Curriculum Vitae

Herbert Dawid

November 2022

Affiliation:

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Date of Birth: 01/30/1969

Place of Birth: Vienna, Austria

Educational Background:

Habilitation, Operations Research: University of Vienna, 1999.

Doctoral Degree, Mathematical Methods in Economics: Vienna Univ. of Technology, 1995. Dissertation: Genetic Learning in Economic Systems

Diploma (Dipl. Ing.), Mathematical Methods in Economics: Vienna Univ. of Technology, 1993.

Academic Appointments:

Full Professor (W3), Chair for Economic Theory and Computational Economics, Department of Business Administration and Economics, Bielefeld University, since 2010.

Full Professor, Center for Mathematical Economics (IMW), Bielefeld University, since 2004.

Full Professor (C4/W3), Chair for Economic Policy, Department of Business Administration and Economics, Bielefeld University, 2003 - 2010.

Associate Professor, Department of Economics, University of Southern California, Los Angeles, 1999 - 2002.

Associate Professor (Ao. Univ. Prof.), Department of Management Science, University of Vienna, 1999 - 2002 (on leave 1999 - 2001).

Assistant Professor, Department of Management Science, University of Vienna, 1996 - 1999.

Research Associate, Department of Operations Research, Vienna University of Technology, 1993-1996.

Visiting Positions:

Senior Research Fellow, Center for Unframed Thinking, Rennes School of Business, 2022-Visiting Professor, Universite Paris 1 Pantheon-Sorbonne, March/April 2010, March 2015, March 2020.

Visiting Professor, University of Technology Sydney, November 2010.

Program for Economic Research, Columbia University, NY, May 2007.

Associated Researcher, GREQAM (Aix-Marseille), June 2006-August 2006.

Visiting Professor, Universite d'Aix-Marseille II, May 2002, April 2004.

Visiting Scholar, Department of Economics, University of Southern California, 1996-1997.

Fields of Interest:

Digitization and Smart Products, Investment under Uncertainty, Economics of Innovation, Agent-based Computational Economics, Policy Design in Complex Environments, Optimal Control and Differential Games

Awards:

Figdor-Prize for Law, Social Sciences, and Economics of the Austrian Academy of Sciences, 2001.

Best Paper Award, Symposium: Simulation of Social Behavior and Artificial Economy, Vienna 2000.

'Young Economist Award', Workshop on Economics with Heterogeneous Interacting Agents, Ancona 1998.

Research Award 1995 of the Austrian Society of Operations Research.

Editorial Activities:

Journal of Economic Dynamics and Control (Co-Editor, 2010-2021).

Dynamic Games and Applications (Associate Editor, since 2013).

Journal of Economic Behavior and Organization (Associate Editor, 2004-2013).

Journal of Evolutionary Economics (Editorial Board, since 2000).

Springer Lecture Notes in Economics and Mathematical Systems (Editorial Board, since 2004).

Professional Service:

President of the Society for Computational Economics (2020 - 2022).

Scientific Advisory Board of the ERC Advanced Grant Project EVOCLIM, UAB Barcelona (2018-2022).

Scientific Committee of the Complexity Lab in Economics, Catholic University of Milano (since 2015).

Advisory Council of the Society for Computational Economics (2008-2011).

Scientific Advisory Council of the Center for Interdisciplinary Research (ZiF) at Bielefeld University (since 2009).

Administrative Duties and Committee Work:

Member of the University Council (Hochschulrat) of Bielefeld University, 2018-2023.

Chairman of the Bielefeld Graduate School of Economics and Management (BiGSEM), since 2009.

Director of the Bielefeld Graduate School in Theoretical Sciences (BGTS), 2017 - 2020.

Dean, Faculty of Business Administration and Economics, Bielefeld Univ., 2011-2013.

Vice-Dean, Faculty of Business Administration and Economics, Bielefeld Univ., 2015-2017.

Member of the Senate of Bielefeld Univ., 2006 - 2011, 2014 - 2016.

Member of the Committee for Ressource and Financial Planning (Finanzkommission) of Bielefeld Univ., 2008 - 2011.

Member of the Department Assembly (Fakultätskonferenz) of the Faculty of Business Administration and Economics, 2004 - 2013.

Coordination of International Collaborative Research and Training Projects (funded by third parties):

Coordinator of the Marie Skłodowska-Curie Innovative Training Network EPOC (Economic Policy in Complex Environments), funded by the European Union (REA) under H2020, $2021-2025 \ (\approx 4 \ \text{Mio.} \ \in)$.

Coordinator of the Marie Skłodowska-Curie Innovative Training Network ExSIDE (Expectation and Social Influence Dynamics in Economics), funded by the European Union (REA) under H2020, 2017-2021 (≈ 3.8 Mio. \in).

Coordinator of the European Doctorate in Economics - Erasmus Mundus (EDEEM) funded by the European Union (EACEA) under FP7 and H2020, 2013- 2019 ($\approx 2.8 \text{ Mio.} \in$).

