



## **BĂDIN Andreea Luiza**



**CURRENT POSITION:** Associate Professor

**AFFILIATION/DEPARTMENT:** Department of Applied Mathematics

**ORCID RESEARCHER ID:** ResearcherID: A-8780-2011

<https://www.webofscience.com/wos/author/record/A-8780-2011>

ORCID 0009-0005-0636-2170 <https://orcid.org/0009-0005-0636-2170>

**URL FOR PERSONAL WEBSITE:**

**LINKEDIN PROFILE:** <https://ro.linkedin.com/in/luiza-badin-7375515>

**EMAIL:** [luiza.badin@csie.ase.ro](mailto:luiza.badin@csie.ase.ro)

### **PROFILE**

---

Luiza Bădin earned her Ph.D. in Mathematics from the University of Bucharest, Romania, in 2006. She is currently an Associate Professor at the Bucharest University of Economic Studies and a Researcher at the “Gheorghe Mihoc–Caius Iacob” Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy (ISMMA). She has been involved in several international research projects and served as the Principal Investigator for two national research projects funded by the Romanian Ministry of Education and Research through CNCS–UEFISCDI. Her research interests include computer-intensive statistical methods, econometric modeling, optimization, nonparametric frontier estimation with applications across various sectors.



## EDUCATION

---

### Habilitation

<b>Post-Doc</b>	-
<b>PhD (Doctorate)</b>	<b>2006</b> - PhD in Mathematics, University of Bucharest, Romania. Thesis: Bootstrap method and applications to statistical analysis of the data
<b>Master</b>	-
<b>Bachelor</b>	<b>1992</b> - Faculty of Mathematics and Computer Science, University of Bucharest, Romania

## PROFESSIONAL TRAINING

---

**2024** - Advanced Digital Skills Training Program (Programul de Formare a Competențelor Digitale Avansate)

## ACADEMIC MANAGEMENT

---

**2018** - Present - Director of the Center for Advanced Fundamental and Applied Mathematical Research (CCMAFA), Bucharest University of Economic Studies

**2024** - Present - Member of the Faculty Council, Faculty of Cybernetics, Statistics and Informatics, Bucharest University of Economic Studies

**2020 - 2024** - Member of the Faculty Council, Faculty of Cybernetics, Statistics and Informatics, Bucharest University of Economic Studies

**2016 - 2020** - Member of the Faculty Council, Faculty of Cybernetics, Statistics and Informatics, Bucharest University of Economic Studies

**2012 - 2016** - Member of the Senate of Bucharest University of Economic Studies

## ACADEMIC EXPERIENCE

---

<b>Year</b>	<b>Job title – Employer – Country</b>
<b>2013 - present</b>	Associate Professor – Department of Applied Mathematics – Bucharest University of Economic Studies – Romania
<b>2008 - present</b>	Researcher – Department of Statistical Inference, “Gheorghe Mihoc – Caius Iacob” Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy
<b>2001 - 2013</b>	Lecturer – Department of Applied Mathematics – Bucharest University of Economic Studies – Romania
<b>1996 - 2001</b>	Assistant Professor – Department of Applied Mathematics – Bucharest University of



Economic Studies – Romania

**1993 – 1996**

Junior Assistant – Department of Applied Mathematics – Bucharest University of  
Economic Studies – Romania

Courses taught :

Business Literacy for Data Analysis (FABIZ, Master Business Analytics)

Applied Mathematics to Economics (FABIZ, undergraduate)

Probability Theory and Mathematical Statistics (CSIE, undergraduate)

Hypotheses Testing (CSIE, undergraduate)

Linear Algebra and Calculus (undergraduate)

Financial Mathematics (undergraduate)

Financial Mathematics (postgraduate, European Institute for Enterprise Administration)

