

Curriculum Vitae, February 2022

Raouf BOUCEKKINE

Rennes School of Business

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Current academic functions

Professor, Rennes School of Business (on leave from Aix-Marseille School of Economics), Associate Dean for Research

Vice-President, Pan-African Scientific Research Council (PASRC), 2021-

Co-chair, 4th Intercontinental Academy on “Intelligence and Artificial Intelligence”, 2020-22

Member of the Advisory Board of the World Pandemic Research Network (WPRN), 2020-

Member of the Scientific Council of CREAD (Centre de Recherche en Economie Appliquée au Développement), Algeria

Member of the Scientific Council of IMEA (Moroccan Institute for Advanced Study)

Corresponding member, IRES (UCLouvain), Belgium

Awards and Honors

Fellow of the Econometric Society (elected in 2020)

Honorary Senior Fellow of the Institut Universitaire de France (IUF), 2019-

Senior Fellow of the Institut Universitaire de France, 2014-2019

President of ASSET (Association of Southern European Economic Theorists), 2017-2019

Vice-President of ASSET (Association of Southern European Economic Theorists), 2015-2017

Main former academic nominations, charges and responsibilities

Director, Institute for Advanced Study of Aix-Marseille (IMéRA), 2015-2020

Deputy Coordinator of UBIAS (University-Based Institutes for Advanced Study), 2018-2020

Scientific and technical director of the Labex RFIEA +, 2016-2020

Member of the Scientific Council of IRD (Institute for Research in Development), 2016-2020

Research director, Aix-Marseille of Economics, 2011-2015

CORE (Center of Operation Research and Econometrics) research co-director, UCLouvain, 2009-2010.

Director of the Doctoral Program in Economics at UCLouvain, 2000-2005.

Vice-President of the Institut de Recherches Economiques et Sociales (IRES), in charge of research, UCLouvain, 2000-2001.

Deputy chairman of the economics department at Carlos III de Madrid (in charge of teaching), 1997-1998.

Previous academic positions

Professor, Aix-Marseille School of Economics, 2011- (on leave)

Professor (Professeur ordinaire), IRES and CORE, UCLouvain, 2007-2013.

Associate Professor, Department of Economics, UCLouvain, 1998-2007

Associate Professor, Department of Economics, Universidad Carlos III de Madrid, 1997-1998.

Assistant Professor, Department of Economics, Universidad Carlos III de Madrid, 1993-1997.
Part-time chair in economics, department of economics, University of Glasgow, 2007-2010.
Invited Professor, HEC-Paris, 2003-2007.
Invited Professor, Catholic University of Leuven (KUL), 2001-2005.
Invited Professor, Université Louis Pasteur de Strasbourg, 2001-2003.
Research Assistant, CEPREMAP (Paris), 1990-1993.

Doctoral studies

PhD: Economics, Université Paris I Panthéon-Sorbonne, October 1993

Dissertation: An alternative methodology for the simulation of nonlinear rational expectations economic models: Theory and applications (In French).

Committee: J-P. Laffargue (Chair), A. D'Autume, Ch. Gouriéroux, C. Le Van, E. Loute and **P. Malgrange (Advisor)**.

RESEARCH

Research areas: Growth and development, demography, sustainable growth, political economy, operation research, International macroeconomics

Publications

Edited Books

Arezki, R., R. Boucekkine, J. Frankel, M. Laksaci and R. van der Ploeg (Eds.), *Rethinking the Macroeconomics of Resource-Rich Countries*, CEPR Press (London), April 2018.

Boucekkine R., N. Hritonenko and Y. Yatsenko (Eds.), *Optimal Control of Age-structured Populations in Economy, Demography, and the Environment*, Taylor and Francis, september 2010

Publications in peer-reviewed journals (87 papers)

87. "A dynamic theory of spatial externalities", (with G. Fabbri, S. Federico and F. Gozzi), *Games and Economic Behavior* 132, 133-165, 2022.

86. "Uncertainty-driven symmetry breaking and stochastic stability in a generic lobbying differential game", (with F. Prieur, W. Ruan and B. Zou), *Economic Theory*, <https://doi.org/10.1007/s00199-021-01403-3>, 2022.

85. "Managing spatial linkages and geographic heterogeneity in dynamic models with transboundary pollution", (with G. Fabbri, F. Gozzi and S. Federico), *Journal of Mathematical Economics* 98, article 102577, 2022.

84. "Stochastic petropolitics: The dynamics of institutions in resource-dependent economies", (with F. Prieur, V. Vasilakis and B. Zou), *European Economic Review* 31, article 103610, 2021.

83. "A theory of elite-biased democracies", (with R. Desbordes and P. Melindi-Ghidi), *Mathematical Social Sciences* 112, 159-166, 2021.
82. "From firm to global-level pollution control: the case of transboundary pollution", (with G. Fabbri, F. Gozzi and S. Federico), *European Journal of Operational Research* 290, 331-345, 2021.
81. "Control theory in infinite dimension for the optimal location of economic activity: The role of social welfare function", (with G. Fabbri, S. Federico and F. Gozzi), *Pure and Applied Functional Analysis* 6, 871-888, 2021.
80. "Long-run stability of money demand and monetary policy: the case of Algeria", (with M. Laksaci and M. Touati Tliba), *Journal of Economic Asymmetries* (November), article e00217, 2021.
79. "A Lipsetian theory of voluntary power handover", (with P. Piacquadio and F. Prieur), *Journal of Economic Behaviour and Organization* 168, 269-291, 2019.
78. "Growth and agglomeration in the heterogenous space: A generalized AK approach", (with G. Fabbri, S. Federico and G. Gozzi), *Journal of Economic Geography* 19, 1287-1318, 2019.
77. "Biodiversity and its value: Conservation genetics meets economics", (with N. Bonneuil), *Conservation Genetics Resources* 12, 141-151, 2020.
76. "Distributed optimal control models in environmental economics: A review", (with E. Augeraud-Véron and V. Veliov), *Mathematical Modelling of Natural Phenomena* 14, article 106, 2019.
75. "Geographic environmental Kuznets curves: the optimal growth linear-quadratic case", (with G. Fabbri, S. Federico and G. Gozzi), *Mathematical Modelling of Natural Phenomena* 14, article 105, 2019.
74. "A pedagogical note on risk sharing versus instability in international financial integration: When Obstfeld meets Stiglitz", (with B. Zou), *Open Economies Review* 30, 179-190, 2019.
73. "Short-run pain, long-run gain: the conditional welfare gains from international financial integration", (with G. Fabbri and P. Pintus), *Economic Theory* 65, 329-360, 2018.
72. "Mean growth and stochastic stability in endogenous growth theory", (with P. Pintus and B. Zou), *Economics Letters* 166, 18-24, 2018.
71. "Longevity, age structure and optimal schooling", (with N. Bonneuil), *Journal of Economic Behaviour and Organization* 136, 63-75, 2017.
70. "Variable mark-ups in the long-run: a generalization of preferences in growth models", (with H. Latzer and M. Parenti), *Journal of Mathematical Economics* 68, 80-86 2017.
69. "Parental morbidity, child work, and health insurance in Rwanda", (with Q. Bousmah and M. Woode), *Journal of Demographic Economics* 83, 111-127, 2017.