Spokesperson of the International Research Training Group (Int. Graduiertenkolleg) 'Economic Behavior and Interaction Models' with the University Paris 1 (Pantheon-Sorbonne) funded by the German Science Foundation (DFG), 2009-2015 (≈ 2 Mio. \in).

Third Party Grants(only projects where I was the sole or a main applicant are listed):

Coordinator of the Research Group 'Economic and Legal Challenges in the Advent of Smart Products', funded by the Center for Interdisciplinary Research (ZiF) at Bielefeld University, 2021-2022.

Leader of the Bielefeld research unit in the EU H2020-project GROWINPRO (Growth Welfare Innovation Productivity), 2019-2022.

Project 'Innovation dynamics under market uncertainty and financial constraints' funded by the German Science Foundation (DFG) within the Collaborative Research Center (SFB 1283) 'Taming uncertainty and profiting from randomness and low regularity in analysis, stochastics and their applications', 2017 - 2025.

Project 'The Role of Professional Networks and Firm Hierarchies for Individual Careers and Wage Inequality' (jointly with Anna Zaharieva) funded by the German Science Foundation (DFG), 2017-2020.

Leader of the Bielefeld research unit in the EU H2020-project ISIGrowth (Innovation-fuelled, Sustainable, Inclusive Growth), 2015-2018.

Project 'Dynamic Oligopolistic Competition between Innovating Firms' (jointly with Peter Kort) funded by the German Science Foundation (DFG) and the NWO, 2013-2016.

Project 'Skill Heterogenitäten, Technologischer Wandel und wandelnde Perspektiven am Arbeitsmarkt' funded by the German Science Foundation (DFG) within the Collaborative Research Center (SFB 882) 'Von Heterogenitäten zu Ungleichheiten', 2011-2016.

Project 'EDE-NET (European Doctorate in Economics-Network)' funded by the German Academic Exchange Service (DAAD), 2010-2014.

Project 'Aufbau eines Agentenbasierten Simulationsmodells über die Diffusion von elektromobilen Fahrzeugen' jointly with different Institutes of the Fraunhofer Society, funded by the German Ministry for Education and Research (BMBF), 2009 - 2010.

Leader of the Bielefeld research unit in the EU STREP-project EURACE ('An agent-based software platform for Euopean economic policy design with heterogeneous interacting agents') funded in the 6th EU-FP, 2006 - 2009.

Member of the International Research Training Group (Int. Graduiertenkolleg) 'Stochastics and Real World Models' funded by the German Science Foundation (DFG), 2006-2010.

National Science Foundation (USA) Grant SES 0095606 'The Evolution of Investment Conventions', 2001-2002 (jointly with Bentley MacLeod).

Member of the special research program 'Adaptive Modelling and Information Systems in Economics and Management Science' funded by the Austrian Science Foundation, 1997 - 2002.

Erwin Schrödinger Grant of the Austrian Science Foundation, 1996 - 1997.

Invited Plenary Talks at International Conferences:

Workshop on Economics with Interacting Heterogeneous Agents (WEHIA 2021), Catholic University of Milano (online), June 2021.

Computational and Experimental Economics Workshop, Barcelona, June 2019.

CeNDEF@20 workshop, Amsterdam, October 2018.

Fifth International Symposium in Computational Economics and Finance, Paris, April 2018.

International Conference on 'Finance and Economic Growth in the Aftermath of the Crisis', Milano, September 2017.

6th World Congress of the International Microsimulation Association, Torino, June 2017.

GeComplexity Conference, Crete, May 2016.

2nd International Conference on Behavioral, Economic and Social-Cultural Computing, Nanjing, China, November 2015.

13th Viennese Workshop on Optimal Control and Dynamic Games, Vienna, May 2015.

15th International Schumpeter Society Conference, Jena, July 2014.

35th AMASES Annual Conference, Pisa, September 2011.

Econophysics Colloquium 2010, Taipei, November 2010.

6th European Meeting on Applied Evolutionary Economics (EMAEE), Jena, May 2009.

10th Annual Workshop on Economics with Interacting Heterogeneous Agents (WEHIA 2005), University of Essex, June 2005.

Doctoral Supervision:

Main supervisor (thesis completed and defended): 27 students

Referee:

Journals:

Journal of Political Economy, Econometrica, Journal of Economic Theory, Journal of Economic Dynamics and Control, Games and Economic Behavior, Economic Theory, Journal of Economic Behavior and Organization, IEEE Transactions on Evolutionary Computation, IEEE Transactions on Neural Networks plus approximately 25 additional scientific journals in Economics, Operations Research and Computer Science.

Publishers:

Academic Press, MIT Press, Oxford University Press, Cambridge University Press, Springer

Science Foundations:

German Science Foundation, National Science Foundation (USA), European Commission,

Austrian Science Foundation, Economic and Social Research Council (UK), Canadian Research Council, Ministero dell' Istruzione dell Universita e della Ricerca (Italy), Netherlands Organization for Scientific Research, Science Foundation of Ireland.

