

# Emanuele Borgonovo

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FULL PROFESSOR

**Decision Analysis**

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## Biography

Emanuele Borgonovo is Full Professor at the Department of Decision Sciences of Bocconi University, and director of the new Bachelor in Economics, Management and Computer Science at Bocconi University, of which he also led the construction process. He is a fellow of the Bocconi Institute for Data Science and Analytics and has been director of the Eleusi Research Center from 2008 to 2012. He has also been director of SDA Bocconi Management Science Lab from 2013 till 2017. He is the current President-Elect of the Decision Analysis Society of INFORMS. He is co-editor-in-chief of the European Journal of Operational Research, and advisor of the Springer International Series in Management Science and Operations Research.

He holds a Ph.D. in Probabilistic Risk Assessment from the Massachusetts Institute of Technology, conducted under the supervision of Prof. George E. Apostolakis. He is the recipient of several national and international awards, among which the 2017 Chinese Academy of Sciences President's Visiting Professor Fellowship, the 2015 IBM Faculty Award, the honorary memberships of "Sc, The Scientific Research Society of North America", "The Honorary Society of the American Nuclear Society," the "McCormack fellowship of the Westinghouse Corporation," nine times the Bocconi Excellence in Research award between 2005 and 2020, twice the Bocconi Excellence in Teaching award, as well as several best paper awards and excellence in refereeing awards. In 2016 he has been elected member of the Council of the Decision Analysis Society of INFORMS, and since 2013 he is the Co-Chair of the Committee on Uncertainty Analysis of the European Safety and Reliability Association.

He is a member of the editorial boards of several international journals, such as Risk Analysis, Decision Analysis, Reliability Engineering and System Safety, the Journal of Business Logistics, the Journal of Risk and Reliability, etc.. He has published more than 100 scientific articles, with works appeared in journals such as Journal of the Royal Statistical Society B, Management Science, Operations Research, Nature Climate Change, Risk Analysis, European Journal of Operational Research, Reliability Engineering & System Safety, SIAM/ASA Journal on Uncertainty Quantification, Water Resources Research, etc.

He has worked in international research projects with institutions such as the US Defense Advanced Research Project Agency (DARPA), the Idaho National Laboratory, the US Department of Energy, the US Nuclear Regulatory Commission, Electricité de France, Charles River Analytics, etc. His research interests concern Machine Learning, Sensitivity Analysis, Decision Analysis, Risk Analysis and Uncertainty Quantification. In his works, he has introduced several new sensitivity analysis techniques. His technique, the differential importance measure, has been introduced in the NASA Probabilistic Risk Assessment Procedures Guide for NASA Managers and Practitioners. He is the author of the book: "Sensitivity Analysis: An Introduction for the Management Scientist", <http://www.springer.com/gp/book/9783319522579>.

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## ARTICLES IN SCHOLARLY JOURNALS

BORGONOVO E., RABITTI G.

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## RESEARCH MONOGRAPHS

BORGONOVO E.

**Sensitivity analysis: an introduction for the management scientist**

Springer International Publishing, , 2017

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## EDITED BOOKS

MOLTENI L., BORGONOVO E. (EDS.)

**Quando ai manager danno i numeri . Come prendere decisioni nell'era dei big data**

Egea, Milano, Italy, 2020

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## ARTICLES IN NATIONAL/INTERNATIONAL NEWSPAPERS

BORGONOVO E., CASELLI S., CILLO A., MASCIANDARO D., RABITTI G.

**Central bank digital currencies, cryptocurrencies, and privacy: What experiments tell us**

VoxEU – CEPR, 28 October, 2021

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**Money, digital cash and cryptocurrencies: Privacy matters**

VoxEU – CEPR, 12 March, 2019

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## EDITORIALS IN JOURNAL

BORGONOVO E., BUSACCA B., SODA G.

**L'onda dei Big Data: minaccia o opportunità**

2015, *Economia & Management*, Milano, Italy

BORGONOVO E., TARANTOLA S.

**Advances in Sensitivity Analysis**

2012, *Reliability Engineering & System Safety*, Netherlands (The)

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## ENTRY (IN DICTIONARY OR ENCYCLOPEDIA)

BORGONOVO E.