68. "Viable Nash equilibrium in the problem of common pollution", (with N. Bonneuil), *Pure and Applied Functional Analysis* 2, 427-440, 2017.
67. "On the timing of political regime changes in resource-dependent economies", (with F. Prieur and K. Puzon), *European Economic Review* 85, 188-207, 2016.
66. "HIV-AIDS and Development: A Reappraisal of the Productivity and Factor Accumulation Effects", (with T. Azomahou and B. Diene) *American Economic Review* 106(5), 472-477, 2016.
65. "Social capital as an engine of growth: Multisectoral modeling and implications", (with Y. Baende and A. Pholo Bala), *Macroeconomic Dynamics* 20 (8), 2093-2122, 2016.
64. "Optimal transition to renewable energy with threshold of irreversible pollution", (with N. Bonneuil), *The European Journal of Operational Research* 248, 257-262, 2016.
63. "Egalitarianism under population change: Age structure does matter", (with G. Fabbri and F. Gozzi), *Journal of Mathematical Economics* 55, 86-100, 2014
62. "Sustainable growth under physical constraints: optimal R&D, investment and replacement policies", (with N. Hritonenko and Y. Yatsenko), *Journal of Optimization Theory and Applications* 163, 310-331, 2014.
61. "Optimal sustainable policies under pollution ceiling: the demographic side", (with B. Martinez and R. Ruiz-Tamarit), *Mathematical Modelling of Natural Phenomena* 9 (4), 38-64, 2014
60. "Growth and financial liberalization under capital collateral constraints: The striking case of the stochastic AK model with CARA preferences", (with G. Fabbri and P. Pintus), *Economics Letters* 122, 303-307, 2014.
59. "Health, work intensity and technological innovations", (with N.Hritonenko and Y.Yatsenko), *Journal of Biological Systems* 22, 219-233, 2014.
58. "Optimal regime switching and threshold effects", (with A. Pommeret and F. Prieur), *Journal of Economic Dynamics and Control* 37, 2979-2997, 2013.
57. "On the optimal control of some parabolic differential equations arising in economics", (with C. Camacho and G. Fabbri), *Serdica Mathematical Journal* 39, 331-354, 2013.
56. "Spatial dynamics and convergence: the spatial AK model", (with C. Camacho and G. Fabbri), *Journal of Economic Theory* 148, 2719-2736, 2013.
55. "Growth vs level effect of population change on economic development: An inspection into human-capital-related mechanisms", (with B. Martinez and R. Ruiz-Tamarit), *Journal of Mathematical Economics* 49, 312-334, 2013.
54. "On the optimal control of the vintage capital growth model with endogenous labor supply", (with N. Hritonenko and Y. Yatsenko), *Mathematical Economics Letters* 1, 3-7, 2013
53. "Viable Ramsey economies", (with N. Bonneuil), *Canadian Journal of Economics* 47, 422-441, 2014.

52. "On the timing and optimality of capital controls: Public expenditures, debt dynamics and welfare", (with A. Pommeret and F. Prieur), *International Journal of Economic Theory* 9, 101-112, 2013.
51. "Technological vs ecological switch and the environmental Kuznets curve", (with A. Pommeret and F. Prieur), *American Journal of Agricultural Economics* 95, 252-260, 2013.
50. "Is history a blessing or a curse? International borrowing without commitment, leapfrogging and growth reversals", (with P. Pintus), *Journal of Economic Growth* 17, 27-47, 2012.
49. "Assessing Parfit's Repugnant Conclusion within a canonical endogenous growth set-up", (with G. Fabbri), *Journal of Population Economics* 26, 751-767, 2013.
48. "On the optimal control of a neutral differential equation arising in economics", (with G. Fabbri and P. Pintus), *Optimal Control, Applications and Methods* 33, 511-530, 2012.
47. "Vintage capital and the diffusion of clean technologies", (with Th. Azomahou and P. Nguyen Van), *International Journal of Economic Theory* 8, 277-300, 2012.
46. "The Dynamics of Wealth Inequality under Endogenous Fertility: A Remark on the Barro-Becker Model with Heterogenous Endowments", (with S. Bosi and T. Seegmuller), *Theoretical Economics Letters* 1, 3-7, 2011.
45. "Revisiting the optimal population size problem under endogenous growth: minimal utility level and finite lives", (with G. Fabbri and F. Gozzi), *Asia-Pacific Journal in Accounting and Economics* 18, special issue edited by K. Nishimura on Trade and Dynamic Systems, 287-306, 2011.
44. "Scarcity, regulation and endogenous technical progress", (with N. Hritonenko and Y. Yatsenko), *Journal of Mathematical Economics* 47, 186-199, 2011.
43. "Environmental quality versus economic performance: a dynamic game approach", (with J. Krawczyk and T. Vallée), *Optimal Control, Applications and Methods* 32, 29-46, 2011.
42. "Maintenance and investment: complements or substitutes? A reappraisal", (with G. Fabbri and F. Gozzi), *Journal of Economic Dynamics and Control* 34, 2420-2439, 2010.
41. "Towards an understanding of trade-offs between regional wealth, tightness of a common environmental constraint, and the sharing rules", (with J. Krawczyk and Th. Vallée), *Journal of Economic Dynamics and Control* 34, 1813-1835, 2010.
40. "On the distributional consequences of epidemics", (with JP. Laffargue), *Journal of Economic Dynamics and Control* 34, 231-245, 2010.
39. "Capital maintenance as a key development tool", (with B. Martinez and C. Saglam), *The Scottish Journal of Political Economy* 57, 547-567, 2010.
38. "On explosive dynamics in RD-based models of endogenous growth", (with N. Hritonenko and Y. Yatsenko), *Nonlinear Analysis: Theory, Methods and Applications* 71, e693-e700, 2009.

