Государственный Университет «Дубна»
Кафедра фундаментальных проблем физики микромира
организуют

8, 9, 10 и 11 февраля 2016 года,
в аудитории Д.И. Блохинцева (4 этаж ЛТФ)
курс лекций

Elements of QFT in Curved Space - Time

Ilya L. Shapiro
Universidade Federal de Juiz de Fora, MG, Brazil

8.02.16, 11:00
Lecture 1.
GR and its limits of applicability, Planck scale. Quantum gravity and importance of semi-classical approach. Formulation of quantum field theory on curved background. Covariance and renormalizability in curved space-time.

9.02.16, 14:30
Lecture 2.
Renormalization and renormalization group in curved space. Brief review of calculational methods. Renormalization in the vacuum sector of the theory.

10.02.16, 11:00
Lecture 3.
Conformal anomaly and anomaly-induced effective action. Ambiguities of effective action. Applications:
1) Classification of quantum vacuum states on black hole background.
2) Starobinsky model and its modifications.

10.02.16, 11:00
Lecture 4.