**Centre de Recherche
en Automatique de Nancy**

**UMR 7039
UNIVERSITY OF LORRAINE
CNRS**

School of Engineering in Computing and Digital Sciences

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Fellow of the Academia Europaea (Academy of Europe)
Fellow of the National Academy of Artificial Intelligence
Fellow of the AAIA (Asia-Pacific Artificial Intelligence Association)
Fellow of the AIIA (Artificial Intelligence Industry Alliance)
IEEE Senior Member, ACM Member
Chairholder of the industry/academy chair HUMAN-AI, co-sponsored by ANR/ENACT-AI cluster and MG-IB

Research topics

My research field is in information systems modelling and semantics formalisation for enterprise systems interoperability, with applications in enterprise, manufacturing processes and PLM systems. I am applying Hybrid Artificial Intelligence techniques to the cognitive interoperability of Cyber-Physical Systems and Human-centric systems, including cognitive systems.

Work experience
Since 2008

Professor of Enterprise Information Systems at University of Lorraine

School of Engineering in Information Technology (TELECOM Nancy)
Associate school of Institut Mines-Telecom

- **Director of International relationships since 2014**
- **Responsible of the Major in "Information Systems for the Intelligent Enterprise" since 2002**
- Deputy Director from 2009 and 2012.
- Head of External Relationships from 2008 and 2014

2023 -
2020 -
2020 – 2023

Member of the IFAC Technical Board
Vice-Chair of the IFAC Technical Committee 9.3 on Control for Smart Cities

Chairman of the IFAC French National Member Organization (NMO)

1991 - 2008	**Associate Professor**
	University Henri Poincaré, Nancy I, France

- 1991 – 2002 : School of Engineering in Wood Science and Technology, Nancy-University
- 2003 – 2008 : School of Engineering in Information Technology, Nancy-University

Researcher

- Research Centre for Automatic Control (CRAN), University of Lorraine, CNRS

Education

- 2006 : Habilitation à Diriger des Recherches, University Henri Poincaré
- 1991 : Ph.D on "Production Engineering", University Henri Poincaré
- 1987 : MSc on "Production Engineering", University Henri Poincaré

Editorial and Scientific boards

- **General co-chair** of OnTheMove Federated Conferences, http://www.onthemove-conferences.org
- **Editor-in-Chief** of Annual Reviews In Control (ARC), ISSN 1367-5788

http://www.journals.elsevier.com/annual-reviews-in-control

- **Regional Associate Editor Europe** of the International Journal of Intelligent Manufacturing (JIM),

http://www.springer.com/business+%26+management/production/journal/10845, Springer, ISSN 1572-8145

- **Associate Editor** of the Enterprise Information Systems journal (EIS), http://www.tandfonline.com/action/journalInformation?journalCode=teis20, Taylor & Francis, ISSN 1751-7575
- **Associate Editor** of the IEEE Internet of Things Journal (IoTJ), http://http://ieee-iotj.org, IEEE (2019-2024)
- **Associate Editor** of the Journal of Industrial Information Integration (JIII), https://www.journals.elsevier.com/journal-of-industrial-information-integration, Elsevier, ISSN 2452-414X
- **Editor** of Engineering Applications of Artificial Intelligence (EAAI), ISSN 0952-1976

https://www.journals.elsevier.com/engineering-applications-of-artificial-intelligence

- **Member of the Editorial Board** of Annual Reviews In Control (ARC), ISSN 1367-5788

http://www.journals.elsevier.com/annual-reviews-in-control

- **Member of the Editorial Board** of Computers In Industry (CII), ISSN 0166-3615

- **Member of the Editorial Board** of the International Journal of Computer Integrated Manufacturing (IJCIM), ISSN 1362-3052

- **Member of the Editorial Board** of International Journal on Universal Computer Science (JUCS), ISSN 0948-695x

- **Member of the Editorial Board** of the International Journal on Advances in Intelligent Systems (IJAIS), ISSN 1942-2679

Member of the Advisory Board of the Digital Twin International Journal (DTIJ), ISSN 2752-5783

- **IPC co-chair** of CoopIS'2010 international conference, Co-chair of the CoopIS steering Committee