37. "How do epidemics induce behavioral changes?", (with R. Desbordes and H. Latzer), *Journal of Economic Growth* 14, 233-264, 2009.
36. "Technological progress, obsolescence and depreciation", (with F. del Rio and B. Martinez), *Oxford Economic Papers* 61, 440-466, 2009.
35. "The burden sharing of pollution abatement costs in multi-regional open economies", (with M. Germain), *The Berkeley Electronic Journals in Macroeconomics (Topics)* 9, Article 21, 2009.
34. "A closer look at the relationship between longevity and economic growth", (with B. Diene and T. Azomahou), *International Journal of Economic Theory* 5, 201-244, 2009.
33. "Bridging the gap between growth theory and economic geography: The spatial Ramsey model, (with B. Zou and C. Camacho), *Macroeconomic Dynamics* 13, 20-45, 2009.
32. "A note on global dynamics and imbalance effects in the Lucas-Uzawa model: Further results", (with B. Martinez and R. Ruiz-Tamarit), *International Journal of Economic Theory* 4, 503-518, 2008.
31. "Human accumulation and the transition from specialization to multi-tasking", (with P. Crifo), *Macroeconomics Dynamics* 12, 320-344, 2008.
30. "Special functions for the study of economic dynamics: The case of the Lucas-Uzawa model", (with R. Ruiz-Tamarit), *Journal of Mathematical Economics* 44, 33-54, 2008.
29. "Demographic, economic and institutional factors in the transition to modern growth in England: 1530-1860", (with D. de la Croix and D. Peeters), *Population and Development Review* 34, Supplement, 126-148, 2008.
28. "Growth economics of epidemics: A survey of the theory", (with B. Diene and T. Azomahou), *Mathematical Population Studies* 15, 1-26, 2008.
27. "Early Literacy Achievements, Population Density and the Transition to Modern Growth", (with D. de la Croix and D. Peeters), *The Journal of the European Economic Association* 5, 183-226, 2007.
26. "Optimal control in infinite horizons: a Sobolev space approach", (with C. Le Van and C. Saglam), *Economic Theory* 32, 497-509, 2007.
25. "On the relationship between longevity and development", (with B. Diene and T. Azomahou), *The International Journal of Ecology and Development* 6, 31-50, 2007.
24. "Capital maintenance Versus technology adoption under embodied technical progress", (with B. Martinez and C. Saglam), *The Berkeley Electronic Journals in Macroeconomics (Contributions)* 6, Article 7, 2006.
23. "The development problem under embodiment", (with B. Martinez and C. Saglam), *Review of Development Economics* 10, 42-58, 2006.
22. "Vintage capital and the dynamics of the AK model", (with O. Licandro, L. Puch and F. del Rio), *Journal of Economic Theory* 120, 39-72, 2005.

21. "Obsolescence and modernization in the growth process", (with F. del Rio and O. Licandro), *Journal of Development Economics* 77, 153-171, 2005.
20. "Imbalance effects in the Lucas model: An analytical exploration", (with R. Ruiz-Tamarit), *The Berkeley Electronic Journals in Macroeconomics* (Topics) 4, article 15, 2004.
19. "Modelling vintage structures with DDEs: specification, stability and optimal control", (with D. de la Croix and O. Licandro), *Mathematical Population Studies* 11, 151-179, 2004.
18. "Technology adoption under embodiment: A two-stage optimal control approach", (with C. Saglam and T. Vallée), *Macroeconomic Dynamics* 8, 250-271, 2004.
17. "Energy saving technical progress and optimal capital stock: The role of embodiment" (with A. Pommeret), *Economic Modelling* 21, 429-444, 2004.
16. "The early mortality decline at the dawn of modern growth", (with D. de la Croix and O. Licandro), *The Scandinavian Journal of Economics* 105, 401-418, 2003.
15. "Replacement, adoption and economic dynamics: Lessons from a canonical creative destruction model", (with B. Martinez), *Structural Change and Economic Dynamics* 14, 339-359, 2003.
14. "Embodied technological change, learning and the productivity slowdown", (with F. del Rio and O. Licandro), *The Scandinavian Journal of Economics* 105, 87-98, 2003.
13. "Information technologies, embodiment and growth", (with D. de la Croix), *Journal of Economic Dynamics and Control* 27, 2007-2034, 2003.
12. "Maintenance services and investment: Complements or substitutes?", (with R. Ruiz-Tamarit), *Journal of Economics* 78, 1-28, 2003.
11. "Human vintage capital, demographic trends and growth", (with D. de la Croix and O. Licandro), *Journal of Economic Theory* 104, 340-375, 2002.
10. "Technological shocks and IT revolutions", (with D. de la Croix and I. Vailakis), *Recherches Economiques de Louvain* 68, Special issue on The New Economy: Implications and viability, 75-89, 2002.
9. "Numerical solution by iterative methods of a class of vintage capital growth models", (with O. Licandro and A. Magnus), *Journal of Economic Dynamics and Control* 25, 655-669, 2001
8. "Endogenous Vs exogenously driven fluctuations in vintage capital models", (with F. del Rio and O. Licandro), *Journal of Economic Theory* 88, 161-187, 1999.
7. "Creative destruction, investment volatility and the average age of capital", (with M. Germain, O. Licandro and A. Magnus), *Journal of Economic Growth* 3, 361-384, 1998.
6. "Replacement echoes in the vintage capital growth model", (with M. Germain and O. Licandro), *Journal of Economic Theory* 74, 333-348, 1997.

