



DOCTORAL RESEARCH TOPIC:

Research on interfacial interactions

RESEARCH FIELD:

Energetics and Power Engineering (T 006)

BRIEF DESCRIPTION OF RESEARCH TOPIC:

Turbulence occurs when the shear forces at a flow-limiting surfaces exceed the viscous forces. However, besides friction surfaces can affect the flow through heat, mass, and moment transfer. The viscosity of the flow changes as heat is transferred. And if the surface is in contact with another flow and mass transferred between them (for example, condensation takes place) – flow velocity at the border changes and momentum transfer is altered too. The changing properties and interactions with the positive feedback between heat and momentum transfer allow the originally laminar flow switch to turbulent spontaneously.

Topics include spontaneous local condensation effects that may occur during turbulence excitation.

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