Special FIAS Colloquium

Wednesday, March 20, 2013, 11:00
FIAS, Ruth-Moufang-Str. 1, 60438 Frankfurt am Main
Lecture hall 0.100

Speaker: Prof. Dr. Kazuyuki Aihara, Institute of Industrial Science,
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Title: Complex Systems Modelling for Personalised Medicine

In this talk, I review our nonlinear scientific approach to personalised medicine. First, we formulate hybrid dynamical systems models of prostate cancer and apply them to personalized diagnosis, optimal hormone therapy, and prognosis (1-3). Second, we extend the concept of the conventional biomarkers to that of dynamical networks biomarkers toward detecting early-warning signals for sudden deterioration of complex diseases in a personalised way, which can be widely applied to various complex networks (4,5).

References