5. "Differential-difference equations in economics: On the numerical solution of vintage capital growth models", (with O. Licandro and C. Paul), *Journal of Economic Dynamics and Control* 21, 347-362, 1997.
4. "Precision performances of terminal conditions for short time horizon systems with forward expectations" (with M. Juillard and P. Malgrange), *Computational Economics* 10, 169-186, 1997.
3. "Liquidity constraints and time non separable preferences", (with J. Adda), *Recherches Economiques de Louvain* 62, Special issue on Modelling macroeconomic dynamics: New developments, 377-402, 1996.
2. "Checking for saddlepoint stability: An easy test" (with C. Le Van), *Computational Economics* 9, 317-330, 1996.
1. "An alternative methodology for solving nonlinear forward-looking models", *Journal of Economic Dynamics and Control* 19, 711-734, 1995.

Invited publications in scientific journals and editorials (17 articles)

17. "The economics of epidemics and contagious diseases: An introduction", (with A. Carvajal, S. Chakraborty and A. Goenka), *Journal of Mathematical Economics* 93, Article 102498, 2021.
16. "Advances in growth and macroeconomic dynamics---*In memory of Carine Nourry*", (with T. Seegmuller and A. Venditti), *Mathematical Social Sciences* 112, 1-6.
15. "Introduction to international financial markets and banking systems crises", (with K. Nishimura and A. Venditti), *Journal of Mathematical Economics* 68, 87-91, 2017.
14. "Introduction to Globalization: Financial, Trade and Institutional Aspects with Applications to China", (with X. Huang), *Pacific Economic Review* 21, 324-329, 2016.
13. "Technological progress and investment: a non-technical survey", (with B. Cruz), *The Bukavu Journal of Economics and Social Sciences*, Volume 3, 10-31, 2017. L'Harmattan: Paris.
12. "Introduction to the Macroeconomic Dynamics special issue on Technology aspects in the process of development", (with T. Azomahou, P. Mohnen and B. Verspagen), *Macroeconomic Dynamics* 20 (8), 1953-1956, 2016.
11. "Introduction to financial frictions and debt constraints", (with K. Nishimura and A. Venditti), *Journal of Mathematical Economics* 61, 271-275, 2015.
10. "Epidemics from the theoretical view point", *Mathematical Population Studies* 19, 1-3, 2012.
9. "Rente, corruption et violence: l'émergence d'un monde nouveau dans les pays arabes?", (with R. Bouklia-Hassane), *Regards Economiques* 92, 2011.
8. "Introduction to the special issue on sustainability", *Mathematical Social Sciences* 59, 145-147, 2010.
7. "Presentacion: Decisiones de inversion y adopcion de nuevas tecnologias", (with L. Puch), *Cuadernos Economicos de ICE* 72, 5-10, 2006.

6. "Progreso tecnologico incorporado, adopcion y mantenimiento", (with B. Martinez and C. Saglam), *Cuadernos Economicos de ICE* 72, 155-175, 2006.
5. "Crecimiento economico y generaciones de capital", (with O. Licandro and L. Puch), *Cuadernos Economicos de ICE* 72, 229-254, 2006.
4. "Technologies de l'information et croissance économique" (with V. Bodart), *Regards Economiques*, June 2002.
3. "The New Economy, Implications and viability: Introduction" (with E. Wasmer), *Recherches Economiques de Louvain* 68, 3-5, 2002.
2. " Progrès technique incorporé et l'énigme du ralentissement de la croissance", *Analyses Economiques et Prévisions*, March Issue, 65-92, 2000. Also available as Bulletin de l'IRES 218, 2000.
1. "On deterministic and stochastic simulation of nonlinear rational expectations models", *IMACS Proceedings*, Volume 4, INCA (Dublin), 1396-1401, 1991

Chapters in collective monographs (16 articles)

16. "Land use, biodiversity patterns and the emergence of zoonotic diseases", (with R. Desbordes and J. Thuilliez), in the **Handbook of Labor, Human Resources and Population Economics**, K. Zimmermann (Ed.), Springer, forthcoming.
15. "On the distributional consequences of the knowledge economy and Artificial Intelligence", **Annale Fondazione Feltrinelli**, 85-112, 2021.
14. "Optimal switching from competition to cooperation: A preliminary exploration", (with C. Camacho and B. Zou), in: *Dynamic Economic Problems with Regime Switches*, V. Veliov, J. Haunschmied, R. Kovacevic, and W. Semmler (Eds.), **Springer Nature Switzerland AG**, 209-225, 2021.
13. "Optimal population growth as an endogenous discounting problem: The Ramsey case", (with B. Martinez and R. Ruiz-Tamarit), *Lecture Notes in Economics and Mathematical Systems- Essays in honor of Vladimir Veliov*, G. Feichtinger, R. Kovacevic, and G. Tragler (Eds.), vol. 687, 321-347, **Springer**, 2018.
12. "Introduction", (with R. Arezki, J. Frankel, M. Laksaci and R. van der Ploeg), in R. Arezki et al. (Eds.), *Rethinking the Macroeconomics of Resource-Rich Countries*, **CEPR Press**, pages 9-19, 2018.
11. "Technological progress, employment and the life time of capital", (with N. Hritonenko and Y. Yatsenko), *Sunspot and Non-linear Dynamics- Essays in honor of Jean-Michel Grandmont*, K. Nishimura, A. Venditti and N. Yannelis (Eds), "Studies in Economic Theory" series, **Springer Verlag**, 305-338, 2017.
10. "Optimal growth with polluting waste and recycling", (with F. El Ouardighi), in *Dynamic Perspectives on Managerial Decision Making- Essays in honor of Richard Hartl*, H. Dawid et al (Eds.), **Springer-Verlag**, 109-126, 2016.