List of Publications

Herbert Dawid

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Citations (Google Scholar): 4337

h-index: 33

Books:

Dawid, H. (1999), Adaptive Learning by Genetic Algorithms, Analytical Results and Applications to Economic Models, 2nd extended and revised edition, Springer.

Edited Volumes:

Dawid H, and J. Arifovic (Eds.) (2021), Dynamic Analysis in Complex Economic Environments: Essays in Honor of Christophe Deissenberg, Springer.

Dawid H., Hanaki N. and J. Tuinstra (Eds.) (2020), Experimental and behavioral analyses in macroeconomics and finance", special issue of the Journal of Economic Dynamics and Control, 110.

Dawid, H. and Pyka, A. (Eds.) (2018), Evolutionary Dynamics and Agent-Based Modeling in Economics, special issue of Computational Economics, 52.

Dawid, H., He, X. and W. Semmler (Eds.) (2018). Special Issue in Honour of Prof. Carl Chiarella, special issue of the Journal of Economic Dynamics and Control, 91.

Bischi, G.-I., Dawid, H., Dieci, R. and A. Matsumoto (Eds.) (2017), *Nonlinear Economic Dynamics*, special issue of the Journal of Evolutionary Economics, 27 (5).

Dawid, H. and M. Falcone (Eds.) (2017), *Numerical Methods for Dynamic Games*, special issue of the Journal Dynamic Games and Applications, 7.

Dawid H., Dörner K.F., Feichtinger G., Kort P.M. and Seidl, A. (Eds.) (2016), *Dynamic Perspectives on Managerial Decision Making*, Springer.

Dawid, H. and W. Semmler (Eds.) (2011), Computational Methods in Economic Dynamics, Springer.

Dawid, H. and W. Semmler (Eds.) (2010), Computational perspectives in economics and finance: Methods, dynamic analysis and policy modeling, special issue of the Journal of Economic Dynamics and Control, 34.

Dawid, H. and G. Fagiolo (Eds.) (2008), Agent Based Models for Economic Policy Design special issue of the Journal of Economic Behavior and Organization, 67.

Dawid, H., Dörner, K., Dorffner, G., Fent, T., Feurstein, M., Hartl, R.F., Mild, A., Natter, M., Reimann, M., Taudes, A. (Eds.) (2002), *Quantitative Models of Learning Organizations*, Springer.

Dawid, H., Feichtinger, G. and R.F. Hartl (Eds.) (2001), Nonlinear Dynamics: Theory and Economic Applications, special issue of the Central European Journal of Operations Research, 9.

Dawid, H., Feichtinger, G. and R.F. Hartl (Eds.) (1999), Optimal Control and Differential Games, Annals of Operations Research, 88.

Dawid, H., Feichtinger, G. and R.F. Hartl (Eds.) (1999), Nonlinear Dynamical Systems and Adaptive Methods, Annals of Operations Research, 89.

Working Papers:

Arifovic J., Dawid H. and M. Nanumyan (2020), 'Efficiency Gains through Social Influence in a Minimum Effort Game ', Bielefeld Working Papers in Economics and Management, No. 01-2020.

Mitkova M.V. and H. Dawid (2020), 'Sectoral Employment Shifts and the Role of R&D: A Cross Country Comparison for Manufacturing and Service', Bielefeld Working Papers in Economics and Management, No. 02-2020.

Colombo L., Dawid H. and P. Harting (2019), 'R&D Location Strategies', Bielefeld Working Papers in Economics and Management, No. 10-2019.

Dawid, H., Gemkow, S., Harting, P., van der Hoog, S. and M. Neugart (2013), 'The Eurace@Unibi Model: An Agent-Based Macroeconomic Model for Economic Policy Analysis', Working Paper, Bielefeld University.

Refereed Journals:

Dawid, H. and M. Neugart (2022), 'Effects of Technological Change and Automation on Industry Structure and (Wage-)Inequality: Insights from a Dynamic Task-Based Model', forthcoming in *Journal of Evolutionary Economics*.

Dawid, H., Mitkova, M. and A. Zaharieva (2022), 'Optimal Promotions of Competing Firms in a Frictional Labour Market with Organizational Hierarchies', forthcoming in *Journal of Economics and Management Strategy*.

Basurto A., Dawid H., Harting P., Hepp J. and D. Kohlweyer (2022), 'How to design virus containment polices? A joint analysis of economic and epidemic dynamics under the COVID-19 pandemic', forthcoming in *Journal of Economic Interaction and Coordination*.

Dawid, H., Keoula, M.Y., Kopel, M. and P.M. Kort (2022), 'Dynamic Investment Strategies and Leadership in Product Innovation', forthcoming in *European Journal of Operational Research*.

