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## Abstracts of Short Communications and Posters

### Section:

## 11. Mathematical Physics

1991 MS Classification: 81T27, 82B27, 82B28
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**Critical phenomena and continuum limit in the hierarchical fermionic model**

The hierarchical fermionic model is defined as a model with 4-component Grassmann-valued spins on the hierarchical lattice with self-similar Gaussian part and local potential $r(\bar{\psi}_1\psi_1+\bar{\psi}_2\psi_2)+g\bar{\psi}_1\psi_1\bar{\psi}_2\psi_2$. The renormalization group transformation is given by rational map in the plane $(r, g)$. This dynamical system has a wide variety of dynamical phenomena. We discuss intricate critical behaviour and continuum limit problem in this model.
Reference: E. Yu. Lerner and M. D. Missarov, Global flow of renormalization group and thermodynamic limit in the hierarchical fermionic model, *Teor. i Mat. Fiz.* , **107** (1996), 201–212 (in russian).