9. "Contract rules in codes and statutes: easing business across the cleavages of Legal Origins Theory", (with F. Docquier, F. Ngendakuriyo, H. Schmiegelow and Michèle Schmiegelow), in: *Institutional Competition between Common Law and Civil Law*, M. and H. Schmiegelow (Eds.), **Springer-Verlag**: Berlin, pp 41-82, 2014.
8. "The dynamics of lobbying under uncertainty: on political liberalization in Arab countries", (with F. Prieur and K. Puzon), in: *Dynamic Games in Economics*, J. Haunschmied, V. Veliov and S. Wrzaczek (Eds.), **Springer-Verlag**: Berlin, pp 69-88, 2014.
7. "Vintage capital growth theory: Three breakthroughs", (with D. de la Croix and O. Licandro), in *Frontiers in Economics and Globalization* (O. de la Grandville, ed.), **Emerald**, chapter 5, 2011.
6. "Age-structured modelling, past, present and new perspectives", in *Optimal control of age-structured populations in economics, ecology and the environment* (R. Boucekine, N. Hritonenko and Y. Yatsenko, Eds.), **Taylor and Francis**, Introduction chapter, 2010.
5. "Vintage capital", (with D. de la Croix and O. Licandro), **The New Palgrave Dictionary of Economics, Second Edition**, S. Durlauf and L. Blume (Eds.), 628-631, 2008.
4. "Why capital maintenance is a key development tool?", (with B. Martinez and C. Saglam), in A. Nyembwe (Ed.), *Development and International Economics*, **Presses Universitaires de Louvain**, 75-98, 2008.
3. "Changement organisationnel et capital humain", (with P. Crifo), in *Capital humain et marchés du travail: Perspectives régionales et européennes*, (H. Sneessens and E. Wasmer, eds.), 33-48, **CIFoP**, Charleroi, 2002.
2. "Knowledge, technology and economic growth" (with D. de la Croix), in *How to Promote Growth in the Euro Area*, M. Dombrecht and J. Smets (editors), **Edward Elgar**, 98-103, 2002.
1. "Monte Carlo experiments for large scale forward looking economic models", in *Predictability and Nonlinear Modelling in Natural Sciences and Economics*, J. Grasman and G. Van Straten (editors), 599-609, **Kluwer Academic Publishers** (Dordrecht), 1994.

Ongoing work and papers (10 papers)

1. "An economic-epidemiological model with endogenous behaviour and learning", (with J. Adda and J. Thuilliez), in progress.
2. "Land use, biodiversity dynamics, and consumption patterns", (with R. Desbordes, M. Nielsen and J. Thuilliez), in progress.
3. "Global warming and the design of optimal international environmental policy in an heterogeneous world game", (with G. Fabbri, F. Gozzi and T. Loch-Temzelides), in progress.
4. "Patronalism", (with R. Desbordes and P. Melindi-Ghidi), in progress.
5. "Education, repression, and the demise of neopatrimonialism", (with R. Desbordes and P. Melindi-Ghidi), under review

6. "Optimal lockdown and testing policies in an extended epi-econ model", (with A. Dobson, M. Pascual, T. Loch-Temzelides, G. Fabbri, F. Gozzi and C. Ricci), in progress.
7. "Why are inflation forecasts sticky? Theory and application to France and Germany", (with F. Bec and C. Jardet), under revision.
8. "Differential constitutional vs development determinants of the duration of international coalitions: A game-theoretic approach", (with C. Camacho, W. Ruan and B. Zou), in progress.
9. "The link education- institutional change revisited: the social mobility channel", (with F. Prieur and V. Vasilakis), in progress.
10. "The irreversible pollution game", (with W. Ruan and B. Zou), under review

Opinions and interviews (sample)

"L'Algérie face à une crise sanitaire et un choc pétrolier : La situation est catastrophique ", Nouvel Obs (France), April 25, 2020

"On peut survivre avec deux mois d'importations si on a un avenir", El Watan (Algeria), April 8, 2020

"La baisse des dépenses et la dévaluation du dinar, la seule option à court terme", Liberté (Algeria), March 10, 2020.

"Algérie: Comment échapper à la malédiction des ressources", France Culture (France), February 18, 2020.

"Surfacturation des importations et marché de change parallèle", (with N. Meddahi), Tout Sur l'Algérie (Algeria), May 21, 2019

"Financement non-conventionnel : enfumage et petites vengeances", (with N. Meddahi), Liberté (Algeria), April 18, 2019

"Financement non-conventionnel : Souveraineté et responsabilité", (with N. Meddahi), Tout sur l'Algérie (Algeria), April 22, 2018.

"2018: l'Algérie à la croisée des chemins", Fellows (France), issue 34, February 1, 2018. Reprinted in Tout Sur l'Algérie (Algeria), February 1, 2018.

"De la nouvelle économie et sa stagnation séculaire", Fellows (France), issue 25, May 15, 2017.

"En finir avec le système rentier en Algérie", La Tribune (France), November 18, 2016.

"Face aux contre-chocs pétroliers : l'emprunt national est une urgence économique", (with E. Chitour and N. Meddahi), Le Quotidien d'Oran (Algeria), March 29 & 30, 2016.

"De Kinshasa à Cherrhell : que faut-il penser des contrats « du siècle » chinois ?", Maghreb Emergent (Algeria), January 30, 2016.

“Le plan budgétaire des Professeurs Boucekkine et Meddahi face au contre-choc pétrolier”, (with N. Meddahi), *Maghreb Emergent* (Algeria), October 12, 2015.

“Algérie: en finir avec la voracité? ”, (with N. Meddahi), *Telos* (France), May 11, 2015

“Algérie : Changeons le pouvoir avant qu’il n’explose”, *Le Monde* (France), April 17, 2014

“A quelques jours de l’élection présidentielle. De la stabilité de l’économie rentière”, *Liberté* (Algeria), April 7, 2014.

“Réformes en Algérie : la menace d’un échec prématuré”, *Les Echos* (France), May 26, 2011.

