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Nota di contenuto	Invited Lectures -- Computing in Nonlinear Media: Make Waves, Study Collisions -- Ant Algorithms Solve Difficult Optimization Problems -- The Shifting Network: Volume Signalling in Real and Robot Nervous Systems -- A Study of Replicators and Hypercycles by Typogenetics -- Emergence of a Super-Turing Computational Potential in Artificial Living Systems -- Agents in Environments -- Eco-Grammars to Model Biological Systems: Adding Probabilities to Agents -- Dynamics of the

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Sommario/riassunto

Why is the question of the di?erence between living and non-living matter - tellectually so attractive to the man of the West? Where are our dreams about our own ability to understand this di?erence and to overcome it using the ?rmly established technologies rooted? Where are, for instance, the cultural roots of the enterprises covered nowadays by the discipline of Arti?cial Life? Cont- plating such questions, one of us has recognized [6] the existence of the eternal dream of the man of the West expressed, for example, in the Old Testament as follows: . . . the Lord God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being (Genesis, 2. 7). This is the dream about the workmanlike act of the creation of Adam from clay, about the creation of life from something non-living, and the con?dence in the magic power of technologies. How has this dream developed and been converted into a reality, and how does it determine our present-day activities in science and technology? What is this con?dence rooted in? Then God said: “Let us make man in our image. . . ” (Genesis, 1. 26). Man believes in his own ability to repeat the Creator’s acts, to change ideas into real things, because he believes he is godlike. This con? dence is – using the trendy Dawkins’ term – perhaps the most important cultural meme of the West.