

**Abstract for GR-TR Conference on Statistical Mechanics
and Dynamical Systems**

Talk Invited

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**Quantization of Nambu flow equations in three dimensional
phase space**

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We present a toroidal discretization of Nambu dynamics for three dimensional phase space and we construct the quantum mechanical evolution matrix for any linear Nambu flow. When the discretization number is $N = \text{prime integer}$ our quantization is a unitary matrix representation of the discrete group $SL[3, Z[N]]$, the group of 3×3 matrices with integer elements mod N and determinant one. The motivation of this work is to present a framework for the quantization of dynamics of perfect fluids in three dimensions.