

## **ABSTRACT**

*The development of technology makes people prefer something practical and efficient. This also happens in the use of rice cookers. There are various types of rice cookers in the market, but there's several problems happens that occur in the temperature control process. While to cook something food, a fast and stable temperature response is needed. So that cooked quality becomes perfect and does not impact to food.*

*In this final project a temperature controller is automatically made on the rice cooker according to the desired set point with the Zero Crossing Method. The zero crossing detector method is a circuit used to detect a 220volt AC sine wave when passing a zero voltage point. Opposite the detected zero is the transition from positive to negative and the transition from negative to positive. This crossing of the zero point is a reference that is used as the beginning of giving the value of the delay time for triggering the triac circuit, to regulate the heat temperature in the rice cooker which can later be adjusted according to user requirements.*

*The results of implementing this final project are obtained in the form of a temperature controller in a rice cooker using the zero crossing method to regulate the temperature. This tool uses the work of double setpoint. The first setpoint is used for cooking according to user-specified input, while the second setpoint is controlled with Arduino automatically by 75 which serves to warm food.*

**Keywords:** *Zero Crossing, Rice cooker, Arduino*