

## **Effects of control on the onset of Marangoni-Benard convection with uniform internal heat generation**

### **ABSTRACT**

The effect of control on the onset of Marangoni-Benard convection in a horizontal layer of fluid with internal heat generation heated from below and cooled from above is investigated. The resulting eigenvalue problem is solved exactly. The effects of control are studied by examining the critical Marangoni numbers and wave numbers. It is found that the onset of Marangoni-Benard convection with internal heat generation can be delayed through the use of control.

**Keyword:** Marangoni-Benard convection; Control; Internal heat generation