Seminar Announcement

IFISC Seminar

Dynamic Light Scattering Revisited - An Artificial Neural Network Approach for Time Series Processing

Dan Chicea, Lucian Blaga University of Sibiu, Romania

IFISC Seminar Room

Wednesday, September 19, 2018 at 14:30

If light is incident on a suspension, the suspended particles act as scattering centers. If the incident beam is coherent, so will be the scattered waves and the wavelets will interfere. The interference field in each location carries information from all the scattering centers in the beam area, therefore a recorded time series from any location of the interference field will do the same. Processing the time series to derive information regarding the Brownian motion of the suspended particles and, here from, regarding the size and size distribution of the particles is named Dynamic Light Scattering (DLS). The techniques will be briefly presented, followed by the novel procedure of processing DLS time series using Artificial Neural Networks, with details on the design and training procedure, together with some results. Dr. Dan Chicea, Professor, PhD., Habil., Physicist Engineer. B.S. in Physics Engineering at the University of Bucharest, Romania 1987; Diploma in System Analysis and Computer Programming, 1988; PhD in Atomic Physics, University Babe□-Bolyai, Cluj-Napoca, 1998. His research is in the area of Dynamic Light Scattering (DLS) and Static Light Scattering (SLS), DLS time series processing, Monte Carlo simulation of stochastic systems, Nanoparticles Synthesis and Characterization.

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TV

This seminar will be broadcasted live in:
http://ifisc.uib-csic.es/live.php

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