## RESEARCH PROFILE

Bootstrap and Resampling Methods, Monte Carlo Simulation

Nonparametric Statistics and Econometrics

Estimation and Inference in Frontier Models

Efficiency and Productivity Analysis

## LIST OF PUBLICATIONS

### ***List of articles published in peer reviewed journals:***

1. Pereira, M.A., Bădin, L., Kerstens, K., Silva, M.C., An integrative approach to reviewing the literature on judicial efficiency in Europe, *Socio-Economic Planning Sciences*, Vol. 98, 102137, 2025.
2. Agapie, A., Solomon, O., Bădin, L., Theory of (1+1) ES on SPHERE revisited, *IEEE Transactions on Evolutionary Computation*, Vol. 27 (4), 938-948, 2023.
3. Bădin, L., Daraio, C., Simar, L., A bootstrap approach for bandwidth selection in estimating
4. conditional efficiency measures, *European Journal of Operational Research*, vol. 277 (2), 784-797, 2019.
5. Bădin, L., Daraio, C. and L. Simar, Explaining inefficiency in nonparametric production
6. models: the state of the art, *Annals of Operations Research*, 214 (1), 5-30, 2014.
7. Bădin, L., Daraio, C., Simar, L., How to measure the impact of environmental factors in a nonparametric production model, *European Journal of Operational Research*, vol. 223 (3), 818-833, 2012.
8. Bădin, L., Daraio, C., Simar, L., Optimal Bandwidth Selection for Conditional Efficiency Measures: a Data-driven Approach, *European Journal of Operational Research*, vol. 201 (2), 633 - 640, 2010.
9. Bădin, L., Simar, L., A bias-corrected nonparametric envelopment estimator of frontiers, *Econometric Theory*, vol. 25 (5), 1289-1318, 2009.



10. Agapie, A., Bădin, L., Confidence Intervals for the Guesstimation Algorithm: a Bootstrap Approach, Economic Computation and Economic Cybernetics Studies and Research, Vol. 43, nr. 3, 167-178, 2009.
11. Bădin, L., Some Remarks on Nonparametric Estimation of Conditional Efficiency Measures, Economic Computation and Economic Cybernetics Studies and Research, Vol. 41, nr. 3-4, 239-244, 2007.
12. Bădin, L., A Note on Some Exact Jackknife and Bootstrap Estimators, Economic Computation and Economic Cybernetics Studies and Research, Vol. 41, no.1-2, 179-188, 2007.
13. Giuclea, M., Agapie, A., Bădin, L., Dedu, S., Mircioi, I., Solomon, O., Biteș, R., Determinants of Success in Graduation: An Empirical Study, Review of International Comparative Management, Vol. 22, 4, 579-589, 2021.
14. Agapie, A., Bădin, L., Dedu, S., Giuclea, M., Mircioi, I., Solomon, O., Analyzing factors accountable for success in completing university studies, Review of International Comparative Management, Vol. 21, 3, 423-431, 2020.
15. Bădin, L., Ciumara, R., Stochastic Frontier Estimation Using Simulated Annealing, Economic Computation and Economic Cybernetics Studies and Research, Vol. 40, no.3-4, 197-210, 2006.
16. Bădin, L., On the Consistency of Some Bootstrap Estimators, Economic Computation and Economic Cybernetics Studies and Research, 39-50, 4, 1999.

**List of papers published in conference proceedings:**

ISI Proceedings Papers

1. Bădin, L., Dedu, S., Șerban-Opreșcu, A.T., Șerban, F., Reflecting on Romanian Universities Ranking: An Entropy-based Approach to Evaluate Scientific Research, Proceedings of the 15th International Conference on Informatics in Economy, IE 2016: Education, Research & Business Technologies, 403-408, ISSN 2284-7472.
2. Agapie, A., Bădin, L., Hybrid Evolutionary Algorithms for Detecting Parameter Stability in Economic Systems, Proc. Of the World Multiconference on Information Systems, Analysis and Synthesis & Systemics
3. Cybernetics and Informatics (ISAS/SCI), Orlando, Florida, Vol. VIII, pp 93-98, 1999, ISBN 980-07-5919-0.

