Imperial College London

Centre for Process Systems Engineering

UCL

2018 Seminar Series: New Frontiers in Systems Engineering

Prof. Mark Huijbregts
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Size scaling in ecological and industrial systems

Abstract: There is a major challenge in quantifying and reducing the ecological footprint of our society. Environmental footprint calculations suffer severely from a limited availability of ecological and industrial data. As it is virtually impossible to collect all the empirical data required, an operational method to derive representative environmental footprints with limited data requirements would be very helpful. In my presentation I will discuss methods on how to derive environmental footprints based on a limited set of parameters, including the production size of technologies and the body size of species. I will also show with a number of examples how these methods could work in practice.

Bio: Mark Huijbregts obtained his PhD at the University of Amsterdam in 2001 on the topic “Uncertainty and variability in environmental life cycle assessment”. Currently, he is professor Integrated Environmental Assessment at the Radboud University Nijmegen in the Netherlands. His research focuses on the development and application of models to assess environmental impacts of multiple stressors both from a consumption and production perspective. He integrates a combination of concepts, methods and data from various scientific disciplines, including (industrial) ecology, toxicology, statistics, mathematical modeling and environmental engineering. His main aim is to contribute to a more evidence-based way of assessing and reducing the environmental impacts of our society.

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