Member of the National Academy of Artificial Intelligence 2025

IEEE Senior Member 2024

Awards

IFAC TC5.3 2023 Award

IFAC France NMO Outstanding Award 2019

Member of the Academia Europaea since 2018

IFAC France Award 2013

INCOSE 2015 Outstanding Service Award

IFAC 2017 Outstanding Service Award

International Research Projects participation

- French chapter coordinator: FunStep-IG ESPRIT EP 29711 "standard for product data exchange for the furniture industry" (10/1998-04/2000)
- French chapter coordinator: Cofurn IST-2000-25183 Thematic Network "Co-operation for consensus, standardisation and interoperability to support e-com services in the FURNiture industries sector" (12/2000-11/2002)
- FSAP-DIS « funStep-Application Protocol Development Project » (03/2002-02/2004)
- Task Force IFAC/IFIP "Architectures for Enterprise Integration"
- IMS Smart-fm IMS-2001-00014 "A standards-compliant framework to support complete integrated product life-cycle information management and electronic commerce for the furniture manufacturing (fm) industry, in the advent of the smart enterprises" (05/2002-04/2005)
- UEML IST–2001–34229 Thematic Network "Unified Enterprise Modelling Language" (03/2002-05/2003)
- Core-member in the FP6 Network of Excellence NoE INTEROP IST 508011 « Interoperability research for

Networked Enterprises Applications and Software »
(11/2003-10/2006).
- COST Action IC1404 "Multi-Paradigm Modelling for Cyber-Physical Systems (MPM4CPS)" (2014-2018)
- COST Action TD1406 "Innovation in Intelligent Management of Heritage Buildings (i2MHB)" (2015-2019)
- H2020 Marie Curie RISE RUC-APS (Enhancing and implementing Knowledge based ICT solutions within high Risk and Uncertain Conditions for Agriculture Production Systems" 2016-2020
- H2020 DIH4CPS (Fostering DIHs for Embedding Interoperability in Cyber-Physical Systems of European SMEs) 2020-2022
- Horizon Europe EDINAF (European Digital Naval Foundation) 2023-2026

Selected Publications in Journals

Panetto H. (2007). Towards a Classification Framework for Interoperability of Enterprise Applications. *International Journal of CIM*, **20/8**, 727-740, Taylor & Francis, December, ISSN: 0951-192X

Panetto H., Molina A. (2008). Enterprise Integration and Interoperability in Manufacturing Systems: trends and issues. In: Special issue on Enterprise Integration and Interoperability in Manufacturing Systems, H. Panetto and A. Molina (Eds). *Computers In Industry*, **59/7**, 641-646, September, Elsevier

Tursi A., **Panetto H.**, Morel G., Dassisti M. (2009). Ontological approach for Products-Centric Information System Interoperability in Networked Manufacturing Enterprises. *IFAC Annual Reviews in Control*. **33/2**, 238-245, December, **extended version** from IFAC Cost Effective Automation in Networked Product Development and Manufacturing, October 2–5, Monterrey, Mexico, Elsevier, ISSN: 1367-5788

Panetto H., Dassisti M., Tursi A. (2012). ONTO-PDM: product-driven ONTOlogy for Product Data Management interoperability within manufacturing process environment. *Advanced Engineering Informatics*, 26/3 334-348, doi: 10.1016/j.aei.2011.12.002

Zdravković M., **Panetto H.**, Trajanović M., Aubry A. (2011). An Approach for Formalizing the Supply Chain Operations. *Enterprise Information Systems*, **5/4**, 401-421, Taylor & Francis, ISSN 1751-7575

Yahia, E., Aubry, A., **Panetto, H.** (2012). Formal measures for semantic interoperability assessment in cooperative enterprise information systems. *Computers in Industry* **63/5** 443–457, doi: 10.1016/j.compind.2012.01.010

Lu Y., **Panetto H.**, Ni Y., Gu X. (2013). Ontology alignment for networked enterprise information system interoperability in supply chain environment. *International Journal of Computer Integrated Manufacturing* **26/1-2** 140–151, doi: 10.1080/0951192X.2012.681917

Panetto H., Cecil J. (2013). Information systems for enterprise integration, interoperability and networking: theory and applications. *Enterprise Information Systems* **7/1** 1–6, Taylor & Francis, doi: 10.1080/17517575.2012.684802

Zdravković, M., **Panetto, H.**, Trajanović, M., Aubry, A. (2014). Explication and semantic querying of enterprise information systems. *Knowledge and Information Systems*. **40/3** 697-724, Springer, doi: 10.1007/s10115-013-0650-x

Giovannini A., Aubry A., **Panetto H**., Bril El-Haouzi H., Pierrel L., Dassisti M. (2015) Anti-logicist framework for design-knowledge representation. Annual Reviews in Control, International Federation of Automatic Control, 2015, 39 (1), doi: 10.1016/j.arcontrol.2015.03.013

Liao Y., Lezoche M., **Panetto H.**, Boudjlida N., Rocha Loures E. (2015) Semantic Annotation for Knowledge Explicitation in a Product Lifecycle Management Context: a Survey, Computers in Industry, Elsevier, 2015, 71 (6), pp.24-34. Doi: 10.1016/j.compind.2015.03.005

