Contribution ID: **12** Type: **not specified**

# Classical Statistical simulation of Quantum Field Theory

*Thursday, 17 December 2020 17:00 (20 minutes)*

We study a classical theory which contains a Gaussian noise as a source. This source is responsible for the creation and annihilation of particle from the vacuum and the energy of the resultant configuration is same as the zero point energy of quantum field theory. We show that after taking the average over the samples, the perturbative expansion of the expectation value, n-point function, can be expressed by the tree and loop Feynman graphs which are exactly same as those in the corresponding quantum field theory. We comment on the similarity and difference to the stochastic quantization.

**Presenter:** Prof. HIRAYAMA, Takayuki (Chubu U.)

**Session Classification:** Short talks