Alexis Laurent - DTU Orbit (31/03/2019)

Laurent, Alexis

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Department of Technology, Management and Economics - Associate Professor

Quantitative Sustainability Assessment

Research outputs:

**Learning-by-doing: experience from 20 years of teaching LCA to future engineers**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**National inventories of land occupation and transformation flows in the world for land use impact assessment**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Effect factors of terrestrial acidification in Brazil for use in Life Cycle Impact Assessment**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**IMPACT World+: a globally regionalized life cycle impact assessment method**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**LCA of aquaculture systems: methodological issues and potential improvements**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Life cycle assessments of aquaculture systems: a critical review of reported findings with recommendations for policy and system development**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Overview and recommendations for regionalized life cycle impact assessment**

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Relationships between plant species richness and soil pH at the level of biome and ecoregion in Brazil**
Crespo Mendes, N., Laurent, A., Bruun, H. H. & Hauschild, M. Z. 2019 In : Ecological Indicators. 98, p. 266-275

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Soil quality index: Exploring options for a comprehensive assessment of land use impacts in LCA**
De Laurentiis, V., Secchi, M., Bos, U., Horn, R., Laurent, A. & Sala, S. 2019 In : Journal of Cleaner Production. 215, p. 63-74

Research output: Research - peer-review › Journal article – Annual report year: 2019

**Advancing Life Cycle Engineering to meet United Nation's Sustainable Development Goals**
Building consensus on how to address the analysis of ecosystem services in the life cycle assessment (LCA) framework
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Research output: Research - peer-review › Journal article – Annual report year: 2018

Evaluating climate change mitigation potential of hydrochars: compounding insights from three different indicators
Research output: Research - peer-review › Journal article – Annual report year: 2018

Framework for building national inventories of toxic emissions to air, water and soil, in Europe
Leclerc, A. S. C., Sala, S., Secchi, M., Cerutti, A. & Laurent, A. 2018 SETAC Europe 28th Annual Meeting Abstract Book. p. 31-32 143
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Goal Definition
Research output: Education - peer-review › Book chapter – Annual report year: 2017

Influence of substance coverage on impacts from the electricity sector
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

LCA Applications
Research output: Education - peer-review › Book chapter – Annual report year: 2017

LCA applied to solid waste management systems: A comprehensive review
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

LCA of Energy Systems
Research output: Education - peer-review › Book chapter – Annual report year: 2017

LCA of Solid Waste Management Systems
Research output: Education - peer-review › Book chapter – Annual report year: 2017

Life cycle assessment in corporate sustainability reporting: Global, regional, sectoral, and company-level trends
Research output: Research - peer-review › Journal article – Annual report year: 2018
Correction to Development of Comparative Toxicity Potentials of TiO₂ Nanoparticles for Use in Life Cycle Assessment
Research output: Research - peer-review › Book – Annual report year: 2018

Cost-competitiveness of organic photovoltaics for electricity self-consumption at residential buildings: A comparative study of Denmark and Greece under real market conditions
Research output: Research - peer-review › Comment/debate – Annual report year: 2017

Critical review of life cycle assessments conducted on aquaculture systems: Identification of environmental improvements
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Development of Comparative Toxicity Potentials of TiO₂ Nanoparticles for Use in Life Cycle Assessment
Research output: Research - peer-review › Journal article – Annual report year: 2017

Environmental impacts of electricity self-consumption from organic photovoltaic battery systems at industrial facilities in Denmark
Research output: Research - peer-review › Journal article – Annual report year: 2017

Evaluating Climate Change Mitigation Potential of Carbonaceous Materials: Do Different Indicators Point to the Same Conclusion?
Framework for estimating toxic releases from the application of manure on agricultural soil: National release inventories for heavy metals in 2000-2014
Research output: Research - peer-review › Journal article – Annual report year: 2017

Globally-differentiated land use flow inventories for life cycle impact assessment
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Human health no-effect levels of TiO2 nanoparticles as a function of their primary size
Research output: Research - peer-review › Journal article – Annual report year: 2017

