

Dimitrios Kyritsis

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Adjunct Professor

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- Biography
- Publications
- Teaching & PhD

Fields of expertise

ICT for Sustainable Manufacturing
Closed Loop Lifecycle Management
Lifecycle Performance Evaluation
Engineering Asset Lifecycle Management
Predictive Management
Product-Process Modeling
Ontology Based Engineering
Context Aware Enterprise Applications
Knowledge Management

Mission

Closed-Loop Lifecycle Management for Sustainable Production and Consumption of Complex Products: In the coming years the use of Embedded Information Devices (including RFID) will be extended from the current use in identification and logistics applications (mainly in the retail sector) to a wide variety of other applications through generalised tagging of product (or artefacts) . These wider applications almost inevitably include the involvement of consumers and users beyond the traditional interpretation of existing product life-cycle management (PLM), to promote holistic information exchange between designers, producers, users and recoverers of future complex products. Therefore, the management of data and information flows and D-I-K (Data-Information-Knowledge) transformations all along the lifecycle of products will involve more and more consumers/users and service providers interactions. My main targets within this context are; (i) to investigate the above mentioned challenges and to conceptualise them within the context of a closed-loop PLM, and (ii) to define the foundations and specifications of the necessary ICT developments, models and software systems that will support the seamless and trustful sharing of knowledge amongst producers and consumers/users of complex products so that the concept of sustainable production and consumption is adopted and applied by modern societies.

Biography

Research

- ? Computer Aided Process Planning for Manufacture, Assembly, Disassembly,
- ? Petri- net modeling with applications in Manufacturing,
- ? Closed-loop Product Lifecycle Management (PLM) using Product Embedded Information Devices (PEID),

- ? Engineering Asset Management,
- ? Ontology-Based Engineering.

Membership and Services in Professional Organizations

- ? Chair of IFIP-WG5.7 - Advance Production Management Systems, member since 2005
- ? Member of ASME since 1993
- ? Vice President/Secretary of ASME International Swiss Chapter, 1995-2006
- ? Member of the Board of MANUFUTURE-CH
- ? Founding Member of the new IFAC TC5.1 WG IFAC WG Advanced Maintenance Engineering, Services and Technology
- ? Founding member of the Hellenic Maintenance Society since 2007
- ? Founding member of the International Society of Engineering Asset Management (ISEAM) since 2007

Services in EPFL Committees

- ? Member of the Informatics Committee of DGM: 1999-2001
- ? Member of the Doctoral Program Committee of the Doctoral Program: Manufacturing Systems and Robotics , since 2002
- ? Member of the CCE (Conference du Coprs des Enseignants) of EPFL since 2007

Services in other Universities

- ? Member of the Administration Board of INP GI, the Industrial Engineering School of INP Grenoble, elected as Qualified External Personality, 2008-2013 and 2013-2016
- ? Invited professor at the University of Technology of Compiègne, France
- ? Invited professor at the University of Technology of Belfort-Montbéliard, France
- ? Invited professor at the Paris-Tech, ENSAM, France
- ? Guest professor at the University of Cincinnati, USA

Services at the European Commission

- ? Member of the Advisory Group LEIT-NMBP

Services in International Research activities

- ? Referee of the international scientific journals CAD, Computers In Industry, Production Planning and Control and others as well as ASME and IEEE conferences, 1994 - today.
- ? Guest Editor of the special issue on CAPP of the international scientific journal Advances in Engineering Software, 25, 1996.
- ? Member of the Editorial Board of the international scientific journal Advances in Engineering Software, 1996-today.
- ? Project Technical Advisor of two BRITE/EURAM-CRAFT projects in the field of CAD/CAM, 1995-1997.
- ? Evaluator of BRITE/EURAM projects (November 1997 evaluation).
- ? Invited expert at the IMS Workshop, EC, February 2002.
- ? Evaluator of FP6-NMP-IP projects (April 2003 evaluation).
- ? Invited expert at MANUFUTURE 2003.

- ? Evaluator of NEST projects (2005)
- ? Invited expert at IMS-NoE FP7 Roadmap Workshops on manufacturing organised by the European Commission.
- ? Invited expert at MANUFUTURE-CH, 2005-today.
- ? Invited expert at MIT RFID Academic Convocation, 2006.
- ? Founding member of the International Working Group on PLM, 2007- .
- ? Reviewer of EPSRC program proposals, UK, 2008.
- ? Reviewer of the National UK Research Program IMRC, 2008.
- ? Reviewer of the National Greek Research Program Competitiveness-Enterpreneurship , 2009.

