

# Wild@Ace

Workshop on Industry and Labor Dynamics.  
The Agent-based Computational Economic approach

Introduction by Pietro Terna

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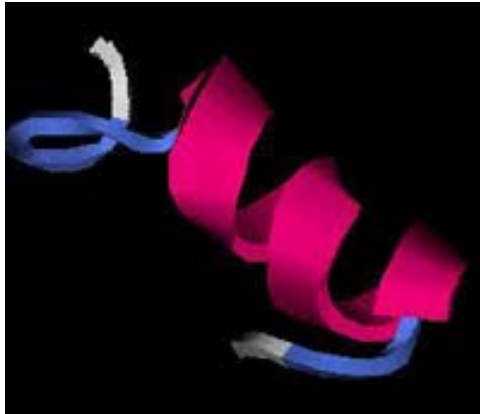
[pietro.terna@unito.it](mailto:pietro.terna@unito.it)

[web.econ.unito.it/terna](http://web.econ.unito.it/terna)

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From the simulation as a (assisted, opaque) mental  
experiment ...

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folding of an alpha helix using distributed dynamics

helix30.mpeg

From [www.stanford.edu/group/pandegroup/folding/](http://www.stanford.edu/group/pandegroup/folding/)

- Folding the smallest protein one could imagine: a single alpha helix.
- A complex structure generated from elementary rules about inter-molecular interaction

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... to ACE, Agent-based Computational  
Economics and, more generally,  
ABS, Agent-based Simulation

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From [www.icosystem.com/](http://www.icosystem.com/)

**pt** looks at **A** as its  
defender at to **B** as an  
offender

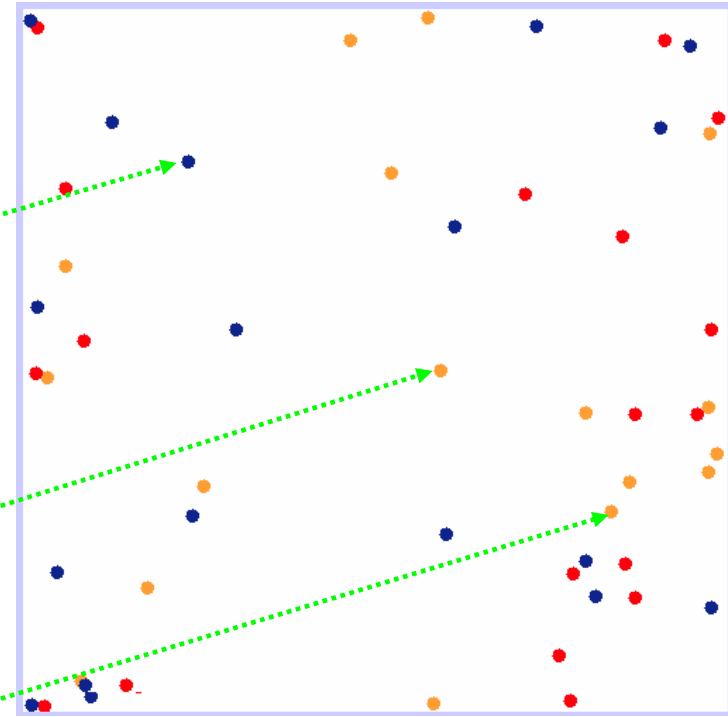
**or**

**pt** has to defend **A** from  
**B**

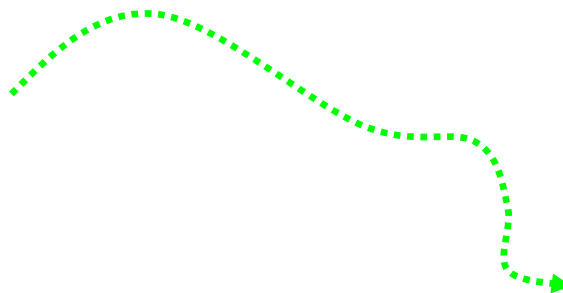
**pt**

**A**

**B**



action



Collegamento a [game\\_launch.htm.lnk](#)

Social simulation as a computer based way  
to **execute complex mental experiments,**

but also as a via **to represent the complexity of real world**

simulation = agent-based models

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How to use agents in simulation models:  
a radical view

