jungers, and A. Olshevsky. **On primitivity of sets of matrices.** *Automatica,,* 61, 80-88, 2015.

[21]   F. Gonze and R. M. Jungers. **A Note on a Recent Attempt to Improve the Pin-Frankl Bound.** *DMTCS* 17(1), 307-308, 2015.

[22]   R. M. Jungers and V. Protasov. **Resonance, marginal instability, and sublinear growth of switching systems.** *Nonlinear Analysis: Hybrid Systems*, 17, 81-93, 2015.

[23]   D. Bernardes, J. C. Delvenne, R. Hollanders, R. M. Jungers, B. Mitra, F. Tarissan, **Data-driven traffic and diffusion modeling in peer-to-peer networks: A real case study.** Network Science, 2(3), 341-366, 2014.

[24]   J. Hendrickx, K. H. Johansson, R. M. Jungers, H. Sandberg and K.C. Sou. **An exact solution to the power networks security index problem and its generalized Min Cut formulation.** IEEE Transactions on Automatic Control, 19(12), 3194-3208, 2014.

[25]   M. Canini and R. M. Jungers. **The Software Defined Network revolution.** *ERCIM News* 97, 18-19, 2014.

[26]   A. A. Ahmadi, R. M. Jungers, P. A. Parrilo, and M. Roozbehani**. Analysis of the Joint Spectral Radius via Lyapunov Functions on Path-Complete Graphs.** *SIAM Journal on Control and Optimization,* 52(1), 687-917, 2014.

[27]   R. M. Jungers, A. Cicone, and N. Guglielmi. **Lifted polytope methods for the stability analysis of switching systems.** *SIAM Journal on Matrix Analysis and Applications,* 35(2), 391-410, 2014.

[28]   R. M. Jungers, V. Bruyère, R. Hollanders, M. Rigo. **Foreword to the Special Issue in the honor of the Journées Montoises 2014.** *RAIRO Theoretical Informatics and Applications,* 48, 247, 2014.

[29]   N. Vlassis and R. M. Jungers. **Polytopic uncertainty for linear systems: New and old complexity results.** *Systems & Control Letters,* 67, 9-13, 2014.

[30]   J. Hendrickx, R. M. Jungers, A. Olshevsky and G. Vankeerberghen. **Graph diameter, eigenvalues, and minimum-time consensus.** *Automatica,* 50(2), 635-640, 2014.

[31]   V. Protasov and R. M. Jungers, **Lower and Upper Bounds for the Largest Lyapunov Exponent of matrices.** *Linear Algebra and Its Applications,* 438, 4448-4468, 2013.

[32]   R. M. Jungers. **The synchronizing probability function of an automaton.** *SIAM Journal on Discrete Mathematics,* 26(1), 177–192, 2012.

[33]   F. Zamorano, A. Vande Wouwer, R. M. Jungers, and G. Bastin. **Derivation of macroscopic dynamic models of CHO cell cultures through minimal sets of elementary flux modes.** *Journal of Biotechnology,* 164(3), 409-422, 2013.

[34]   J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers and J. I. Munro. **Sorting under Partial**

Information (without the Ellipsoid Algorithm). *Combinatorica,* 33(6), 655-697, 2013.

[35]   R. M. Jungers. **On asymptotic properties of matrix semigroups with an invariant cone.** *Linear Algebra and its Applications,* 437(5): 1205–1214 2012.

[36]   R. M. Jungers. **On the existence of a bounded trajectory for nonnegative integer systems.** *Groups, Geometry, and Dynamics,* 7(2): 349-355, 2013.

[37]   R. M. Jungers and V. Protasov. **Fast algorithms for the p-radius computation.** *SIAM Journal on Scientific Computing,* 33(3): 1246-1266, 2011.

[38]   B. C. Csaji, R. M. Jungers and V. D. Blondel. **Pagerank optimization by edge selection**. *Discrete Applied Mathematics* 169, 73-87, 2014.

[39]   R. M. Jungers and V. D. Blondel. **Observable graphs.** *Discrete Applied Mathematics,* 159: 981–989, 2011.

[40]   R. M. Jungers, F. Zamorano, V. D. Blondel, A. Vande Wouwer, and G. Bastin. **Fast computation of minimal elementary decompositions of metabolic flux vectors.** *Automatica, 47: 1255-1259, 2011.*

[41]   J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers and J. I. Munro. **An Efficient Algorithm for Partial Order Production.** *SIAM Journal on Computing,* 39(7):2927–2940, 2010.

[42]   V. Protasov, R. M. Jungers and V. D. Blondel. **Joint spectral characteristics of matrices: a conic programming approach.** *SIAM Journal on Matrix Analysis and Applications,* 31(4): 2146-2162, 2010.

[43]   P. Bell, J.-C. Delvenne, R. M. Jungers and V. D. Blondel. **The Continuous Skolem-Pisot Problem: On the complexity of reachability for linear ordinary differential equations.** *Theoretical Computer Science,* 411(40-42):3625-3634, 2010.

[44]   R. M. Jungers and V. Protasov. **Counterexamples to the CPE conjecture.** *SIAM Journal on Matrix Analysis and Applications*, 31(2): 404-409, 2009.