Banas, L., Dawid, H., Randrianasolo, T.A., Storn, J. and X. Wen (2022), 'Numerical approximation of a system of Hamilton-Jacobi-Bellman equations arising in innovation dynamics', *Journal of Scientific Computing*, 92, 54.

Dawid H. and G. Muehlheusser (2022), 'Smart Products: Liability, Timing of Market Introduction, and Investments in Product Safety', *Journal of Economic Dynamics and Control*, 134, 104288.

Dawid, H. and S. Gezer (2022), 'Markov perfect equilibria in multi-mode differential games with endogenous timing of mode transitions', *Dynamic Games and Applications*, 12, 363-393.

Dawid, H. and J. Hepp (2022), 'Distributional Effects of Technological Regime Changes: Hysteresis, Concentration and Inequality Dynamics', The Review of Evolutionary Political

Economy, 3, 137-167.

Dawid H., Pellegrino G. and M. Vivarelli (2021), 'The role of demand in fostering product vs process innovation: a model and an empirical test', *Journal of Evolutionary Economics*, 31, 1553-1572.

Dawid H. and T. Hellmann (2020), 'R&D Investments Under Endogenous Cluster Formation', Journal of Economic Behavior and Organization, 174, 253-283.

Dawid H., Kopel M and P.M. Kort (2020), 'Product Innovation With Partial Capacity Rollover', Central European Journal of Operations Research, 28, 479-496.

van der Hoog, S. and H. Dawid (2019), 'Bubbles, Crashes and the Financial Cycle: Insights from a Stock-Flow Consistent Agent-Based Macroeconomic Model', *Macroeconomic Dynamics*, 23, 1205-1246.

Huberts N, Dawid H, Huisman K and P.M. Kort (2019), 'Entry Deterrence by Timing Rather than Overinvestment in a Strategic Real Options Framework', *European Journal of Operational Research*, 274, 165-185.

Dawid H, Harting P and S. van der Hoog (2019), 'Manager Remuneration, Share Buybacks and Firm Performance', *Industrial and Corporate Change*, 28, 681-706.

Dawid H, Harting P, van der Hoog S, Neugart M (2019), 'A Heterogeneous Agent Macroeconomic Model for Policy Evaluation: Improving Transparency and Reproducibility', *Journal of Evolutionary Economics*, 29, 467-538.

Dawid, H. (2019), 'Potential, Erfolge und Herausforderungen der Agenten-basierten Modellierung in den Wirtschaftswissenschaften', *List Forum*, 44, 767-782 (in german).

Dawid, H., Harting, P. and M. Neugart (2018), 'Cohesion Policy and Inequality Dynamics: Insights from a Heterogeneous Agents Macroeconomic Model', *Journal of Economic Behavior and Organization*, 150, 220-255.

Dawid, H., Harting, P. and M. Neugart (2018), Fiscal Transfers and Regional Economic Growth, *Review of International Economics*, 26, 651-671.

Colombo, L., Dawid, H., Piva, M. and M. Vivarelli (2017): 'Does Easy Start- Up Formation Hamper Incumbents R&D Investment? A Theoretical and Empirical Analysis,' *Small Business Economics*, 49(3), 513-531.

Dawid H, Keoula M, Kort PM (2017), 'Numerical Analysis of Markov-Perfect Equilibria with Multiple Stable Steady States: A Duopoly Application with Innovative Firms', *Dynamic Games and Applications*, 7, 555-577.

Dawid, H. and B. Zou (2017), 'Foreign direct investment with endogenous technology choice', *Pacific Economic Review*, 22, 3-22.

Dawid, H., Decker, R., Hermann, T., Jahnke, H., Klatt, W, König, R. and C. Stummer (2017), 'Management science in the era of smart consumer products: Challenges and research perspectives', *Central European Journal of Operations Research*, 25, 203-230.

Colombo, L. and H. Dawid (2016). 'Complementary Assets, Start-Ups and Incentives to Innovate', *International Journal of Industrial Organization*, 44, 177-190.

Dawid H, Keoula M, Kopel M, and P.M. Kort (2015), 'Product Innovation Incentives by an

Incumbent Firm: A Dynamic Analysis', Journal of Economic Behavior and Organization, 117, 411-438.

Dawid, H. and G. Muehlheusser (2015), 'Repeated Selection with Heterogenous Individuals and Relative Age Effect', *Journal of Economic Behavior and Organization*, 116, 387-406.

Colombo, L. and H. Dawid (2014), 'Strategic Location Choice Under Dynamic Oligopolistic Competition and Spillovers', *Journal of Economic Dynamics and Control*, 48, 288-307.

Dawid, H. and S. Gemkow (2014), 'How do social networks contribute to wage inequality? Insights from an agent-based analysis', *Industrial and Corporate Change*, 23,1171-1200.

Dawid, H., Harting, P. and M. Neugart (2014), 'Economic Convergence: Policy Implications from a Heterogeneous Agent Model', *Journal of Economic Dynamics and Control*, 44, 54-80.