“Algérie : maladie hollandaise ou arabe ?”, *Les Echos* (France), April 12, 2011.

“Le procès de la Nouvelle Economie est toujours en cours”, *Le Soir* (Belgium), July 6th, 2002.

Invited conferences: keynote speaker (17 conferences)

10th Workshop on Dynamic Games in Management Sciences, Rabat, November 2018

Institutional dynamics in resource-rich countries as dynamic games

39emes JESF, Marseille, November 2017

Health, epidemics and development

Econometric Society African Meeting, Algiers, June 2017

Institutional dynamics in resource-dependent economies

Annual SURED conference, Banyuls-sur-Mer, June 2016

Institutional dynamics under stochastic environments

CEAFE Conference, Marseille, March 2016

6th Euro-African Economic Conference

On the duration of autocracies: Theory and application to Arab countries

Hammamet (Tunisia), March 2015

Conference on “Macroeconomic policies during crises periods”

L’Algérie entre le marteau et l’enclume: Printemps arabe, contre-choc pétrolier et politique économique

Kinshasa (DR Congo), January 2015

High-level conference on promoting growth in the Democratic Republic of Congo

The demographic ingredients of development: the case of Congo

Marseille, December 2014

Anglo-French-Italian Macro Workshop

An AK theory of financial liberalization

Hang Zhou (China), October 2014

Annual meeting of the Chinese Society of World Economics (Zhejiang University)

The growth and welfare implications of financial liberalization

Strasbourg, June 2014

5th Doctoral Workshop on Dynamic Macroeconomics

On political regime changes in Arab countries

Luxembourg, May 2014

4th CREA Conference on Economics on Tax Competition and Public Policy

The strategic ingredients of the Arab Spring

Livorno (Italy), September 2013

IV CICSE Conference on Structural Change, Dynamics and Growth

Financial globalization, growth and welfare: an AK theory of international borrowing without Commitment

Brussels, December 2012

Conference at Société Royale d'Économie Politique de Belgique

Rente, corruption et violence : Genèse et conséquences du Printemps arabe

Cap-Town (South-Africa), November 2012

6th Micro-Evidence on Innovation and Development (MEIDE) conference

The gift of longevity, age-structure and development: theory and policy implications

Darmstadt (Germany), June 2012

Conference on Health, Development and Inequality

Mortality shocks, health capital and income distribution

GREQAM Doctoral Spring School, May 2010

Growing over time and space

T2M Annual Conference, Cergy, January 2008

On the distributional consequences of epidemics

PhD thesis supervision: completed theses

39. Kevin Genna (supervised with A. Venditti), Green development and policies in multi-sector models, Aix-Marseille Université, July 2021.

38. Régis Swadogo (co-supervised with C. Garcia), State capacity, unified growth theory and development, Aix-Marseille Université, December 2017.

37. Guzman Ourens (co-supervised by F. Meyneris), Growth and trade with firm heterogeneity, Université catholique de Louvain, September 2017.

36. Emma Hooper (co-supervised with P. Pintus), Essays on international finance and sustainable growth in natural resource rich countries, Aix-Marseille Université, October 2016.

34. Alice Mufungizi (co-supervised with F. Gaspart), Agricultural production, market structure and location in South-Kivu, Université catholique de Louvain, March 2016

35. Qays Bousmah (co-supervised by B. Ventelou), Morbidity, mortality and fertility, Aix-Marseille University, February 2015

33. Celestin Buchekuderwha (co-supervised with JB. Ntagoma), Essays on technology adoption in subsistence farming, Université catholique de Bukavu (RDCongo), June 2014.

32. Alexandre Simons, North-South technology transfer and globalization, Université catholique de Louvain, Janvier 2014.

31. Bastien Chabe-Ferret (co-supervised by JM. Baland), Inequalities in the development process, Université catholique de Louvain , April 2013.
30. Daria Onori (co-supervised with E. Marchetti), Schumpeterian growth and endogenous fluctuations, Université catholique de Louvain and Università La Sapienza di Roma, June 2013.
29. Chrysovalantis Vasilakis (co-supervised by F. Docquier), Essays in development economics, Université catholique de Louvain , March 2013.
28. Olivier Sterck (co-supervised by W. Parienté), Essays on sustainable development, Université catholique de Louvain, March 2013.
27. Paolo Piacquadio, (co-supervised by F. Maniquet), Essays on intergenerational justice, Université catholique de Louvain, December 2012 .
26. Youyou Baende, Essays on social capital and development, Université catholique de Louvain, June 2012.
25. Tanguy Isaac, Information revelation and intergenerational fairness, Université catholique de Louvain, October 2011.
24. Fabien Ngendakuryo, Institutions and growth, Université catholique de Louvain, June 2011
23. Raul Fuentes, Economic Development, aid and foreign direct investment, Université catholique de Louvain, June 2011.
22. Giulio Nicoletti, Essays on dynamic monetary macroeconomics, Université catholique de Louvain, April 2010.
21. Hélène Latzer, Essays in economic development, Université catholique de Louvain, January 2010.
20. Concetta Mendolicchio, (co-supervised with Vincent Vandenberghe), Essays on education and economics, Université catholique de Louvain, July 2009.
19. Hai Do, (co-supervised with Benoit Rihoux), Fighting poverty in Vietnam, Université catholique de Louvain, December 2008.
18. Claudio Mattalia, Technological and organizational aspects in promoting growth, Université catholique de Louvain, July 2008.
17. Carmelo Parello, Essays on globalization and economic development, Université catholique de Louvain, February 2008.
16. Bity Diene (co-supervised with R. Dos Santos Ferreira), Essays on life expectancy and economic development: The role of epidemics, Université Louis Pasteur, Strasbourg (France), December 2007.
15. Jakub Growiec, Essays in economic growth theory, Université catholique de Louvain, October 2007.

