

# *ASTRA Seminar Series 2011-2012*

*Presents*



## **Madhur Anand**

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## **Human-Environment Systems and Sustainability: Collective Intentions vs. the Invisible Hand**

**Tuesday, March 6, 2012**

**12:00 - 1:15pm MacKinnon 318**

**All are welcome – bring your lunch!**

We all know that humans are part of the so-called 'environment'. But the collapse of human-dominated ecosystems in not so distant and recent times suggests that we don't have a good understanding of human-environment systems. What are some of the belief and values that humans introduce into their interactions with ecosystems? Can this kind of knowledge help us to move away from 'invisible hand' metaphors of production systems and more towards managing collective intentions towards greater sustainability? I will address these questions and give an example of an approach to coupling human-environment systems from our recent work on mathematical modeling of human influence on forest-grassland mosaic dynamics. By 'coupling', I mean a two-way feedback: from human behavior to 'environmental' dynamics and back to human behavior. In my talk I may also refer, albeit obliquely, to poetry.

**Madhur Anand** has broad research interests in natural and human-induced changes in terrestrial ecosystems at local and global scales and their implications for sustainability. Her research has been supported by governments, industry, national and international granting agencies and by a number of awards (e.g., Premier's Research Excellence Award, Canada Research Chairs). She has collaborated with mathematicians, theoretical physicists, statisticians, computer scientists, geographers and poets. She serves on several international journal editorial boards and grant selection panels and currently as President of the Sigma Xi Scientific Society (UofT Chapter). In 2011 she was named a young scientist of the World Economic Forum. She has presented scholarly work in ecopoetics, co-edited a book on ecopoetry, published poetry in literary journals and was recently elected member-at-large with the Association for Literature, Environment and Culture in Canada.



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