

Research Title: Finite Element Analysis of Multiphase Antenna for Microwave cancer Ablation

Researcher:.....Asst.Prof.Dr. Pattarapong Phasukkit.....

Faculty: Engineering.....**Department:** Electronic Engineering.....

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ABSTRACT

Microwave ablation for liver cancer treatment has been widely performed due to its minimal invasive technique both single and multi probe. Even though, multi antenna ablation system provide a larger destroy area, however effect of phase shift difference between each antenna is still challenge to be investigate for total ablation result. In this research, we propose a preliminary investigate of phase shift effect to a multi antenna system. Two probes array and three probes array was configured as a multi antenna liver ablation system based on each coaxial opened-slot antenna. By using FEM analyze, we present a full 3D simulation results of those multiple antenna system as phase shift between each probe was varied.

Keywords - finite element analysis, phase shift multi-antenna,microwave liver ablation