14. Antonio Minniti, Essays on R&D, growth and market structure, Université catholique de Louvain, August 2007.
13. Luca Spinesi, Essays on economic growth, Université catholique de Louvain, April 2007.
12. Agustin Barahona, Natural resources, environment and economic growth, Université catholique de Louvain, March 2007.
11. Carmen Camacho, (co-supervised with David de la Croix), Essays on growth and geography, Université catholique de Louvain, January 2007.
10. Jean-Baptiste Ntagoma, Corruption, fiscal decentralization and growth in developing countries, Université catholique de Louvain, June 2005.
9. Benteng Zou, Essays in economic dynamics with heterogenous capital goods, Université catholique de Louvain, June 2005.
8. Ornella Tarola, (co-supervised with Guido Cozzi), Essays on R&D-based endogenous growth models, Université catholique de Louvain, May 2005.
7. Bruno Cruz, (co-supervised with Aude Pommeret), Essays on public investment and growth, Université catholique de Louvain, March 2005.
6. Yiannis Vailakis, (co-supervised with Cuong Le Van), Essays on optimal growth and recursive utility, Université catholique de Louvain, December 2003.
5. Huseyin Cagri Saglam, Innovations, growth and incentive design, Université catholique de Louvain, May 2003.
4. Alberto Bucci, Schumpeterian models of growth and fluctuations, Université catholique de Louvain, September 2002.
3. Blanca Martinez, Essays on technology adoption and capital maintenance, Université catholique de Louvain, February 2002.
2. Fernando del Rio (co-advisor with Omar Licandro), Monopolistic competition in overlapping generations models, and embodied technical progress in vintage capital models, Universidad Carlos III de Madrid, March 2000.
1. Jorge Duran (co-advisor with Manuel Santos), Dynamic programming with unbounded returns, Universidad Carlos III de Madrid, June 1999.

Currently supervised PhD thesis

1. Mykhailo Matvieiev (supervised with C. Poilly), Precautionary saving and pensions, from September 2021.
2. Souad Azzi (supervised with A. Zakane), DSGE modelling of the Algerian economy: lessons for macroeconomic policy, from September 2018

Coordination and supervision of research projects (other than LABEX projects)

Principal Investigator of a research project on “The economic epidemiology of COVID-19” (with J. Thuilliez and J. Adda), ANR grant (French National Research Agency), 2020-2021

Coordinator of a research project on “Evaluation of public research in France”, funded by the MESRI (French Ministry of High Education, Research and Innovation”, 2020-2021.

Coordinator of the PIC project (“Projet Inter-universitaire de Coopération”) for the Belgian Cooperation Agency (CUD) on Fighting Poverty in South Kivu (RDC), 2008-2013.

Coordinator of the research project Action de Recherche Concertée (ARC 03/08-302), Communauté Française de Belgique. Topic: New macroeconomic perspectives in economic development, 2003/2008.

Coordinator (from 2003) of the research project Action de Recherche Concertée (ARC 99/04-235), Communauté Française de Belgique. Topic: Growth and incentive design, 1999/2004

Supervisor of the research project PAI P5/10, financed by the Belgian Federal Government. Topic: Equilibrium theory and optimization for public policy and industry regulation, 2003/2007

Supervisor of the research project Actions Concertées Incitatives (ACI), Ministère délégué à la Recherche du gouvernement Français. Topic: Changement technique et développement durable, 2005/2007.

Supervisor of a research project funded under the contract c26087 of the European Commission, DG information society. Topic: Information technologies and growth, 2000/2003

Organization of scientific events (small selection)

Co-organizer of the 10th anniversary conference of the Institute for Advanced Study at Aix-Marseille (IMÉRA) on “Energy: Challenges and perspectives”, November 2018.

Member of the Scientific Committee of the 14th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, July 2018.

Co-chairman of the 2017 Annual ASSET conference in Algiers, October 2017

Member of the Scientific Committee of the 13th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, 2015.

Member of the Scientific Committee of the 12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, 2012.

Member of the Scientific Committee of 2012 meetings of the French Economic Association (AFSE)

Session organizer in optimal control in the 24th European Conference on Operational Research (EURO), Lisbon, July 2010.

Member of the Scientific Committee of the 15th Annual Conference of APET (Association of Public Economic Theory), Luxembourg, July 2015.

Member of the Scientific Committee of the 14th Annual Conference of APET (Association of Public Economic Theory), Seattle, July 2014.

Member of the Scientific Committee of the 13th Annual Conference of APET (Association of Public Economic Theory), Lisbon, July 2013.

Member of the Scientific Committee of the 10th Annual Conference of APET (Association of Public Economic Theory), Istanbul, June 2010.

Member of the Scientific Committee of the 17th Annual Conference of EARE (European Association of Environmental and Resource Economists), Amsterdam, June 2009.

Session organizer in optimal control in the 23rd European Conference on Operational Research (EURO), Bonn, July 2009.

Member of the Scientific Committee of the 9th Annual Conference of APET (Association of Public Economic Theory), Galway (Ireland), June 2009.

Coordinator of the organizing local committee of the conference New Challenges in Economic Research, September 2007 at Louvain-la-Neuve.

Co-organizer with Th. Bréchet of an international conference on "Macroeconomic dynamics, technological change and the environment", CORE-UCL, November 2006.

Member of the International Program Committee of the Limassol Society of Computational Economics annual meeting, June 22-24, 2006.

Co-organizer of the joint seminar CES-UCL-ULB with the National Bank of Belgium, on monetary theory and policy, 2004 and 2005

Co-organizer with O. Licandro and L. Puch of an international conference on "Vintage modelling in economics and economic demography", European University Institute (Florence, Italy), September 2005.

Member of the International Program Committee of the Paris Association of Public Economic Theory annual meeting, July 3-6, 2002.

Member of the International Program Committee of the Aix-en-Provence Society of Computational Economics annual meeting, June 27-29, 2002.

Session organizer at the 2002 Society for Computational Economics annual conference. Title of the session: Dynamic models of technology adoption (Aix, France)

Co-organizer (with Etienne Wasmer) of an international conference on "Analyzing the New Economy" at University of Metz (France), April 27 and 28, 2001.

Member of the International Program Committee of the Barcelona Society of Computational Economics annual meeting, July 6-8, 2000.