Monostori L., Valckenaers P., Dolgui A., **Panetto H.**, Brdys M., Csanád Csáji B. (2015). Cooperative Control in Production and Logistics. Annual Reviews in Control, International Federation of Automatic Control, 2015, 39 (1), doi: 10.1016/j.arcontrol.2015.03.001

Liao Y., Lezoche M., **Panetto H.**, Boudjlida N. (2016). Semantic annotations for semantic interoperability in a product lifecycle management context. International Journal of Production Research, Taylor & Francis, 2016, 54 (18), pp.5534-5553. <10.1080/00207543.2016.1165875>

Panetto H., Whitman L. (2016). Knowledge Engineering for Enterprise Integration, Interoperability and Networking: Theory and Applications. Data and Knowledge Engineering, Elsevier, 2016, 105, pp.1-4. <10.1016/j.datak.2016.05.001>

Panetto H., Zdravković M., Jardim-Goncalves R., Romero D., Cecil J., Mezgár I. (2016). New Perspectives for the Future Interoperable Enterprise Systems. Computers in Industry, Elsevier, 2016, Special Issue: "Future Perspectives on Next Generation Enterprise Information Systems: Emerging Domains and Application Environments", 79, pp.47-63. <10.1016/j.compind.2015.08.001>

Panetto H., Iung B., Ivanov D., Weichhart G., Wang X. (2019). Challenges for the cyber-physical manufacturing enterprises of the future. Annual Reviews in Control, Elsevier, 2019, 47, pp.200-213. ⟨10.1016/j.arcontrol.2019.02.002⟩

Lezoche M., **Panetto H.** (2020). Cyber-Physical Systems, a new formal paradigm to model redundancy and resiliency. Enterprise Information Systems, Taylor & Francis, 2020, 14 (8), pp.1150-1171. ⟨10.1080/17517575.2018.1536807⟩

Guest Editor of Special issues of International Journals

Panetto H., Molina A. (Editors) (2008). Special issue on Enterprise Integration and Interoperability in Manufacturing Systems. *Computers in Industry*, **59/7**, September, Elsevier, ISSN: 0166-3615

Catarci T., **Panetto H.**, Scannapieco M. (Editors) (2008). Special issue on Advances in Data and Service Integration. *Information Systems*, **33/7-8**, November-December, Elsevier, ISSN: 0306-4379

Panetto H., Morel G. (Editors) (2008). *Special section on Systems Engineering: Best of France. Insight journal of INCOSE*, **11/3**. 5-43, July

Panetto H. (Editor) (2010). Special issue on Integration and Information in Networked Enterprises. *Computers in Industry*, **61/2**, February, Elsevier, ISSN: 0166-3615

Panetto H. (Editor) (2011). Theme editor of the Special section on AFIS Doctoral Symposium: Systems Engineering Research Challenges in French Universities. *Insight Journal of INCOSE*, **14/4**, 8-38, December

Panetto H., Cecil J. (Editors) (2013). Information systems for enterprise integration, interoperability and networking: theory and applications. *Enterprise Information Systems* **7/1**. doi: 10.1080/17517575.2012.684802

Panetto H., Mayer F., Bonjour E. (Editors) (2015). Special issue on AFIS Doctoral Symposium: Advancing Systems Analysis and Modelling in French Universities Insight journal of INCOSE, Wiley, **18/4**, December

Panetto H., Whitman L. (Editors) (2016). Special issue on Knowledge Engineering for Enterprise, Integration, Interoperability and Networking: Theory and Application Data & Knowledge Engineering, Volume **106**, 84 Pages 84 (November 2016)

Panetto H., Weichhart G. and Pinto R. (Editors) (2019). Special Section on Industry 4.0: Challenges for the future in Manufacturing Annual Reviews In Control, Elsevier, Volume 47, Pages 198-274 (June 2019)

Panetto H., Lezoche M., Hernandez J., Alemany Diaz MME, Kacprzyk J. (Editors) (2020). Special issue on Agri-Food 4.0 and Digitalization in Agriculture Supply Chains - New directions, challenges and applications Computers In Industry, Elsevier, October 2020

Gaaloul W., Zhou Z., **Panetto H.**, Zhang L. (Editors) (2020). Special issue on fog and cloud computing for cooperative information system management. Future Generation Computer Systems, Elsevier, 2020, 109, pp.704-705. ⟨10.1016/j.future.2020.02.060⟩

Hernandez J., Mortimer M., **Panetto H.** (Editors) (2020). Special issue on operations management and collaboration in agri-food supply chains. Production Planning and Control, Taylor & Francis, ⟨10.1080/09537287.2020.1796141⟩

Panetto H., Li Qing (Editors) (2024), Special section on Control for Cognitive Systems, Annual Reviews in Control, 100955, 57, Elsevier, ⟨10.1016/j.arcontrol.2024.100955⟩