

**Invited Session on “Industrial Symbioses: Design, Management, Control”  
for IFAC MIM 2019**

**Invited session identification code XXX**

IFAC MIM 2019, August 28-30, 2019, Berlin, Germany

<https://ifac.papercept.net/>

**Session Chairs:**

- Dr. Daniel ROY, LGIPM, University of Lorraine, FRANCE
- Dr. Sophie Hennequin, LGIPM, University of Lorraine, FRANCE

**Session topics:**

« Living together »; is basically what symbiosis relationship is all about. A concept that was observed in nature describing mutualism in the interactions between biological species. This is a kind of relationship where each element finds its own benefit and interest (they basically live together) and depends on others, sometimes even with regard to its own existence. This phenomenon among many others observed in nature inspired industries to look at waste in a different way, to consider it as a blessing instead of a curse, an alternative to the non-renewable raw materials that become more and more rare and therefore expensive. By cooperating, companies seek an overall income greater than the sum of individual benefits they could achieve acting individually. Although the benefits of Industrial Symbioses (IS) are numerous, like economic benefits for the involved companies and less vulnerability towards resources depletion, it appears very difficult to initially design and then manage or control efficiently such a system.

This session aims to allow participants to share their experiences, ideas, methods, models, etc. about this new industrial form of cooperation, deeper than precedent ones, involving novel constraints but also exciting way of research and interesting results.

**Track topics:**

Topics include but are not limited to: Symbioses modeling, Symbioses design, Scheduling or planning in Symbioses, Symbioses processes optimization, Symbioses Flows design, Symbioses Flows control, Simulations of Symbiotic systems, external/internal flows balance, sustainability and symbiotic systems, risks and uncertainties in industrial symbioses.

**Submission**

For author guidelines, please refer to [www.ifac-control.org](http://www.ifac-control.org). All papers must be submitted electronically using Symposium Manuscript Management System (CMMS). All papers must be prepared in a two-column format in accordance with the IFAC manuscript style. Please use the official IFAC instructions and template to prepare your contribution as full-length draft paper and submit it online by December 15, 2018. Submission details are available on the symposium website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as **an invited session paper**. Submission as an invited paper requires the **invited session code XXX**. Several international journals are associated with the MIM 2019 for publication of special issues.

**Important dates:**

December 15, 2018	Deadline for the submission
February 20, 2019	Notification of acceptance/rejection
March 15, 2019	Deadline for the final submission

**References:**

A. Abreu & L. M. Camarinha-Matos (2008) On the role of value systems to promote the sustainability of collaborative environments, *International Journal of Production Research*, 46:5, 1207-1229, DOI: 10.1080/00207540701224244

Dominic Chwan Yee Foo (2009). Game theory approach to the analysis of inter-plant water integration in an eco-industrial park. *Journal of cleaner production*.

Marian Ruth Chertow, (2000). Industrial symbiosis: Literature and taxonomy. *Annual Review of Energy and the Environment*. P :314-315

Pengcheng Xiang, (2017). The vulnerability of industrial symbiosis: A case study of Qijiang Industrial Park, China. *Journal of cleaner production*.

Posch, A. (2010), "Industrial Recycling Networks as Starting Points for Broader Sustainability-Oriented Cooperation?", *Journal of Industrial Ecology*, Vol.14, No.2, p. 242-257.