LCIA framework and cross-cutting issues guidance within the UNEP-SETAC Life Cycle Initiative
Research output: Research - peer-review › Journal article – Annual report year: 2017

Normalisation and weighting in life cycle assessment: quo vadis?
Research output: Research - peer-review › Journal article – Annual report year: 2016

On the importance of including a life cycle perspective in assessing the environmental performances of renewable energies
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Position of existing footprints in the environmental sustainability landscape
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Potentials and limitations of footprints for gauging environmental sustainability
Laurent, A. & Owsianiak, M. 2017 In : Current Opinion in Environmental Sustainability. 25, p. 20-27
Research output: Research - peer-review › Journal article – Annual report year: 2017

Quantifying the importance of comprehensive life cycle and impact coverage for photovoltaic systems
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Renewable Energy and Carbon Management in the Cradle-to-Cradle Certification: Limitations and Opportunities
Research output: Research - peer-review › Journal article – Annual report year: 2017

Bringing the life cycle perspective into the Cradle-to-Cradle certification: the case study of aluminium cans
Active Learning in Sustainability Teaching
Research output: Research - peer-review » Conference abstract in proceedings – Annual report year: 2015

Ecodesign of organic photovoltaic modules from Danish and Chinese perspectives
Espinosa Martinez, N., Laurent, A. & Krebs, F. C. 2015 In : Energy & Environmental Science. 8, p. 2537-2550
Research output: Research - peer-review » Journal article – Annual report year: 2015

Environmental impacts of electricity generation at global, regional and national scales in 1980–2011: What can we learn for future energy planning?
Laurent, A. & Espinosa Martinez, N. 2015 In : Energy & Environmental Science. 8, p. 689–701
Research output: Research - peer-review » Journal article – Annual report year: 2015

Fate factors for airborne contributions to acidification, eutrophication and photochemical ozone formation in Brazil
Research output: Research » Poster – Annual report year: 2015

Necessidade de uma metodologia de Avaliação de Impacto do Ciclo de Vida espacialmente diferenciada para o Brasil
Research output: Research » Paper – Annual report year: 2015

Normalisation
Research output: Research » Book chapter – Annual report year: 2015

Power generation from chemically cleaned coals: do environmental benefits of firing cleaner coal outweigh environmental burden of cleaning?
Research output: Research » Journal article – Annual report year: 2015

20 years of LCA applied to waste management systems: what can we learn?
Research output: Research » Conference abstract for conference – Annual report year: 2014

Assessing the environmental impacts of using demineralized coal for electricity generation
Research output: Research » Conference abstract in proceedings – Annual report year: 2014

Building and characterizing regional and global emission inventories of toxic pollutants
Research output: Research » Journal article – Annual report year: 2014

Can carbon footprint be an acceptable indicator of environmental sustainability?
Research output: Research » Conference abstract for conference – Annual report year: 2014

Environmental impacts of global and regional electricity generation from 1980 to 2010: What can we learn for sound energy transition plannings?
Laurent, A. & Espinosa, N. 2014
Research output: Research » Poster – Annual report year: 2014
Review of LCA studies of solid waste management systems – Part II: Methodological guidance for a better practice
Research output: Research - peer-review › Journal article – Annual report year: 2014

Review of LCA studies of solid waste management systems – Part I: Lessons learned and perspectives
Research output: Research - peer-review › Journal article – Annual report year: 2014

Will organic photovoltaic technology render benefits in a 30-year horizon?
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

A critical review of life cycle assessment applied to solid waste management systems
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Complementary use of life cycle assessment and risk assessment for engineered nanomaterials: Lessons learned from chemicals?
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Identifying best existing practice for characterization modeling in life cycle impact assessment
Research output: Research - peer-review › Journal article – Annual report year: 2013

Life Cycle Risks and Impacts of Nanotechnologies
Research output: Research - peer-review › Book chapter – Annual report year: 2013