Dawid, H. and T. Hellmann (2014), 'The Evolution of R&D Networks', *Journal of Economic Behavior and Organization*, 105, 158-172.

Dawid, H. and D. Heitmann (2014), 'Best Response Dynamics with Level-n Expectations in Two-Stage Games', *Journal of Economic Dynamics and Control*, 41, 130-153.

Dawid, H., Kopel, M and P.M. Kort (2013), 'R&D Competition versus R&D Cooperation in Oligoplistic Markets with Evolving Structure', *International Journal of Industrial Organization*, 31, 527-537.

Dawid, H., Kopel, M. and P.M. Kort (2013), 'New product introduction and capacity investment by incumbents: effects of size on strategy', *European Journal of Operational Research*, 230, 133-142.

Holcombe, M., Coakley, S., Kiran, M., Chin, S., Greenough, C., Worth, D., Cincotti, S., Raberto, M., Teglio, A., Deissenberg, C., van der Hoog, S., Dawid, H., Gemkow, S., Harting, P. and Neugart, M. (2013), 'Large-Scale Modeling of Economic Systems', *Complex Systems*, 22, 2.

Dawid, H., Gemkow, S., Harting, P. and M. Neugart (2012), 'Labor market integration policies and the convergence of regions: the role of skills and technology diffusion', *Journal of Evolutionary Economics*, 22, 543-562.

Colombo, L., Dawid, H. and K. Kabus (2012), 'When do Thick Venture Capital Markets Foster Innovation? An Evolutionary Analysis' *Journal of Evolutionary Economics*, 22, 79-108.

Dawid, H. and Reimann, M. (2011), 'Diversification: A Road to Inefficiency in Product Innovations?', *Journal of Evolutionary Economics*, 21, 191-229.

Dawid, H., Kopel, M., Kort, P.M. (2010), Dynamic Strategic Interaction Between an Innovating and a Non-innovating Incumbent', Central European Journal of Operations Research, 18, 453-463.

Dawid, H. and M. Neugart (2010), "Agent-based Models for Economic Policy Design", Eastern Economic Journal, 37, 44-50.

Dawid, H. and W. Semmler (2010), "Introduction to the special issue computational perspectives in economics and finance: Methods, dynamic analysis and policy modeling", *Jour-*

nal of Economic Dynamics and Control, 34, 1529-1530.

Dawid, H., Kopel, M. and P. Kort (2010), 'Innovation Threats and Strategic Responses in Oligopoly Markets', *Journal of Economic Behavior and Organization*, 75, 203-222.

Arifovic, J., Dawid, H., Deissenberg, C. and O. Kostyshyna, (2010), 'Learning Benevolent Leadership in a Heterogenous Agents Economy', *Journal of Economic Dynamics and Control*, 34, 1768-1790.

Dawid, H., Greiner, A. and B. Zou (2010), 'Optimal Foreign Investment Dynamics in the Presence of Technological Spillovers', *Journal of Economic Dynamics and Control*, 34, 296-311.

Dawid, H., Gemkow, S., Harting, P., Neugart M., (2009), 'Spatial Skill Heterogeneity and Growth: An Agent-based Policy Ananlysis', *Journal of Artificial Societies and Social Simulation*, 12(4), 5.

Dawid, H., Dangl, T. and M. Kopel (2009), 'Trash it or sell it? A strategic analysis of development and market introduction of product innovations', *International Game Theory Review*, 11, 321-345.

Dawid, H., Feichtinger, G., Goldstein, J.R. and V. Veliov (2009), 'Keeping a Learned Society Young', *Demographic Research*, 20, 541-558..

Deissenberg, C., van der Hoog, S. and Dawid, H. (2008), 'EURACE: A Massively Parallel Agent-based Model of the European Economy', *Applied Mathematics and Computation*, 204, 541-552.

Dawid, H., Gemkow, S., Harting, P., Kabus, K., Neugart, M. and Wersching, K. (2008), 'Skills, innovation, and growth: An agent-based policy analysis', *Journal of Economics and Statistics*, 228, 251-275.

Dawid, H. and MacLeod, W.B. (2008), 'Hold-up and the Evolution of Investment and Bargaining Norms', in *Games and Economic Behavior*, 62, 26-52.

Dawid, H. and Fagiolo, G. (2008), 'Agent-Based Models for Economic Policy Design: Introduction to the Special Issue', *Journal of Economic Behavior and Organization*, 67, 351-354.

Dawid, H. and Day, R. (2007), 'On Sustainable Growth and Collapse: Optimal and Adaptive Paths', *Journal of Economic Dynamics and Control*, 31, 2374-2397.

Dawid, H. (2007), 'Evolutionary game dynamics and the analysis of agent-based imitation models: the long run, the medium run and the importance of a global analysis', *Journal of Economic Dynamics and Control*, 31, 2108-2133.