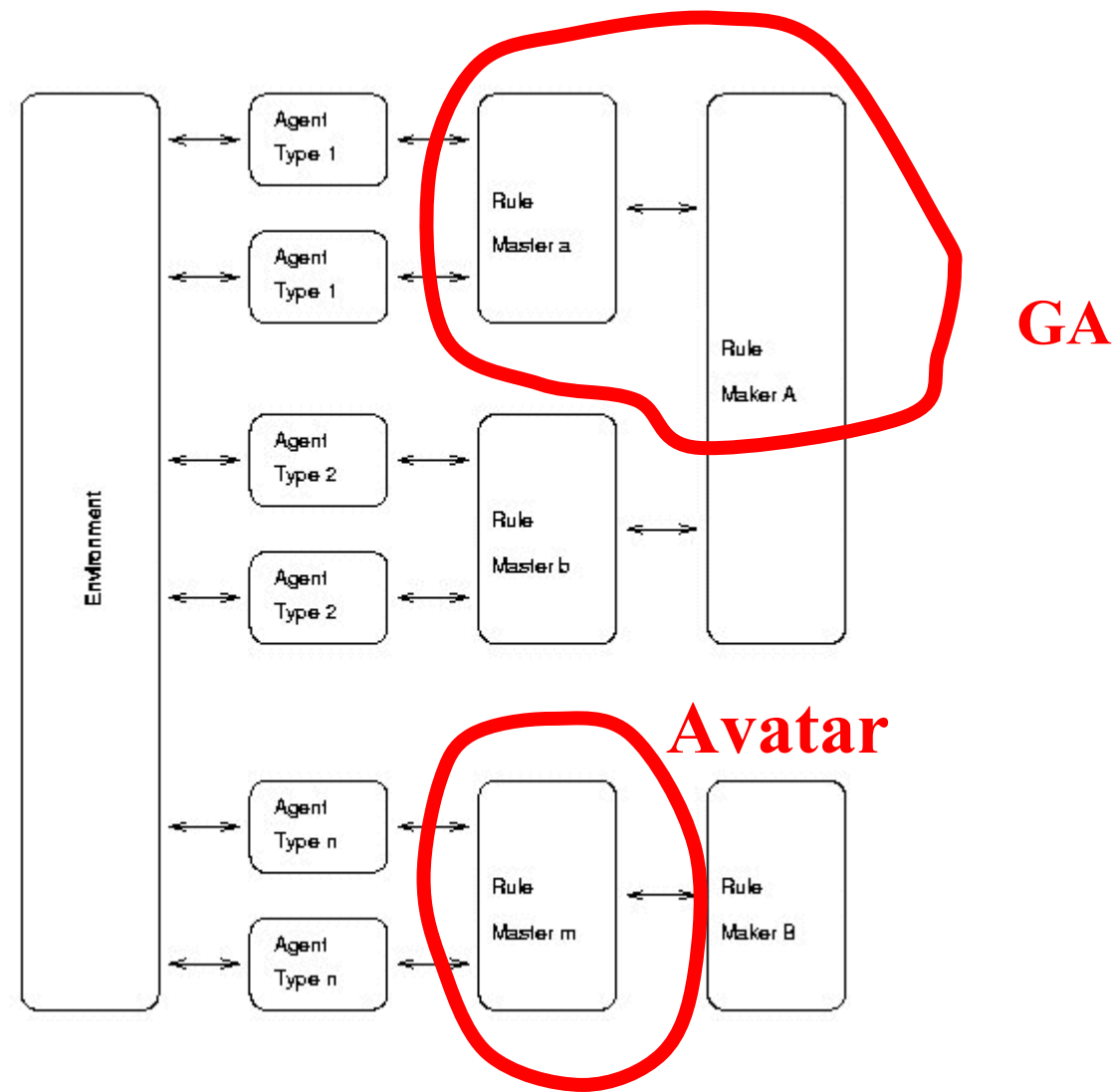
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The radical characterization of an ABM must be found into the possibility of real – direct or indirect – interaction amid the agents, instead of modeling it in a simplified way with aggregate simultaneous equations

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# A general structure for agent-based simulation models

