

## **Marangoni convection in a fluid layer with internal heat generation**

### **ABSTRACT**

In this paper we use classical linear stability theory to investigate the effects of uniform internal heat generation on the onset of Marangoni convection in a horizontal layer of fluid heated from below. We use an analytical technique to obtain the close form analytical expression for the onset of Marangoni convection when the lower boundary is conducting with free-slip condition. We show that the effect of increasing the internal heat generation is always to destabilize the layer.

**Keyword:** Marangoni convection; Heat generation; Free-slip