Mapping and characterization of LCA networks
Research output: Research - peer-review › Journal article – Annual report year: 2013

Normalisation factors for ecotoxicity and human toxicity: Extrapolation strategies using GDP, CO2 and Hg
Cucurachi, S., Sala, S., Laurent, A. & Heijungs, R. 2013 1 p.
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Analysis of current research addressing complementary use of life-cycle assessment and risk assessment for engineered nanomaterials: have lessons been learned from previous experience with chemicals?
Research output: Research - peer-review › Journal article – Annual report year: 2012

Can carbon footprint serve as a comprehensive tool for assessing and managing environmental sustainability?
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Defining and mapping LCA networks: Initial results
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

LCA applied to nanotechnologies: A critical review

Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

LCA applied to solid waste management systems: A comprehensive review

Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Learning by doing - bringing real-life case studies into the classroom

Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Limitations of Carbon Footprint as Indicator of Environmental Sustainability

Research output: Research - peer-review › Journal article – Annual report year: 2012

Mapping and characterization of LCA networks

Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Modelling health effects from inhalation of nano-objects

Research output: Research › Poster – Annual report year: 2012

Importance of linkage between LCA methodology developments and their applications in practice
Laurent, A., Olsen, S. I. & Hauschild, M. Z. 2011

Research output: Research › Poster – Annual report year: 2011

Normalization in EDIP97 and EDIP2003: updated European inventory for 2004 and guidance towards a consistent use in practice

Research output: Research - peer-review › Journal article – Annual report year: 2011

Normalization references for Europe and North America for application with USEtox™ characterization factors

Research output: Research - peer-review › Journal article – Annual report year: 2011

Normalization references for USEtoxTM-based toxic impact categories: North American and European economic systems

Research output: Research › Conference abstract in proceedings – Annual report year: 2011

Ability of carbon footprint to reflect the environmental burden of a product or service – an empirical study
Laurent, A., Olsen, S. I. & Hauschild, M. Z. 2010

Research output: Research › Poster – Annual report year: 2010
Carbon footprint as environmental performance indicator for the manufacturing industry
Research output: Research - peer-review › Journal article – Annual report year: 2010

Ecoefficiency indicators for development of nano-composites
Olsen, S. I. & Laurent, A. 2010
Research output: Research › Poster – Annual report year: 2010

Deliverable 4.2: Methodology for including specific biological effects and pathogen aspects into LCA
Research output: Research › Report – Annual report year: 2009

Projects:

Fantke, P., Hauschild, M. Z., Laurent, A., Owsianiak, M. & Aurisano, N.
01/05/2013 → 31/07/2020
Project: Research

Environmental sustainability assessment of the aquaculture sector at global and national scales
Bohnes, F. A., Laurent, A., Hauschild, M. Z. & Schlundt, J.
Technical University of Denmark
15/12/2016 → 14/12/2019
Project: PhD

Development of environmental footprints for large-scale systems
Leclerc, A. S. C., Laurent, A., Hauschild, M. Z. & Wood, R.
Technical University of Denmark
15/09/2016 → 31/01/2020
Project: PhD

ECOdesign of urban buildings by integration of organic photovoltaics microgrids (ECLIPS microgrids)
Chatzisideris, M. D., Laurent, A., Gevorgyan, S., Owsianiak, M., Finkbeiner, M. & Nelson, J.
Samfinansieret - Andet
15/12/2014 → 22/05/2018
Project: PhD

Product/Service-System Design from a Life Cycle Costing Perspective
Pagoropoulos, A., McAloone, T. C., Maier, A., Laurent, A., Andersen, I. M. V. & Isaksson, K. O.
Samfinansieret - Andet
01/02/2014 → 21/09/2017
Project: PhD

Development of a Life Cycle Impact Assessment methodology for Brazil
Science Without Borders, Brasi
15/12/2013 → 08/06/2018
Project: PhD

