

# Halmstad Colloquium

Seminar, August 19, 2015

School of Information Technology

## Hybrid System Trajectories as Partial Continuous Maps

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Hybrid systems can exhibit a range of pathologies that are hard to rule out without making a modeling formalism overly restrictive. Addressing these pathologies, many of which relate to so-called Zeno behaviors, is a prerequisite to being able to give sound definitions of fundamental concepts in hybrid systems, such as reachability.

We propose the use of partial continuous maps (PCM) as trajectories to describe how a hybrid system evolves over time. PCMs enable a notion of trajectory that can go beyond Zeno points.



Professor Eugenio Moggi received his MSc from Pisa (1983) and PhD from Edinburgh (1988). He worked at the University of Cambridge, Edinburgh and Pisa, before moving to Genova in 1990. His most well known research contributions include: categorical semantics of polymorphic types, the study of formal systems for partial functions, notions of computations as monads, metalanguages for computational monads and evaluation logic, categorical semantics of program modules, and type systems and operational semantics for multi-stage programming languages.

Wigforssalen, Visionen, August 19, 13.15  
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The Halmstad Colloquium is a distinguished speaker series. The prominent speakers are invited from universities around the world to talk about topics of interest for the researchers within our research environment Halmstad Embedded and Intelligent systems research. The Halmstad Colloquium is hosted by the School of Information Technology.

