

**Report on research collaboration**

**between**

**Dr. Shuvam Sen, Department of Mathematical Sciences, Tezpur University**

**and**

**Dr. Jiten C Kalita, Department of Mathematics, IIT Guwahati**

**Title of collaboration:**

alpha-, beta-phenomena in the post-symmetry break for the flow past a circular cylinder

**Summary of collaboration:**

A collaborative research work was undertaken by Dr. Shuvam Sen and Dr. Jiten C Kalita with the aim to study  $\alpha$  and  $\beta$  phenomena in the post-symmetry break for the flow past a circular cylinder. The main emphasis in the computational work was to augment literature in the context of the above mentioned phenomena at the later stages of flow past circular cylinder. Expertise and computational resources from both the collaborators were put together to come up with detailed analysis along with computational evidence towards the formation of tertiary structures in the flow field. The collaboration was mostly restricted in online mode with exchange of ideas and data over electronic mode of communication.

**Duration of collaboration:**

The collaboration started in the month **January, 2016** and culminated in the form of a published research paper in the month of **March, 2017**.

**Details of collaboration:**

Details of collaboration could be found in the article-

$\alpha$ -,  $\beta$ -phenomena in the post-symmetry break for the flow past a circular cylinder, Physics of Fluids, vol. 29, p. 033603 1 – 12, 2017.

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