Newly certified models in the CoMSES model library and newly published models added to the model library.

... a node in the CoMSES Network

CoMSES Digest August 2013 v.1

(March 1, 2013 – July 25, 2013)

Welcome to the inaugural newsletter of CoMSES Net. You are receiving this newsletter because you are registered as an affiliated or full member via openabm.org. With this newsletter we hope to begin providing you regular updates on the activities of the Network. We hope to publish the news letter several times each year. In this edition, you will see a list of recently uploaded models and Certified models in the CoMSES Computational Model Library. As you may recall from past announcements on OpenABM, you can request to have your models reviewed for CoMSES Certification. This means that two peers will examine your model and verify that you have archived it according to best practices of model coding and documentation. We recently also announced another mechanism for model feedback with the community comments and rating section on the model pages.

In addition to the Model Library, you can find other relevant information on computation modeling such as in job postings and conferences. We also invite you to have a look at the Education section and CoMSES' new YouTube channel, which includes a growing collection of videos you may want to use for your classes.

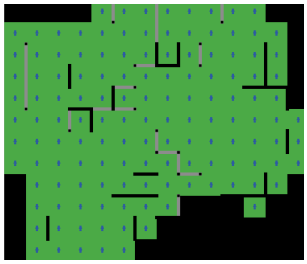
Finally, we would like to mention that the CoMSES Board (Bruce Edmunds, Volker Grimm, Christophe La Page, John Murphy, and Bill Rand) has been meeting to set up the governance structure of CoMSES Net, and you will be hearing more about this in the near future.

New Certified Models in the Model Library

Artificial Anasazi

Marco A. Janssen
Replication of the well known Artificial Anasazi model that simulates the population dynamics between 800 and 1350 in the Long House Valley in Arizona.

Torsten Hägerstrand's Spatial Innovation Diffusion Model



Sean M. Bergin

This model is a replication of Torsten Hägerstrand's Spatial Innovation Diffusion Model. The purpose of this model is to understand the processes which create a "nebula-distribution," a common spatial pattern. This model explores the way that the diffusion of ideas across a social network might produce this pattern.

Pumpa irrigation model

Irene Perez Ibarra & Marco A. Janssen

This is a replication of the Pumpa model that simulates the Pumpa Irrigation System in Nepal (Cifdaloz et al., 2010). The purpose of this model is to analyze the robustness of this small-scale irrigation system to two scenarios of disturbances to the natural resource (discharge reduction and time shift in water supply), and two scenarios of disturbances to the physical infrastructure (canals and gates) using five possible irrigation policies (open flow, sequential rotation, optimized sequential, 24-hour rotation, and 12-hour rotation).

Axelrod Cultural Disssemination

Arezky H. Rodríguez

The Axelrod's model of cultural dissemination is an agent-model designed to investigate the dissemination of culture among interacting agents on a society.

More Information About Model Certification

New Models Published in the Model Library

A-KinGDom: A Kinship, Grooming and Dominance Model for Primate Societies

Ruth Dolado, Francesc S. Beltran, Vicenc Quera

Based on previous models (Hemelrijk 1998; Puga-González, Hildenbrant & Hemelrijk 2009), we have developed an agent-based model and software, called A-KinGDom, which allows us to simulate the emergence of the social structure in a group of non-human primates.

Market For Protection

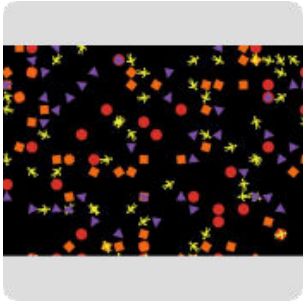
Steven J Doubleday

Security is a pre-requisite for economic development and activity. Konrad and Skaperdas (2010) analyze the interaction of individual agents in anarchy, without any collective

organization. Peasants spend their effort in productive activity, and consume some of their output to sustain themselves until the next period. Bandits produce no output, but prey on peasants, forcing the peasants to surrender their output for the bandits' consumption.

The Garbage Can Model of Organizational Choice

Guido Fioretti



We reconstruct Cohen, March and Olsen's Garbage Can model of organizational choice as an agent-based model. In the original model, the members of an organization can postpone decision-making. We add another means for avoiding making decisions, that of buck-passing difficult problems to colleagues.