Dawid, H. and J. Dermietzel (2006), 'How Robust is the Equal Split Norm? Responsive Strategies, Selection Mechanisms and the Need for Economic Interpretation of Simulation Parameters', *Computational Economics*, 28, 371-397.

Dawid, H. (2005), "Long Horizon versus Short Horizon Planning in Dynamic Optimization Problems with Incomplete Information", *Economic Theory*, 25, 575-597.

Dawid, H. and Deissenberg, C. (2005), "On the Efficiency-Effects of Private (Dis-)Trust in the Government", *Journal of Economic Behavior and Organization*, 57, 530-550.

Dawid, H. and Reimann, M. (2004), 'Evaluating Market Attractiveness: Individual Incen-

tives vs. Industrial Profitability', Computational Economics, 24, 321-355.

Bischi, G.I., Dawid, H. and Kopel, M. (2003), "Gaining the Competitive Edge Using Internal and External Spillovers: A Dynamic Analysis", *Journal of Economic Dynamics and Control*, 27, 2171-2193.

Bischi, G.I., Dawid, H. and Kopel, M. (2003), "Spillover Effects and the Evolution of Firm Clusters", *Journal of Economic Behavior and Organization*, 50, 47-75.

Dawid, H. and Kopel, M. (2003), "A Comparison of Exit and Voice Relationships under Common Uncertainty", *Journal of Economics and Management Strategy*, 12, 531-555.

Dawid, H., Feichtinger, G. and Novak, A. (2002), "Extortion as an Obstacle to Economic Growth: A Dynamic Game Analysis", *European Journal of Political Economy*, 18, 3, 499 - 516.

Dawid, H. and MacLeod, W.B. (2001), "Holdup and the Evolution of Bargaining Conventions", European Journal of Economics and Social Systems, 15, 3, 153-169.

Dawid H., König J., Strauss, C. (2001), "An Enhanced Rostering Model for Airline Crews", Comupters and Operations Research, 28, 671 - 688.

Dawid, H., Reimann, M. and Bullnheimer, B. (2001), "To Innovate or Not To Innovate?", *IEEE Transactions on Evolutionary Computation* (special issue on Agent-based Computational Economics), 5, 471-481.

Dawid, H. and Kopel, M. (2001), 'Zur Organisation zwischenbetrieblicher Beziehungen: Sind kurzfristige oder langfristige Vereinbarungen optimal?', Zeitschrift für Betriebswirtschaftslehre, 4, 51 - 72 (in german).

Dawid, H. (2000), "On the Emergence of Exchange and Mediation in a Production Economy", Journal of Economic Behavior and Organization, 41, 27-53.

Dawid, H. and Kopel, M. (1999), "On Optimal Cycles in Dynamic Programming Models With Convex Return Functions", *Economic Theory*, 13, 309-327.

Dawid, H. (1999), "On the Dynamics of Word of Mouth Learning with and without Anticipations", Annals of Operations Research, 89, 273 - 295.

Dawid, H. (1999), "On the Stability of the Discrete Time Replicator Dynamics with Inertia", *Mathematical Social Sciences*, 37, 265-280.

Dawid, H. (1999), "On the Convergence of Genetic Learning in a Double Auction Market", Journal of Economic Dynamics and Control, 23, 1545 - 1567.

Dawid, H. and Kopel, M. (1998), "The Appropriate Design of a Genetic Algorithm in Economic Applications Exemplified by a Model of the Cobweb Type", *Journal of Evolutionary Economics*, 8, 297-315.

Bullnheimer, B., Dawid, H. and Zeller, R. (1998), "Learning from Own and Foreign Experience: Technological Adaptation by Imitating Firms", Computational and Mathematical Organization Theory, 4,267-282.

Dawid, H. and Kopel, M. (1997), "On the economically optimal exploitation of a renewable resource: the case of a convex environment and a convex return function", *Journal of Economic Theory*, 76, 272-297.

Dawid, H. (1997), "Learning of Equilibria by a Population with Minimal Information", Journal of Economic Behavior and Organization, 32, 1-18.

Dawid, H., Kopel, M. and Feichtinger, G. (1997), "Complex solutions of nonconcave dynamic optimization models", *Economic Theory*, 9, 427-439.

Kopel, M., Dawid, H. and Feichtinger, G. (1997), "Periodic and chaotic programs of intertemporal optimization models with non-concave net benefit function", *Journal of Economic Behavior and Organization*, 33, 435-447.

Dawid, H. and Mehlmann, A. (1996), "Genetic Learning in Strategic Form Games", Complexity, 1, 5, 51-59.

Dawid, H. and Hornik, K. (1996), "The Dynamics of Genetic Algorithms in Interactive Environments", *Journal of Network and Computer Applications*, 19, 5-19.

Dawid, H. and Feichtinger, G. (1996), "Optimal Allocation of Drug Control Efforts: A Differential Game Analysis", Journal of Optimization Theory and Applications, 91, 2, 279-297.

