ALESSANDRO **BERTONI**

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BRIEF STATEMENT ON RESEARCH ACTIVITIES

Alessandro Bertoni's latest research focuses on data-driven solutions for the design and implementation of product and service systems, with a particular interest in the planning, design and deployment of digital twins for the assessment of value and sustainability implications for major technology shifts in complex industrial contexts. The latest industrial collaboration focused on the benchmark of Sustainable Concepting Environment for multifactor optimization in maritime vessels design.

EXPERIENCE

FROM APRIL 2025
PROFESSOR, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

JULY 2020 TO MARCH 2025
BITRÄDANDE PROFESSOR, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

DECEMBER 2019 TO JUNE 2020
DOCENT, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

NOVEMBER 2016 TO DECEMBER 2019
SENIOR LECTURER, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

OCTOBER 2016
VISITING LECTURER, CHINA JILIANG UNIVERSITY, HANGZHOU (CHINA)

NOVEMBER 2014 TO OCTOBER 2016
POST DOCTORAL RESEARCH FELLOW, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

FEBRUARY 2014 TO OCTOBER 2014
PROJECT LEADER, BLEKINGE INSTITUTE OF TECHNOLOGY (SWEDEN)

MAY 2010 TO DECEMBER 2013
DOCTORAL STUDENT, LULEÅ UNIVERSITY OF TECHNOLOGY (SWEDEN)

JANUARY 2010 TO APRIL 2010
GENERAL DIRECTOR ASSISTANT, SETCO, CLUSONE (ITALY)

DATES FROM OCTOBER 2008 TO APRIL 2009
TRAINEE, LMS INTERNATIONAL, LEUVEN (BELGIUM)

EDUCATION

DECEMBER 2013
DOCTORAL DEGREE IN PRODUCT INNOVATION, LULEÅ UNIVERSITY OF TECHNOLOGY (SWEDEN)

MARCH 2012
LICENTIATE DEGREE IN FUNCTIONAL PRODUCT DEVELOPMENT, LULEÅ UNIVERSITY OF TECHNOLOGY (SWEDEN)

SEPTEMBER 2009
MASTER DEGREE IN MANAGEMENT ENGINEERING, UNIVERSITY OF BERGAMO

JULY 2017
BACHELOR DEGREE IN MANAGEMENT ENGINEERING, UNIVERSITY OF BERGAMO

MAJOR LEADERSHIP, COLLABORATION AND PARTICIPATION IN RESEARCH PROJECTS

- VINNOVA FFI – TESTED-SOS - Tested Site Optimization Solutions (2025 – 2027)
  - Main applicant for BTH, project leader

- DIRECT PRIVATE Funding PROSUCCO: Benchmark of Sustainable Concepting Environment for multifactor optimization in maritime vessels design (2024)
  - Project leader
- VINNOVA FFI – FELD - Future Fossil Free Rock Loading Solution (2022 – 2025)
  - Project member
- VINNOVA FFI – TRUST-SOS - TRUSTed – Site Optimisation Solutions (2021 – 2024)
  - Contributor to application, project member
- VINNOVA FFI -ASPECT – a system for electric and connected transport solutions (From November 2021 to June 2024)
  - Contributor to application, project member
- KKS NU 2020. "Nätbaserad utbildining för digitalizering och Industi 4.0" (online based education for digitalization and Industry 4.0). (From September 2021 to June 2023)
  - Main applicant, project leader and project coordinator
- VINNOVA - eTwin "Digital-Twin enabled Transition into Electromobility and Autonomy in Construction Equipment" (From May 2021 to October 2021)
  - Main applicant, project leader and project coordinator
- KKS AVANS 2019 – "Development of Second-Cycle MSc Programme in Mechanical Engineering" (From March 2019 to January 2023)
  - Project member
- KKS Model-Driven Development and Decision Support (MD3S and MD3S+) Plus. (From February 2014 to June 2022)
  - Project member and contributor to the application
- VINNOVA VITUM. (From December 2014 to June 2017)
  - Project member and project coordinator for Blekinge Institute of Technology.
- EU FP7-IP CRESCENDO. (From May 2010 to October 2012)
  - Project member.

MAJOR PUBLICATIONS RELATED TO THE PROJECT

- Melén, C.N.K.T., Machchhar, R.J. and Bertoni, A., 2024. Merging agent-based simulation and vehicle dynamics: a hybrid approach for value exploration in the mining industry. Proceedings of the Design Society, 4, pp.2755-2764. https://urn.kb.se/resolve?urn=urn:nbn:se:bth-26249
- · Bertoni, A., 2023. Mitigating uncertainty in conceptual design using operational scenario simulations: a data-driven extension of the EVOKE approach. Proceedings of the Design Society, 3, pp.2665-2674. https://urn.kb.se/resolve?urn=urn:nbn:se:bth-25258
- Raj Jiten Machchhar Carl Nils Konrad Toller, Alessandro Bertoni, Marco Bertoni. Data-driven value creation in Smart Product-Service System design: State-of-the-art and research directions. Computers in Industry, 137, May 2022, 103606
- Bertoni, A., R.J. Machchhar, T. Larsson, B. Frank (2022). Digital Twins of Operational Scenarios in Mining for Design of Customized Product-Service Systems Solutions. Procedia CIRP, Volume 109, 2022, Pages 532-537, ISSN 2212-8271, https://doi.org/10.1016/j.procir.2022.05.290.

ACTIVITIES AS REVIEWER:

- **Scientific Journals:** Artificial Intelligence for Engineering Design, Analysis and Manufacturing, Concurrent Engineering Research and Applications, Expert Systems with Applications, Journal of Cleaner Production, Journal of Systems Science and Systems Engineering. European Journal of Engineering Education, Education Sciences, CIRP Journal of Manufacturing Science and Technology, Design Science, Education Sciences
- **Research funder:** reviewer for German Research Foundation.

ACADEMIC MEMBERSHIP

- **Technical scientific committee of**: International Design Conference, International Conference on Research into Design, International Conference on Cognitive Info Communication, International Conference on Engineering Design
- **Member of**: Design society, International Council of Systems Engineering

CITATION INDEXES:

ORCID: http://orcid.org/0000-0001-5114-4811
Citation Indices
(Google Scholar data, updated 26th march 2025)
- Citations: 1308

- h-index: 20
- i10 index: 30

Google Scholar: https://scholar.google.se/citations?user=DtofyKwAAAAJ&hl=en