**List of books & book chapters:**

1. Toma, A., Keziou, A., Bădin, L., Dedu, S., Equivariant robust estimators for moment condition models (Chapter 19) Yiannis Dimotikalis, Christos H. Skiadas (Eds.), Data Analysis and Related Applications 4: New Approaches, ISTE-Wiley, 11 pg, 2024.
2. Bădin, L., Mastromarco, C., Lagravinese, R., A nonparametric journey through conditional frontier models, in The Cambridge Handbook of Healthcare - Productivity, Efficiency, Effectiveness, Eds. Grosskopf, S., Valdmanis, V. and V. Zelenyuk, Cambridge University Press, 2024.
3. Bădin, L., Dedu, S., Șerban-Opreșcu, A.T., Șerban, F., Reflecting on Romanian Universities Ranking:



- An Entropy-based Approach to Evaluate Scientific Research. In: Silaghi G., Buchmann R., Boja C. (Eds.), Lecture Notes in Business Information Processing, vol. 273, pp. 175–183, Springer, 2018, ISBN 9787-3-319-73458-3.
4. Bădin, L., Daraio, C., Explaining Efficiency with Nonparametric Frontier Models. Recent Developments in Statistical Inference, in Exploring Research Frontiers in Contemporary Statistics and Econometrics, A Festschrift in honor of Leopold Simar, Eds. Ingrid Van Keilegom and Paul Wilson, Springer-Verlag, 2012, DOI 10.1007/978-3-7908-2349-3 7.
  5. Bădin, L., Horvat, L., Wagner, P., Analiza eficienței și productivității industriei românești în perioada 1991–1997, în Marin, D., Spircu, L., Analize economice cantitative, Editura Independența Economică, 226–238, 2001, ISBN 973-99972-7-9 (in Romanian).

### **Case Studies:**

## **SCIENTIFIC COMMITTEES OF ACADEMIC JOURNALS / CONFERENCES, REVIEW**

---

### Editorial Board Membership

**2016 – present** Member of the Editorial Advisory Board of Economic Computation and Economic Cybernetics Studies and Research

**2010 – present** Member of the Editorial Board of Applications and Applied Mathematics: An International Journal (former Godishnik Vissh. Uchebn. Zaved. Prilozhna Mat. – Annals of Technical University Sofia, Applied Mathematics), included in Current Mathematical Publications of AMS, indexed in MathSciNet, Zentralblatt MATH.

### Reviewer for International Journals:

- Annals of Operations Research, Springer
- Central European Journal of Operations Research, Springer
- European Journal of Operational Research, Elsevier
- Ecological Economics, Elsevier
- Health Care Management Science, Springer
- Journal of Multivariate Analysis, Elsevier
- Journal of Productivity Analysis, Springer
- Omega - International Journal of Management Science, Elsevier
- Scientometrics, Springer
- Socio-Economic Planning Sciences, Elsevier

## **PROJECTS**

---

### Project Management Experience



<b>Year</b>	<b>Project title - Role – Funder – Budget – link to project webpage</b>
<b>2021 – 2025</b>	<i>Efficient Justice for All: Improving Court Efficiency through EU Benchmarking - Management Committee Member, CORE Action Group member and Workgroup Leader WG2 (Measurement) - COST (European Cooperation in Science and Technology), COST Action CA20131 - 500K Euro - <a href="https://efficientjusticeforall.org/">https://efficientjusticeforall.org/</a></i>
<b>2015 – 2017</b>	<i>Per Aspera Ad Astra: Advanced Econometric Modeling and Quantitative Analysis to Evaluate and Explain Performances in Scientific Research, PN-II-RU-TE-2014-4-2905, Principal Investigator – CNCS-UEFISCDI – 549.976 Lei - <a href="http://res-eval.ase.ro">http://res-eval.ase.ro</a></i>
<b>2011 – 2016</b>	<i>Assessing the Impact of External, Environmental Factors on the Efficiency of Economic Producers: Statistical Modeling, Software, Applications, PN-II-ID-PCE-2011-3-0893, Principal Investigator – CNCS-UEFISCDI – 1.114.550 Lei - <a href="http://z-factor.ase.ro/">http://z-factor.ase.ro/</a></i>

