

# CIFREM SEMINARS

## AGENT-BASED MODELING OF MINORITY GAMES (EL FAROL PROBLEMS)

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*10.00 AM – Department of Economics seminar room 4° floor  
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Via Inama, 5 – Trento*

In this talk, we study the self-coordination problem as demonstrated by the well-known El Farol problem (Arthur, 1994), which later becomes what is known as the minority game in the econophysics community. While the El Farol problem or the minority game has been studied for almost two decades, existing studies are most only concerned with efficiency. The equality issue, however, has been largely neglected. In this paper, we build an agent-based model to study both efficiency and equality and ask whether a decentralized society can ever possibly self-coordinate a result with highest efficiency while also maintaining a highest degree of equality. Our agent-based model shows the possibility of achieving this social optimum. The two key determinants to make this happen are social preference and social networks. Hence, not only does institution (network) matters, but individual characteristics also matters. The latter part is open for human-subject experiments for further examination.