Session organizer at the 2000 Society for Computational Economics annual conference Title of the session: Macroeconomic models with vintage capital (Barcelona, Spain)

Session co-organizer (jointly with Pierre Malgrange) at the 1999 Society for Computational Economics (SCE) annual conference. Title of the session: Models of creative destruction (Boston)

Session organizer at the 1998 Society for Computational Economics (SCE) annual conference. Title of the session: Differential-difference equations and economic fluctuations (Cambridge, UK)

Editorial activities

Editor-in-chief, *Mwengo- The Journal of the Pan-African Scientific Research Council*, to be published from January 2023.

Associate editor: *J. of Economic Dynamics & Control*, 2015- , *J. of Mathematical Economics*, 2014-, *Macroeconomic Dynamics*, 2010- , *J. of Public Economic Theory*, 2006- , *Annals of Economics and Statistics*, 2010- , and *J. of Demographic Economics*, 2013- .

Former associate editor of: *Mathematical Social Sciences*, 2007-2018, *Mathematical Population Studies*, 2008- 2010 , and *Investigaciones Economicas*, 2003-2009

Guest editor

Guest co-editor with E. Wasmer of a special issue of *Recherches Economiques de Louvain*: "The New Economy: Implications and viability", April I 2002

Guest editor of a special issue of *Mathematical Population Studies*: "Vintage modelling in economics and economic demography", volume 15, issue 4, 2008.

Guest editor of a special issue of *Mathematical Population Studies*: "Overlapping-generations modelling", volume 16, issue 1, 2009.

Guest editor of a special issue of *Mathematical Social Sciences* on "Sustainability", volume 59, March issue, 2010.

Guest co-editor with L. Puch of a special issue of *Cuadernos Economicos de ICE*: "Decisiones de inversion y adopcion de nuevas tecnologias", volume 72, 2006.

Guest editor of a special issue of *Mathematical Population Studies*: "Epidemics from the economic theory viewpoint", volume 19, issue 1, 2012.

Guest co-editor with K. Nishimura and A. Venditti of a special section of *Journal of Mathematical Economics*: "Financial frictions and debt constraints", volume 61, 2015.

Guest co-editor with K. Nishimura and A. Venditti of a special section of *Journal of Mathematical Economics*: "International financial markets and banking systems crises", volume 68, 2017.

Guest co-editor with T. Azomahou, P. Mohnen and B. Verspagen of a special issue of *Macroeconomic Dynamics*: "Technology aspects in the process of development", volume 20, issue 8, 2016.

Guest co-editor with X. Huang of a special issue of *Pacific Economic Review*: "Globalization: Financial, Trade and Institutional Aspects with Applications to China", Part I in volume 21, issue 3, 2016, and Part II in volume 22, issue 1, 2017.

Guest co-editor with E. Augeraud, and V. Veliov of a special issue of *Mathematical Modelling of Natural Phenomena*: "Economics and the environment: distributed optimal control models", Volume 14, issue 1, 2019.

Guest co-editor with S. Chakraborty and A. Goenka of a special issue of *Journal of Mathematical Economics* on "The economics of epidemics and emerging diseases", Volume 93, March 2021.

Guest co-editor with T. Seegmuller and A. Venditti of a special issue of *Mathematical Social Sciences* on "Advances in Growth and Macroeconomic Dynamics---In memory of Carine Nourry", to be published in 2021.

Guest co-editor with R. Amir of a special issue of *Journal of Public Economic Theory* on "Covid Economics", to be published in 2022.

Guest co-editor with T. Azomahou, H. Kazianga, M. Korir and N. Ndung'u of a special issue of *Food Policy* on "The agricultural impacts of agricultural, food and nutrition policies in Sub-Saharan Africa", to be published in 2022.

Guest co-editor with T. Loch-Tamzelides of a special issue of *Economic Theory* on "Epi-econ mathematical modelling", to be published in 2023.

Refereeing activities

For economic journals (among many others)

Econometrica, Journal of Economic Theory, Journal of Mathematical Economics, Journal of Economic Growth , Journal of the European Economic Association, Macroeconomic Dynamics,

Journal of Economic Dynamics and Control, Games and Economic Behaviour, Review of Economic Studies, Journal of Political Economy, American Economic Review, International Economic Review, Economic Journal, Mathematical Social Sciences, Review of Economic Dynamics, Journal of Public Economics, American Economic Journal: Macroeconomics, American Journal of Agricultural Economics, Journal of International Economics, Economic Theory, Journal of Economic Behaviour and Organization, Journal of Development Economics, Journal of Economic Geography, European Economic Review, Scandinavian Journal of Economics, Journal of Environmental Economics and Management...

For applied mathematics journals (among others)

Nature Computational Science, Mathematics of Operations Research, Automatica, Numerical Algorithms, Annals of Operation Research, International Transactions in Operational Research, Optimization, Optimal Control Applications and Methods, Journal of Optimization Theory and Applications, Systems and Control Letters, European Journal of Operational Research, Nonlinear Analysis Series B, Central European Journal of Operational Research, Mathematical Biosciences and Engineering...

For Demography journals

Mathematical Population Studies, Population Studies, Mathematical Medicine and Biology, International Health and Human Rights

Research projects evaluation committees (short selection)

Member of the International Committee for the evaluation of research in economics and management, appointed by the Portuguese Foundation of Science and Technology, July 2001, Lisbon.

Appointed by the Austrian Foundation of Science (FWF) for the evaluation of research projects in economics, February 2002.

Appointed by Fundacion Ramon Areces (Spain) for the evaluation of research projects in economics, December 2002 to January 2003.

Appointed by the Israel Science Foundation (ISF) for the evaluation of research projects in economic growth, February-March 2005, and February-March 2007.

Appointed by the Italian Science Foundation for the evaluation of research in economics in Italy, Spring 2005.

Member of the "Jury d'agrégation" for professorship in economics in France for the academic year 2005/2006.

Member of the ANR (French research agency) committee for the evaluation of research projects in economics in 2008-2009 and 2011-2012.