1011-76-5 **Jaykov JSF Foukzon*** (`advancedguidance@list.ru`), Rambam 7a/2, 56789 Tel-Aviv, Israel.
Advanced numerical-analytical methods for path integral calculation and its application to some famous problems of 3-D turbulence theory. New scenario for transition to slow turbulence. Preliminary report.

Advanced numerical-analytical methods for path integral calculation and its application to some famous problems of 3-D turbulence theory.New scenario for transition to slow turbulence. Turbulence like quantum chaos in three dimensional model of Euclidian quantum field theory with classical source.Quasidetermined chaos in the stochastic Nikolaevskii model. Running title: New scenario for transition to slow turbulence. Jakov Foukzon Israel Institute of Technology, Haifa, Israel, Numerical-analytical study of the three-dimensional nonlinear stochastic partial differential equation, analogous to that proposed by V. N. Nikolaevskii [Recent Advances in Engineering Science (Springer-Verlag, Berlin. 1989)] to describe longitudinal seismic waves, is presented. The equation has a threshold of short-wave instability and symmetry, providing long-wave dynamics. Proposed new mechanism for quantum chaos generating in nonlinear dynamical systems. The hypothesis is said, that physical turbulence could be identified with quantum chaos of considered type. PACS numbers : 47.27.Cn. 47.52.fyj, 47.27.Eq. 47.20.Ky In the present work a non-perturbative approach to the studying of problem of quantum chaos in dynamical systems with infinite number of degrees of freedom is proposed. (Received January 08, 2005)