#### Other Projects

- *Robust Empirical Likelihood and Related Methods for Semiparametric Models, PN-III-P4-ID-PCE-2020 - 1112, financed by CNCS-UEFISCDI (National Competition), 2021-2023, member of the project team.*
- *Comparative Evaluation Techniques of Academic Competencies in Romania, PROGRAM 4 'Partnerships in priority domains', PN II 91-047/18.09.2007, 2007 - 2010 (Phases I, II, III), member of the project team.*
- *The Efficiency of the Academic Education in Romania in View of the Dynamics of the Educational-Formation Requirements, Project CEEX 05-D8-66/11.10.2005, financed by CERES, 2005-2008, member of the project team.*
- *Perfecționarea predării și învățării științelor economice folosind software matematic specializat - pregătirea exploatării extinse, Contract grant CNFIS nr. 93, 2001, member of the project team.*
- *Perfecționarea predării și învățării științelor economice folosind software matematic specializat - etapa pilot, Contract grant CNFIS nr. 37, 1999, member of the project team.*

#### OTHER RELEVANT PROFESSIONAL EXPERIENCE

- 2023** Member of the Organizing Committee of The 24th Annual Conference of the Romanian Society of Probability and Statistics, Bucharest, April 21-22
- 2022** Member of the Organizing Committee of The 23rd Annual Conference of the Romanian Society of Probability and Statistics, Bucharest, November 18-19
- 2020** – present Member of the Faculty Council, Faculty of Cybernetics, Statistics and Economic Informatics, Bucharest University of Economic Studies
- 2019** Member of the Organizing Committee of The 22nd Annual Conference of the Romanian Society of Probability and Statistics, Bucharest, May 10-11
- 2018** – present Director of the Centre for Advanced Fundamental and Applied Mathematical Research (CCMAFA), Bucharest University of Economic Studies
- 2016** – present Member of the Editorial Advisory Board of Economic Computation and Economic



## Cybernetics Studies and Research

**2010** – present Member of the Editorial Board of Applications and Applied Mathematics: An International Journal (former Godishnik Vissh. Uchebn. Zaved. Prilozhna Mat. – Annals of Technical University Sofia, Applied Mathematics), included in Current Mathematical Publications of AMS, indexed in MathSciNet, Zentralblatt MATH.

## PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS

---

**2017 – present** Member of ERCIM and CMStatistics

**1999 – present** Member of the Romanian Society of Probability and Statistics

## GRANTS AND HONORS

---

**November 2024** – AFER (The Association of Faculties of Economics in Romania) prize for the best article published in an international Economics journal in 2023

National Council of Scientific Research awards for publication in top ranked ISI journals: Q1 in 2009, 2010, 2012, 2019; Q2 in 2014.

## INTERNATIONAL EXPERIENCE / ACADEMIC ENGAGEMENT

---

### Invited Talks, Courses, Seminars

- Bădin, L., Bandwidth selection for nonparametric conditional efficiency estimation, Symposium on Production Frontiers and Efficiency Measures, TBS Education Research Center of Excellence on Sustainable Development and CSR, Toulouse Business School, March 28–29, Toulouse, France.
- Bădin, L., Confidence intervals for efficiency scores in non-convex technologies, Applied Economics Seminar, School of Economics / CEPA, University of Queensland, August 7, 2017, Brisbane, Australia.
- Bădin, L., Nonparametric Conditional Efficiency Analysis: Recent Methodological Developments and Practical Implementation, Applied Economics Seminar, School of Economics / CEPA, University of Queensland, July 16, 2014, Brisbane, Australia.
- Bădin, L., CondEff: A Toolbox for Conditional Efficiency Measurement, Seminar MORE @ DIAG, Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza University of Rome, July 4, 2013, Rome, Italy.
- Bădin, L., Bias Correction for Nonparametric Conditional and Unconditional Efficiency Estimators: A Monte Carlo Study, Exploring Research Frontiers in Contemporary Statistics and Econometrics: Conference in Honor of Professor Leopold Simar, 14–15 May 2009, Institute of Statistics, Universite Catholique de Louvain, Louvain la Neuve, Belgium.
- Bădin, L., Bootstrap Methods in Statistics - An Introductory Course, International School Multidimensional Signal Processing And Analysis School: Methods, Algorithms, Technologies, Applications (MSPAS/ETASM), XII-th Edition, July 17–29, 2006, Braşov.



## LANGUAGES

---

**English** - Proficient

**French** - Upper Intermediate

**Italian** - Intermediate

## SKILLS

---

**Software skills:** Matlab, R, Statistica, LaTeX, Microsoft Office.

Excellent team working, technical, analytical, communication skills.