Abstract:

I plan to talk about a construction of two different solutions to an elliptic system defined on the two dimensional torus. The system can be viewed as an elliptic regularization of the stationary Burgers 2D system. A motivation to consider the above system comes from an examination of unusual properties of a linear operator. Roughly speaking a term effects in a special stabilization of particular norms of the operator. The proof is valid for a particular large force. The main steps of the proof concern finite dimension approximation of the system and concentrate on analysis of features of large matrices, which resembles standard numerical analysis. The talk is based on the results of the paper: Jacek Cyranka, Piotr B Mucha : A construction of two different solutions to an elliptic system. arXiv:1502.03363.