Life cycle assessment applied to nanomaterials in solid waste management - Focus on human health impact assessment
1/3 DTU-stip, 2/3 FUR/andet
01/05/2010 → 24/03/2014
Project: PhD
Impacts of waterbone nitrogen emissions to hypoxia-driven marine eutrophication: modelling of damage to ecosystems in life cycle impact assessment (LCIA)

Technical University of Denmark
15/12/2012 → 01/09/2016
Project: PhD

Activities:

Microplastics to the environment: Modelling of releases and impacts in a global perspective
Laurent, A. (Invited speaker)
20 Sep 2018
Activity: Talks and presentations › Conference presentations

Life cycle assessment of energy systems: State and outlook
Laurent, A. (Invited speaker)
30 Aug 2018
Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

LCA and LCIA: where it is today and perhaps tomorrow
Laurent, A. (Invited speaker)
5 Jul 2018
Activity: Talks and presentations › Conference presentations

Peliston(TM) workshop on "Global guidance on environmental life cycle impact assessment indicators, 2nd round"
Laurent, A. (Participant), Hauschild, M. Z. (Participant), Fantke, P. (Participant), Owsianiak, M. (Participant)
24 Jun 2018 → 29 Jun 2018
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

The Sustainable Development Goals (SDGs) from a research perspective
Laurent, A. (Invited speaker)
14 May 2018
Activity: Talks and presentations › Conference presentations

25th CIRP Life Cycle Engineering (LCE) Conference
30 Apr 2018 → 2 May 2018
Activity: Attending an event › Participating in or organising a conference

Interactive Session on "How can the Life Cycle Engineering community contribute to meet the UN’s Sustainable Development Goals?"
Molin, C. (Organizer), Owsianiak, M. (Organizer), Fantke, P. (Organizer), Laurent, A. (Organizer), Sami Kara (Organizer), Christoph Herrmann (Organizer), Wim Dewulf (Organizer), Hauschild, M. Z. (Organizer)
30 Apr 2018
Activity: Attending an event › Participating in or organising a conference

Short Course on "Addressing the most critical issues in LCA: from theory to practice"
Molin, C. (Organizer), Owsianiak, M. (Organizer), Laurent, A. (Organizer)
29 Apr 2018
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Marine Plastics Value Chain Mapping, Plastic Losses, and Hotspots
Laurent, A. (Invited speaker), Ryberg, M. (Invited speaker), Hauschild, M. Z. (Invited speaker)
15 Feb 2018
Sustainability (Journal)
Laurent, A. (Editor), Owsianiak, M. (Editor)
2018

Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

Learning by doing – Experience from 20 years of teaching LCA to future engineers
7 Sep 2017
Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

Life cycle assessment of energy systems: Status and outlook
Laurent, A. (Keynote speaker)
25 May 2017
Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

Energy Modelling Platform for Europe (EMP-E) 2017
Laurent, A. (Participant)
18 May 2017
Activity: Attending an event › Participating in or organising a conference

Assessing environmental impacts of future energy systems: A holistic LCA model for Europe in 2015-2050
Fabbri, S. (Speaker), Bohnes, F. A. (Other), Laurent, A. (Other)
17 May 2017 → 18 May 2017
Activity: Talks and presentations › Conference presentations

Environmental sustainability of energy systems
Laurent, A. (Guest lecturer)
7 Jul 2016
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

Life cycle assessment of electric vehicle deployment in Copenhagen with a systemic perspective
Gregg, J. S. (Supervisor), Laurent, A. (Main supervisor)
1 Feb 2016 → 15 Jun 2016
Activity: Examinations and supervision › Supervisor activities

Exploring Teaching for Active Learning in Engineering Education (ETALEE 2015)
Laurent, A. (Organizer)
11 Nov 2015
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Lecture "Introduction to Life Cycle Assessment (LCA)"
Laurent, A. (Guest lecturer)
27 Jul 2015
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

Journal of Industrial Ecology (Journal)
Laurent, A. (Editor)
1 Feb 2014 → ...
Activity: Research › Journal editor