Organisation of Conferences

- ? Organiser and chairman of two technical sessions on CAPP, in the 1994 ASME International Computers in Engineering Conference, Minneapolis, USA, 11- 14 September 1994.
- ? Member of the Organizing Committee of the International Symposium for Electromachining-ISEM-XI, held in Lausanne, Switzerland, April 17-21, 1995. Also co-editor of the Conference Proceedings.
- ? Program co-chairman and member of the Organizing Committee of the First International Workshop on Intelligent Manufacturing Systems [IMS-EUROPE 1998], held in Lausanne, Switzerland, April 15-17, 1998. Also co-editor of the Conference Proceedings.
- ? Member of the National Organizing Committee of the 16th IMACS WORLD CONGRESS 2000 on Scientific Computation, Applied Mathematics and Simulation, Lausanne, Switzerland, August 21-25, 2000.
- ? General Secretary of the International Symposium TMCE 2004, April 13-17, 2004, Lausanne, Switzerland.
- ? Member of the International Advisory Committee of the international conference IMS-Forum 2004, Como, Italy, May 2004.
- ? Organiser and chairman of two sessions (SIG5), IMS-Forum 2004, Como, Italy, May 2004.
- ? Organiser and chairman of a session at INCOM 2006, May 2006, Saint-Etienne, France.
- ? Member of the International Program Committee of the international congress WCEAM 2006, July 2006, Brisbane, Australia.
- ? Member of the Program Committee of the international conference ASI 2006, September 2006, Kassel, Germany.
- ? Member of the Technical Programme Committee of the international conference APMS 2006 (IFIP-WG5.7), September 2006, Wroclaw, Poland.
- ? Member of the International Program Committee of the international congress WCEAM 2007, April 2007, Harrogate, UK.
- ? Member of the International Program Committee of the international conference EURASIP 2007.
- ? Member of the International Program Committee of the international conference PLM 2007, July 2007, Milan, Italy.

- ? Organiser and chairman of the session on Sustainable Manufacturing of the International IMS workshop, November 2007, Zürich, Switzerland.
- ? General Chair of the 1st IMS MTP Workshop, April 2008, Bern, Switzerland.
- ? Member of the International Program Committee of the international conference EURASIP 2008.
- ? Member of the International Program Committee of the international conference PLM 2008, July 2008, Seoul, South Korea.
- ? General Chair of the 2nd IMS MTP Workshop, October 2008, Montreux, Switzerland.
- ? Member of the International Program Committee of the international congress WCEAM 2008, October 2008, Beijing, China.
- ? Program Chair & Coordinator of the IMS World Congress: Engineering a Sustainable Future , November 2009, Geneva, Switzerland.
- ? Congress Chair of the the international congress WCEAM 2009, 28-30 September 2009, Athens, Greece (www.wceam.com).

Publications

Selected publications

Dimitris Kiritsis Computer-Aided Design, vol. 43, pp. 479-501, 2011	Closed-loop PLM for intelligent products in the era of the internet of things
Dimitris Kiritsis Chapter 43 in: Nof (ed.), Handbook of Automation, ISBN 978-3-540-78830-0, Springer, 2009	Product Lifecycle Management
Dimitris Kiritsis, Ahmed Bufardi, Paul Xirouchakis Advanced Engineering Informatics, 17, pp. 189-202	Research issues on product lifecycle management and information tracking using smart embedded systems
Matsokis A. and Kiritsis D. International Journal of Product Lifecycle Management; 5 (1), pp. 84-97, 2011	Ontology Applications in PLM
Dimitris Kiritsis International Journal of Production Research, Volume 51, Issue 23-24, 2013, Special Issue: 50th Volume Anniversary, pp. 7345-7371, DOI: 10.1080/00207543.2012.761364	Semantic technologies for engineering asset life cycle management
Dimitris Kiritsis, Andreas Koukias, Drazen Nadoveza Int. J. Sustainable Manufacturing, Vol. 3, No. 3, 2014, pp. 229-249	ICT Supported Lifecycle Thinking and Information Integration for Sustainable Manufacturing

<p>Soumaya El Kadiri, Dimitris Kiritsis International Journal of Production Research (in print)</p>	<p>Ontologies in the Context of Product Lifecycle Management: A State of the Art Analysis</p>
<p>Kiritsis, D., Neuendorf, K.-P. and Xirouchakis, P. Advances in Engineering Software, 30, 1999</p>	<p>Petri Net Techniques for process planning cost estimation</p>
<p>Drazen Nadoveza, Dimitris Kiritsis Computers in Industry, 65 (2014), pp. 1218- 1231</p>	<p>Ontology-based approach for context modeling in enterprise applications</p>
<p>Andreas Koukias, Drazen Nadoveza, Dimitris Kiritsis Int. J. Product Lifecycle Management, Vol. 8, No. 1, 2015, pp. 24-45</p>	<p>Ensuring Asset Optimization through Ontology-based Modelling of Technical Documentation</p>
<p>KIRITSIS D. The International Journal of Advanced Manufacturing Technology, Vol. 10, 1995</p>	<p>A review of knowledge-based expert systems for process planning</p>
<p>KIRITSIS D. Computer-Aided Design (CAD), Vol. 26, No. 11, 1994</p>	<p>A high precision interpolation algorithm for 3D parametric curve generation, Special Issue on NC Machining and Cutter Path Generation</p>