Optimising Emergence

J. Kasmire, J. Van Der Beek, M. Vavier

This work presents an Agent Based Model of a greenhouses horticultural sector developed using a CAS approach. In the model, agents represent greenhouses competing to raise crops and remain profitable through their choice of various technologies to control the internal climate conditions of greenhouses.

An agent-based model generating social practices

Georg Holtz

Changing consumer behaviour is key to reduce the environmental effects of industrialised societies. Social practice theories provide an integrated approach to consumer behaviour which accounts for the social embedding of consumers as well as the role of material artefacts.

Implementation of 'satisficing' as a model for farmers' decision-making in an agent-based model of groundwater over-exploitation

Marvin Nebel

In this model 'satisficing' is implemented as a model for farmers' decision making in an agent-based farming model, that deals with groundwater over-exploitation in the 'Mancha Occidental Aquifer', Spain.

The Travel-tour case study

Christophe Sibertin-Blanc, Françoise Adreit, Joseph El Gemayel

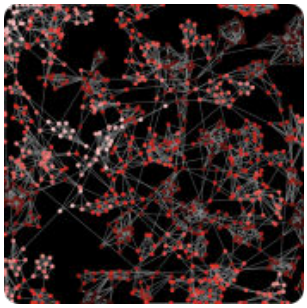
The Travel-tours firm is a tour operator having two agencies, TRO1 and TRO2, situated in Trouville. These last months, the results of the TRO1 agency increase, as the ones of TRO2 agency stay stable, or even decrease. The regional director decides to reward the TRO1 agency for its merits.

Interplay between stakeholders of the management of a river

Christophe Sibertin-Blanc, Pascal Roggero & Bertrand Baldet

The model is the SocLab formalization of a sociological investigation performed at the renewal of the Flood Risk Prevention Plan of the Touch river. Ten main stakeholders are

considered – local representative and inhabitants, State agencies, political authorities and engineering firms – each one with his own representation and interests about ecological health, urbanism, economic and agricultural activities, safety and so on, and worrying about strengthening his position.



Alternative scenarios of green consumption in Italy: an empirically grounded model

Giangiacomo Bravo, Elena Vallino, Alessandro K. Cerutti & Maria Beatrice Pairotti

The Consumption Italy (CITA) model is an empirically grounded agent-based model designed to represent household consumption in Italy and to estimate the related greenhouse gas emissions under different environmental policy scenarios.

Setting the Stage for Inequality

Timothy J. Dennehy

The purpose of the model is to examine combinations of within-group and between-group selection scenarios that could lead to the breakdown of a strictly egalitarian social structure. It builds on a replication of the model developed by Rogers et al. (2011) which examined the differential survival of egalitarian or hierarchical societies in constant or variable environments.

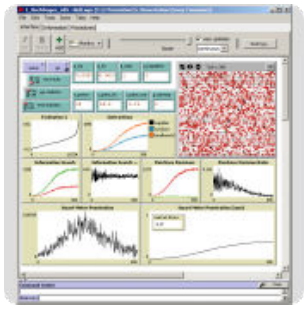
Most Downloaded Models in the Model Library

(March 1, 2013 – July 25, 2013)

1. (28 Downloads) (Policy induced) Diffusion of Innovations - An integrated demand-supply Model based on Cournot Competition ***by Martin Rixin***

2. (23 Downloads) A computational Model of Workers Protest ***by Jae-Woo Kim***

3. (23 Downloads) Simulating Knowledge Dynamics in Innovation Networks ***by Nigel Gilbert***



4. (23 Downloads) A consumer-demand simulation for Smart Metering tariffs (Innovation Diffusion) ***by Martin Rixin***

5. (19 downloads) Torsten Hägerstrand's Spatial Innovation Diffusion Model ***by Sean M. Bergin***

6. (19 downloads) MayaSim: An agent-based model of the ancient Maya social-ecological system ***by Scott Heckbert***

7. (19 downloads) Artificial Anasazi ***by Marco A. Janssen***