Dawid, H. (1996), "Genetic Algorithms as a Model of Adaptive Learning in Economic Systems", Central European Journal of Operations Research and Economics, 4, 7-24.

Dawid, H. (1996), "Learning of cycles and sunspot equilibria by genetic algorithms", *Journal of Evolutionary Economics*, 6, 361-373.

Dawid, H. and Feichtinger, G. (1996), "On the Persistence of Corruption", *Journal of Economics*, 64, 177-193.

Dawid, H. and Feichtinger, G. (1995), "Complex optimal policies in an advertising diffusion model", Chaos, Solitons & Fractals, 5, 45-53.

Tragler, G., Feichtinger, G. and Dawid, H. (1994) "Optimal Resource Exploitation May Be Chaotic", Central European Journal of Operations Research and Economics, 3, 111-122.

Dawid, H. (1994), "A Markov Chain Analysis of Genetic Algorithms with a State Dependent Fitness Function", *Complex Systems*, **8**, 407-417.

Multiauthor Books and Proceedings:

Dawid H., Harting P. and M. Neugart (2021), 'The Role of (De-)Centralized Wage Setting for Industry Dynamics and Economic Growth. An Agent-Based Analysis with the Eurace@Unibi Model', in Dawid, H. and J. Arifovic (Eds.) "Dynamic Analysis in Complex Economic Environments", Springer, Berlin, pp. 205-230.

Dawid H. and S. Gezer (2021), 'Delaying Product Introduction in a Duopoly: A Strategic Dynamic Analysis', in Haunschmied J., Kovacevic R., Semmler W. and V. Veliov (Eds), "Dynamic Economic Problems with Regime Switches", Springer, Berlin, pp. 227-248.

Dawid, H., Hartl, R.F. and P.M. Kort (2020), 'Dynamic models of the firm with green energy and goodwill with a constant size of the output market', in Pineau, P.-R., Sigue, S. and S. Taboubi (Eds.) "Games in Management Science: Essays in Honor of Georges Zaccour", Spriner, Berlin, pp. 131-146.

Dawid, H. and D. Delli Gatti (2018), 'Agent-based Macroeconomics', in Hommes, C. and Lebaron, B. (Eds.) "Handbook of Computational Economics, Vol. 4 - Heterogeneous Agent

Models", Elsevier, Amsterdam, pp. 63-156.

Dawid, H., Gemkow, S., Harting, P., van der Hoog, S. and M. Neugart (2018), 'Agent-Based Macroeconomic Modeling and Policy Analysis: The Eurace@Unibi Model', in Chen, S-H., Kaboudan, M. and Y.-R. Du (Eds.), "Handbook on Computational Economics and Finance", Oxford University Press, pp. 490-519.

Dawid, H., Hartl, R.F. and P.M. Kort (2018), 'Dynamic Models of the Firm with Green Energy and Goodwill', in Feichtinger, G., Kovacevic, R. and G. Tragler (Eds.), "Control Systems and Mathematical Methods in Economics: Essays in Honor of Vladimir M. Veliov", Springer Lecture Notes in Economics and Mathematical Systems, pp. 279-296.

Colombo, L. and H. Dawid (2017), 'A Dynamic Model of Firms' Strategic Location Choice', in Commendatore, P., Kubin, I., Bougeas, S., Kirman, A., Kopel, M. and G.I. Bischi (Eds), "The Economy as a Complex Spatial System: Macro, Meso and Micro Perspectives", Springer Proceedings in Complexity, pp. 159-177.

Dawid H, Keoula M.Y. and Kort P.M. (2016), 'Skiba Phenomena in Markov Perfect Equilibria of Asymmetric Differential Games', in Dawid H, Dörner KF, Feichtinger G, Kort PM, Seidl A (Eds), "Dynamic Perspectives on Managerial Decision Making", Springer, pp. 63-76.

Dawid, H. (2015), 'Modeling the Economy as a Complex System', in B. Alves Furtado, P.A.M. Sakowski, M.H. Tovolli (Eds.), "Modeling Complex Systems for Public Policies", IPEA, Brasilia, pp. 191-216.

Ausloos, M., Dawid, H. and U. Merlone (2015), 'Spatial interactions in agent-based modeling', in P. Commendatore, S.S. Kayam and I. Kubin (Eds.), Complexity and Geographical Economics: Topics and Tools, Springer, pp. 353-377.

Dawid, H. and Zou, B. (2014), "Strategies of Foreign Direct Investment in the Presence of Technological Spillovers", in J.Haunschmied, V.M.Veliov, S.Wrzaczek (Eds.), "Dynamic Games in Economics", Springer, pp. 115-133.

Dawid, H. and P. Harting (2012), "Capturing Firm Behavior in Agent-Based Models of Industry Evolution and Macroeconomic Dynamics", in G. Bünsdorf (Ed.), "Applied Evolutionary Economics, Behavior and Organizations", Edward-Elgar, 103-130.