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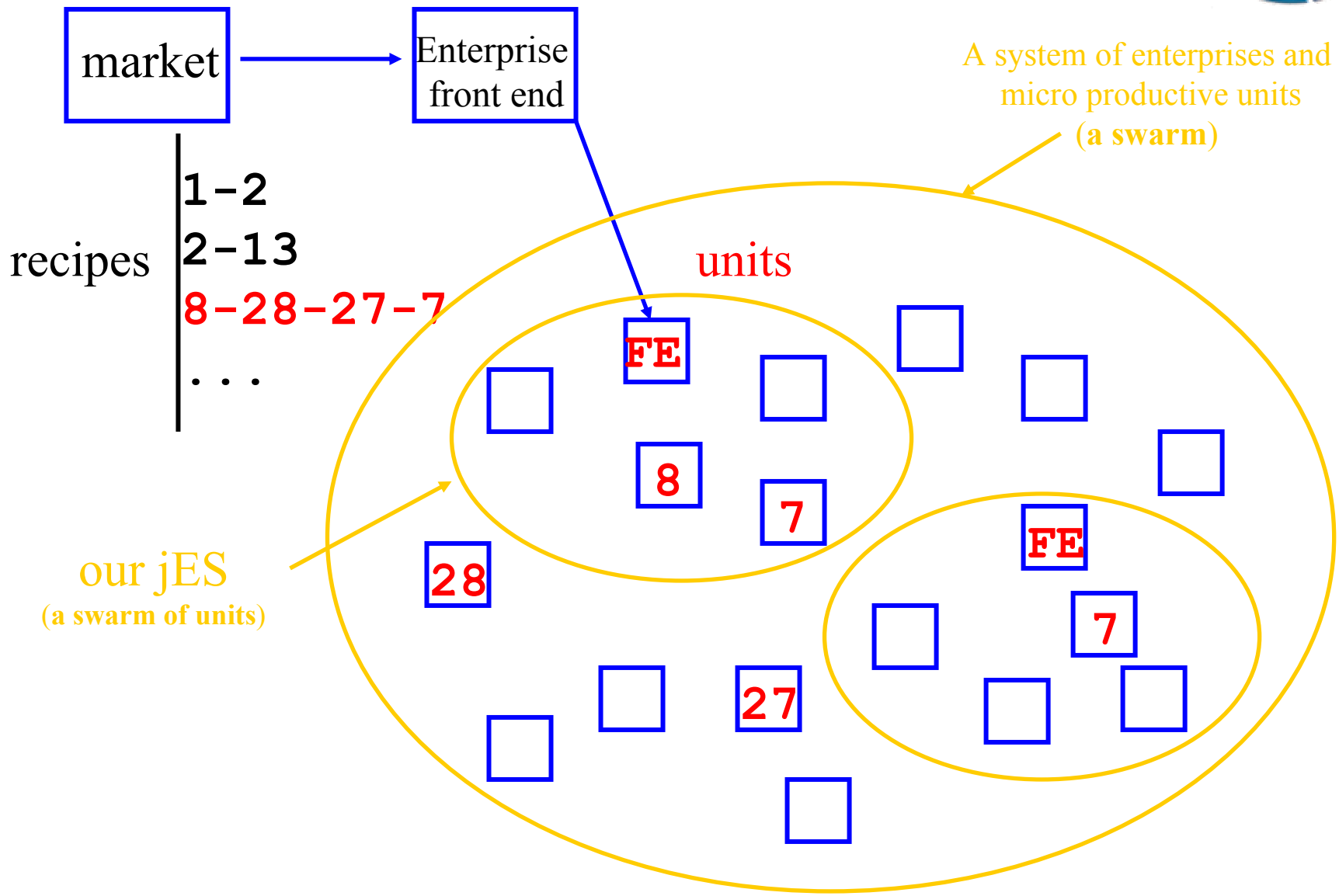
<http://web.econ.unito.it/terna/ct-era/ct-era.html>

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## An application: enterprise simulation

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# Recipes and production units



enterprise simulation (1)

8-28-27-7

**a**

we have the phases **a**, **b**, **c**, then

units

in **X** we have a choice problem

**Avatar, genetic algorithms, classifier systems to experiment and to simulate the effects of decision making:**

- **experiments in a usual context**
- ***soft computing* applications**

The orders are placed in the unit waiting lists and executed according to the FIFO criterion

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... relevance needed ...

the relevance of our work



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