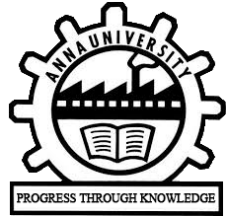
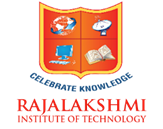
****

****

**SMART ANTENNA FOR BRAIN TUMOUR APPLICATIONS**

**A PROJECT REPORT**

***Submitted by***

**BALAJI R 211715106018**

**BALAJI V 211715106019**

**BUVANESH G 211715106022**

***In partial fulfilment for the award of the degree of***

**BACHELOR OF ENGINEERING**

**IN**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**RAJALAKSHMI INSTITUTE OF TECHNOLOGY**

**CHENNAI**

**ANNA UNIVERSITY: CHENNAI 600 025**

**APRIL 2019**

I

**ANNA UNIVERSITY CHENNAI: CHENNAI 600 025**

**BONAFIDE CERTIFICATE**

Certified that this Report “**SMART ANTENNA FOR BRAIN TUMOR APPLICATION**” is the bonafidework of **Balaji R (211715106018), Balaji V (211715106019)** and **Buvanesh G (211715106022)** who carried out the work under my supervision

**SIGNATURE SIGNATURE**

**Dr. R. RAJESWARI, M.E., Ph.D., S.Kalaivani, M.Tech,**

**HEAD OF THE DEPARTMENT SUPERVISOR**

Professor Professor

Department of Electronics and Department of Electronics and

Communication Engineering Communication Engineering

Rajalakshmi Institute of Technology Rajalakshmi Institute of Technology

Kuthambakkam Post Kuthambakkam Post

Chennai-600124 Chennai-600124

ii

**CERTIFICATE OF EVALUTION**

**College Name : 2117- Rajalakshmi Institute of Technology**

**Branch & Semester : Electronics and Communication Engineering. VIII sem.**

**Subject : EC6811 PROJECT WORK**

**TITLE OF THE PROJECT:**

Smart Antenna for Brain Tumour Application.

**NAME OF THE STUDENT:**

**BALAJI.R 211715106018**

**BALAJI.V 211715106019**

**BUVANESH.G 211715106022**

The report on the project work submitted by the above students in partial fulfilment for the award of the degree of Bachelor of Engineering in ELECTRONICS AND COMMUNICATION ENGINEERING of Anna University, reported the work done by the above students and then evaluated.

**The University Viva-voice was held on\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INTERNAL EXAMINER EXTERNAL EXAMINER**

iii

**ACKNOWLEDGEMENT**

We wish express our hearty and sincere gratitude to our chairman **Dr.S.MEGANATHAN. B.E.,F.I.E,** for his sincere endeavor in educating us in his premier institution.

We wish to express our deep gratitude to our beloved chairperson **Dr.HAREE SHANKAR, MBBS,**for his enthusiastic motivation which helped us a lot in completing the project.

We express our thankfulness to **Dr.M.VELAN, M.E., Ph.D.,**Principal, Rajalakshmi Institute of Technology for their kind support and the facilities provided to complete our work in time.

With profound since and regards, we acknowledge with great pleasure **Dr.R.RAJESWARI.M.E., Ph.D.,** Head of the Department, Department of Electronics and Communication Engineering for his valuable suggestions and guidance for the development and completion of our project.

We express our sincere thanks to our guide **S.KALAIVANI., M.E,.** Professor, Department of Electronics and Communication Engineering, for leading us on the project.

We expend our gratitude to **Mr.K.SIVAKUMAR,M.E.,(Ph.D).,** Assistant Professor(SS), project coordinator for their timely organization of reviews and their support throughout the project work.

We also thanks our review committee members **Dr.R.RAJESWARI,** professor and **Dr.G.NIRMALA PRIYA,** professor, Department of Electronics and Communication Engineering for her valuable suggestions and guidance for the development and completion of our project.

Finally, we express our deep sense of gratitude to our parents, all our faculty members, technical staff and all our friends for their constant encouragement and moral support.

Iv

**ABSTRACT**

In this method of detection of Brain Tumour using Smart Antenna, a 3D model of the human brain is taken as the input so that the exact shape of the tumour can be identified. This detection in Tumour is very important in many diagnostic and therapeutic applications. Because of high quantity data in MRI images and blurred boundaries, tumour identification, segmentation and classification are very hard. This model proposes a brain tumour detection method to increase the accuracy and decrease the diagnosis time as well as reducing the side effects of radiation. Accurate detection of brain tumour is done by Specific Absorption Rate of the normal cells and tumour cells plays a vital role in the diagnosis of tumour. The diagnosis method consists of three stages, Antenna testing and error calculation, Sam Phantom without tumour, Sam Phantom with tumour.

V