**Sensitivity Analysis in Decision Making** in *Wiley Encyclopedia of Operations Research and Management Science*

J. J. Cochran, L. A. Cox, Jr. Pinar Keskinocak, J. P. Kharoufeh, J. C. Smith(Ed), John Wiley & Sons, pp.1076–1076, 2013

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## INTERVIEW ARTICLES

BORGONOVO E., BUSACCA B.

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2015, *Economia & Management*, Milano, Italy

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## OTHER

BORGONOVO E., GRANDO A.

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## PROCEEDINGS/PRESENTATIONS

BORGONOVO E., BAUCCELLS M., BARR J., PLISCHKE E., RABITZ H.

**On the Properties of Graphical Tools**

*Advances in Decision Analysis Conference (ADA 2022), June 22-24 2022, Washington D.C., United States of America*

CILLO A., ULU C., BORGONOVO E., ORTIS A., BATTIATO S.

**Should Advisors Signal Access to Algorithms?**

*Advances in Decision Analysis Conference (ADA 2022), June 22-24 2022, Washington D.C., United States of America*

CILLO A., ULU C., BORGONOVO E., ORTIS A., BATTIATO S.

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*FUR Conference, July 11-14, 2022, Ghent, Belgium*

BORGONOVO E., SMITH C.

**Importance measures with finite changes: the relationship between Fussell-Vesely and total order reliability importance**

*20th European Safety and Reliability Conference, ESREL 2011, Advances in Safety, Reliability and Risk Management - September 18-22, 2012, Troyes, France*

BORGONOVO E., SMITH C.

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*20th European Safety and Reliability Conference, ESREL 2011, Advances in Safety, Reliability and Risk Management - September 18-22, 2012, Troyes, France*

BORGONOVO E., ANDERSON B., ROSON R., GALEOTTI M.

**Global Sensitivity Analysis and the Economics of Climate Change**

*6th International Congress on Environmental Modelling and Software (iEMSs) - July 1-5 2012, Leipzig, Germany*

BORGONOVO E., PECCATI L.

**Value of Information in the Appraisal of Industrial Investments**

*17th International Working Seminar on Production Economics - February 20-24 2012, Innsbruck, Austria*

BORGONOVO E., BAUCCELLS M.

**Probabilistic Sensitivity of Uncertain Cash Flow Streams**

*INFORMS Annual Meeting Proceedings - November 13-16, 2011, Charlotte, North Carolina, United States of America*

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**Use of HDMR metamodel for seismic fragility analysis**

*Applications of Statistics and Probability in Civil Engineering. Proceedings of the 11th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP11) - August 1-4, 2011, Zürich, Switzerland*

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## RESEARCH NOTES OR SHORT ARTICLES IN JOURNALS

PERCOCO M., BORGONOVO E.

**On the Sensitivity Analysis of Internal Rates of Return**

2012, International Journal of Production Economics, United States of America

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## RESEARCH REPORTS

BORGONOVO E., POLETTI C.

## WORKING PAPERS

CASELLI S., BORGONOVO E., CILLO A., MASCIANDARO D.

**Beyond Bitcoin and Cash: Do We Would Like a Central Bank Digital Currency? A Financial and Political Economics Approach**

2017, SSRN Electronic Journal

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## Grants & Honors

Excellence in Research Award – Università Commerciale Luigi Bocconi , 2020

Excellence in Teaching Award – Università Commerciale Luigi Bocconi , 2020

IBM Faculty Award , 2015

Teaching Excellence Award – Università Commerciale Luigi Bocconi , 2015

Best Risk Analysis Paper Award, from 'Risk Analysis, an International Journal' for the paper: "Uncertainty in Climate Change: Can Global Sensitivity Analysis be of Help?", with B. Anderson, M. Galeotti and R. Roson – SRA – Society for Risk Analysis , 2014

Best Reviewer Award 'European Journal of Operational Research' , 2013

Best Reviewer Award 'Reliability Engineering and System Safety' , 2013

Best Reviewer Award 'Risk Analysis' , 2013

Best Research Paper Award from the journal 'Economia & Management' – SDA Bocconi School of Management , 2012

Best Reviewer Award 'Environmental Modelling and Software' , 2012

Research Excellence Award – Università Commerciale Luigi Bocconi , 2012

Best Reviewer Award 'European Journal of Operational Research' , 2011

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