Contribution ID: **366** Type: **Poster Presentation**

An Accurate Determination of Pressure Profiles in Microfluidic Crevices and Networks

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Abstract content
   (Max 300 words)

Results from the modified Navier-Stokes equations with momentum and energy accommodation coefficients are utilized to model the gas flow in microfluidic channels in order to develop a semi-empirical gas flow conductance integral equation. Parameters occurring in the developed semi-empirical flow conductance equation that is an approximation of the more complex Clausing integral equation from vacuum gas dynamics studies are then optimized to more closely match the fluid pressure-velocity field obtained with the PDE solution, in an attempt to develop a simplified equation set that can be applied for the numerical analysis of flow/pressure behaviour in pipe networks for microfluidic devices

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Primary author: Mr RAMNATH, Vishal (Silvan Industries)

Presenter: Mr RAMNATH, Vishal (Silvan Industries)

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