



UNIVERSIDAD COMPLUTENSE  
MADRID

---

# AVISO DE CONFERENCIA

---

## Hybrid Agent Models for the Regulation of Social Exchange Processes in Open Multiagent Systems

Prof.<sup>a</sup> Graçaliz Dimuro. Centro de Ciências Computacionais.  
Universidade Federal do Rio Grande - FURG

---

Facultad de Informática  
Sala de Grados • 24 de abril de 2013 • 12:00  
*entrada libre hasta completar el aforo*

### resumen:

---

Systems of social relationships have often been seen as systems of social exchanges. The modeling of agent social interactions based on the evaluation of social exchanges has been considered in different works and in various different Multiagent System (MAS) contexts. A central problem in such systems of social exchanges is that of the regulation of the exchanges, towards producing social equilibrium. In this talk, we present an overview about social exchange regulation models, in particular discussing about the problem of the regulation of social exchanges in open MAS, where the agents adopting different exchange can enter and leave freely. Different hybrid agent models for the social exchange regulation problem were developed, e.g.: (i) the so-called equilibrium supervisor -- a centralized model for closed societies -, (ii) the regulation model based on BDI (Beliefs, Desires, Intentions) agents with plans derived from optimal policies of POMDPs (Partially Observable Markov Decision Process), (iii) the BDI-POMDP model combined with a HMM (Hidden Markov Model) for recognizing and learning social exchange strategies, operating in open agent societies, and (iv) fuzzy-BDI models. A step towards the self-regulation of exchange processes is outlined, with the agents organized in a complex network evolving their exchange strategies based on game theory.

### Sobre Graçaliz Dimuro:

---

G.P Dimuro ([\url{http://www.gracalizdimuro.com/}](http://www.gracalizdimuro.com/)) graduated in Civil Engineering (1980) at Universidade Católica de Pelotas (Brazil), and has a M.Sc. degree (1992) and a Ph.D. degree (1998) in Computer Science, all from Universidade Federal do Rio Grande do SUL -UFRGS (Porto Alegre, Brazil). His current research interests are Agent and Multiagent Systems, Social Agent-based Simulation, Soft and Evolutionary Hybrid Agent Models, Fuzzy Logic and Systems. She is a research fellow of CNPq (PQ Grant, level 2), member of the board of the Brazilian Society of Computational and Applied Mathematics (SBMAC), member of the editorial board of the journal Trends in Computational and Applied Mathematics (TEMA), member of the Special Committee of Artificial Intelligence (CEIA) of the Brazilian Computer Society (SBC), and advises graduate thesis at Universidade Federal do Rio Grande - FURG (Rio Grande, FURG). She has organized two editions of the main scientific event in Social Simulation in Brazil (The Brazilian Workshop on Social Simulation - BWSS 2010 and 2012) and some other events in Artificial Intelligence and Multiagent Systems (WESAAC and ENIA), and has participated in several program committees of international conferences and workshops (e.g., AAMAS, MABS, EPIA, IBERAMIA). The link to the official CV is <http://lattes.cnpq.br/9414212573217453> (in Portuguese), with the complete list of publications.