

# Seminar

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## Institute for Plasma Research

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**Title :** Simulation Studies on the Interaction of Different Gas Jets with Ambient Air

**Speaker :** Mr. Akshay Vaid  
FCIPT, Gandhinagar

**Date :** 31 October, 2018 (Wednesday)

**Time :** 04.00 PM

**Venue :** Committee Room 4, (New Building), IPR

### **Abstract:**

Atmospheric pressure plasma jets have been extensively studied in recent times due to the ease of production and handling. In such plasma jets, predominately helium and argon are used as plasma producing gases. These plasma jets find applications in various bio-medical and agricultural fields. In this work, fluid dynamic behaviour of the plasma jet in the absence of plasma discharge with argon is investigated using finite volume approach. The study is carried out for different jet diameters using appropriate geometric models at different flow rates. It is found that the flow remains largely in the turbulent regime for various conditions. The parameter regime for which the flow is in laminar is chosen as most appropriate for the jet operation. Results also indicate decrease in jet length with decreasing jet diameter.

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