Insurgent Science Series

Highlighting challenging developments in the conception of nature and science

Friday, January 16th at 1:30 in 68-181

A Pattern Language for Animal Form

Stuart Newman

Animal body plans and organs emerged during several bursts of concentrated evolutionary change between 500 and 600 million years ago. Many of the key regulatory genes for animal development existed in single-celled ancestors, took on new functions in the multicellular state, and remained relatively unchanged during the explosive diversification of form. This talk will present a theory for the origination of multicellular form in which the major driving force consists of the physical laws inherent to organisms' mesoscopic materials rather than, as the standard conception of biological evolution holds, genetic change driven by chance.

Dr. Newman is professor of cell biology and anatomy at New York Medical College. He specializes in cellular and molecular mechanisms of vertebrate limb development, physical mechanisms of morphogenesis, and evolution of developmental mechanisms.

Wednesday, January 28th at 1:30pm in 4-231

A Bigger Physics

Michael Augros

As Erwin Schrödinger wrote in 1951, "The isolated knowledge obtained by a group of specialists in a narrow field has in itself no value whatsoever, but only in its synthesis with all the rest of knowledge". What could it mean to 'synthesize' all of natural science? To what extent is such a thing possible? Why is it desirable? Whose job is it? And how would it relate to mathematics? Come join Dr. Augros to explore the possibility of a general theory of nature.

Dr. Augros is a philosopher of science who teaches at the Center for Higher Studies in Thornwood, New York. He has written on Euclid's fifth postulate and the natural science that claims physics as a subset.

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in conjunction with the Institute for the Study of Nature. All are welcome!

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