Dawid, H., Deissenberg, C. and Van der Hoog, S. (2008), "Production and Finance in EU-RACE" in K. Schredelseker, F. Hauser (Eds.), Complexity and Artificial Markets, Springer, pp. 147 - 158.

Dawid, H. (2006), "Agent-based Models of Innovation and Technological Change", in L. Tesfatsion and K. Judd (eds.), *Handbook of Computational Economics, Volume 2: Agent-Based Computational Economics*, North-Holland, pp. 1235-1272.

Dawid, H. and Wersching, K. (2006), "On Technological Specialization in Industrial Clusters: An Agent-based Analysis", forthcoming in J.P. Rennard (Ed.), *Handbook of Research on Nature Inspired Computing for Economy and Management*.

Dawid, H., Deissenberg, C. and P. Sevcik (2005), 'Cheaptalk, gullibility, and welfare in an environmental taxation game', in A. Haurie and G. Zaccour, (Eds.), *Dynamic Games: Theory and Applications*, pp. 175-192.

Behrens, D. and Dawid, H. (2004), "Genetic Learning of Nash Equilibria in Illicit Drug

Markets and Prerequisites for a Successful Crakcdown", in William Barnett, Christophe Deissenberg, and Gustav Feichtinger (Eds.), "Economic Complexity: Non-linear Dynamics, Multi-agents Economies, and Learning", ISETE Vol 14, Elsevier, Amsterdam, pp. 391-410.

Dawid, H., Dörner, K., Hartl, R.F. and Reimann, M. (2002): "Ant based computation in the management sciences", in: Dawid et al (Eds.): Quantitative models of learning organisations, Springer, Berlin/Heidelberg, pp 65–94.

H. Dawid (2000), "Learning to Trade and Mediate", in D. Delli Gatti, M. Gallegatti and A. Kirman (Eds.), *Interaction and Market Structure: Essays on Heterogeneity in Economics*, Springer, Berlin, 9 - 32.

Dawid, H. and Kopel, M. (2000), "Market Takeovers in Medieval Trade", in E.J. Dockner et al. (Eds.), Optimization, Dynamics and Economic Analysis: Essays in Honor of Gustav Feichtinger, Physica/Springer, Berlin, 118-133.

Behrens, D. and Dawid, H. (2000), "On the Imitation and Communication Effects in Illicit Drug Markets: A Genetic Algorithm Based Model", in R. Trappl (Ed.), Cybernetics and Systems 2000, 489 - 494.

Dawid, H., Feichtinger, G. and Jørgensen, S. (1999), "Crime and Law Enforcement: A Multistage Game", in J. Filar, K. Mitzukami and V. Gaitsgory (Eds.), *Advances in Dynamic Games and Applications*, Birkhauser, Boston.

Wirl, F., Novak, A., Feichtinger, G. and Dawid, H. (1997), "Indeterminacy of open-loop Nash equilibria: The ruling class versus the tabloid press, in H.G. Natke, Y. Ben-Hain (Eds.), *Uncertainty: Models and Measures*, Akademie-Verlag, 124-136.

Dawid, H. and Mehlmann, A. (1995), "Two Population Contests and the Language of Genetics", in: G. Paun (Ed.), *Mathematical Linguistics and Related Topics*, Editura Academiei, Bucarest, 88-95.

Dawid, H. (1995), "Learning by Genetic Algorithms in Evolutionary Games", in: U. Derigs (Ed.), Proceedings of the International Conference on Operations Research '94, Springer, Berlin, 261-266.

Dawid, H. and Mehlmann, A. (1995), "Conservative Agents in GA-deceptive Games", in: F. Breitenecker and I. Husinsky (Ed.), *Proceedings of the EUROSIM Simulation Congress EUROSIM 1995 Late Paper Volume*, ARGESIM, Vienna, 27-32.

F. Wirl, A. Novak, G. Feichtinger, H. Dawid, M. Hager (1995), "Corruption in Democratic Systems: A Differential Game between Polititians and the Press", in: Proceedings of the IFAC/IFIP/IFORS/SEDC Symposium on Modelling and Control of National and Regional Economies, The Institution of Engineers, Australia.

Book Reviews:

Dawid, H. (2019), Review of 'Agent-Based Models in Economics: A Toolkit' edited by D. Delli Gatti, G.Fagiolo, M. Gallegati, M. Richiardi and A. Russo, *Journal of Economic Literature*, 57, 180-182.

Dawid, H. (2005), Review of 'Heterogenous Agents, Interactions and Economic Performance' edited by R, Cowan and N. Jonard, *Journal of Economic Behavior and Organization*, 59, 453-456.

Dawid, H. (2002), Review of "Learning in Economics - Analysis and Application of Genetic Algorithms" by T. Riechmann, $Journal\ of\ Economics,\ 77,\ 283-287.$