[45]   R. M. Jungers, V. Protasov, and V. D. Blondel. **Overlap-free words and spectra of matrices.** *Theoretical Computer Science,* 410: 3670-3684, 2009.

[46]   V. D. Blondel, J. Cassaigne, and R. M. Jungers. **On the number of α-power-free binary words for 2 <α < 7/3.** *Theoretical Computer Science,* 410: 2823-2833, 2009.

[47]   F. Blanchet-Sadri, R. M. Jungers, and J. Palumbo. **Testing avoidability of sets of partial words is hard.** *Theoretical Computer Science*, 410: 968-972, 2009.

[48]   R. M. Jungers and V. D. Blondel. **On the finiteness property for rational matrices.** *Linear Algebra and its Applications*, 428(10): 2283–2295, 2008.

[49]   R. M. Jungers, V. Protasov, and V. D. Blondel**. Efficient algorithms for deciding the type of growth of products of integer matrices.** *Linear Algebra and its Applications*, 428(10): 2296–2311, 2008.

[50]   V. D. Blondel, J. M. Hendrickx, and R. M. Jungers. **Solitaire Clobber as an optimization problem on words.** *INTEGERS: The Electronic Journal of Combinatorial Number Theory*, 8, G04, 2008.

[51]   V. D. Blondel, J.-L. Guillaume, J. M. Hendrickx, and R. M. Jungers. **Distance distribution in random graphs and application to complex networks exploration.** *Physical Review E*, 76, 066101, 2007.

[52]   V. D. Blondel, R. Jungers, and V. Protasov. **On the complexity of computing the capacity of codes that avoid forbidden difference patterns.** *IEEE Transactions on Information Theory*, 52(11): 5122–5127, 2006.

Selected conference papers and abstracts

[1]   D. Angeli, M. Philippe, N. Athanasopoulos, and R. M. Jungers. **Path-Complete Graphs and Common Lyapunov Functions.** Proc. of HSCC 2017.

[2]   M. Philippe, R. Essick, G. E. Dullerud, R. M. Jungers. **Extremal Storage Functions and Minimal Realizations of Discrete-Time Linear Switching Systems.** Proc. Of CDC 2016.

[3]   N. Athanasopoulos, K. Smpoukis, R. M. Jungers **Safety and Invariance for Constrained Switching Systems.** Proc. Of CDC 2016.

[4]   B. Legat, P. A. Parrilo, and R. M. Jungers. **Generating unstable trajectories for Switched Systems via Dual Sum-Of-Squares techniques.** Proc. of *HSCC 2016*.

[5]   N. Athanasopoulos and R. M. Jungers. Computing the domain of attraction of switching systems subject to non-convex constraints. Proc. of *HSCC 2016*.

[6]   A. Simonetto, F. Gonze, R. M. Jungers et al**. Coptra: Combining Probable Trajectories.** SESAR Innovation Days, 2016.

[7]   P. Chevalier, J. Hendrickx, R. M. Jungers. **Reachability of Consensus and Synchronizing Automata**. CDC 2015

[8]   M. Philippe, R. Essick, G. Dullerud, R. M. Jungers. **The Minimum Achievable Stability Radius of Switched Linear Systems with Feedback.** CDC 2015.

[9]   R. Jungers, A. Kundu, and M. Heemels. **On observability in networked control systems with packet losses**. *Proc. of Allerton 2015*.

[10]   R. Jungers, and M. Heemels. **Controllability of networked control systems subject to packet losses**. *Proc. of ADHS 2015*.

[11]   V. Protasov and R. M. Jungers. **Resonance and marginal instability of switching systems.** *Proc. of ECC 2015.*

[12]   M. Philippe and R. M. Jungers. **A Graph-Related Sufficient Condition for the Exact Computation of the Joint Spectral Radius.** *Proc. of SIAMCT 2015.*

[13]   M. Philippe and R. M. Jungers. **Converse Lyapunov theorems for discrete-time linear switching systems with regular switching sequences.** *Proc. of ECC 2015.*

[14]   M. Philippe and R. M. Jungers. **A sufficient condition for the boundedness of matrix products accepted by an automaton.** *Proc. of HSCC 2015.*

[15]   M. Ogura and R. M. Jungers. **Efficiently Computable Lower Bounds for the p-radius of Switching Linear Systems.** *Proc. of CDC 2014.*

[16]   F. Gonze and R. M. Jungers**. On the synchronizing probability function and the triple rendezvous time as approaches to Cerny's conjecture.** *Proc. of the Mons Days 2014.*

[17]   M. Philippe and R. M. Jungers. **Stability analysis of discrete time switching systems driven by an automaton.** *Proc. of the Mons Days 2014.*

[18]   P.-Y. Chevalier, J. Hendrickx, and R. M. Jungers. **A switched Systems approach to the decidability of consensus.** *Proc. of MTNS 2014.*

[19]   G. Vankeerberghen, J. M. Hendrickx, R. M. Jungers. **JSR: a toolbox for computing the Joint Spectral Radius.** *Proc. of HSCC 2014.*

[20]   R. M. Jungers, A. D'Innocenzo and M. D. Di Benedetto. **Further results on controllability of linear systems with switching delays.** *Proc. of IFAC WC 2014.*

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