

<b>Thesis Title</b>	Development of Computer-Controlled Microwave Heating System for Hyperthermia Cancer Therapy
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### **Abstract**

This thesis presents the investigation and development of a 2450 MHz computer-controlled microwave hyperthermia system using a spherical slot array applicator. The system consists of a computer, a temperature measurement system, a magnetron power controller, a magnetron, an applicator and a surface cooling system. It is found from experiments, in human muscle phantom, that the system is able to heat the heating material to the depth of 2 cm from the surface and temperature can be controlled to keep constant. This satisfies the hyperthermia cancer therapy requirement.