

[Events](#) | [News](#) | [FAQs](#) | [Get Involved](#)


RICE | OEDK
Oshman Engineering Design Kitchen

Enter search string


[Back](#)

WNR

[Send message](#)

Wireless Relay of Multi-Channel Neuro-Electrode Data

Membership level 2015-2016 Team

Team Name WNR

Project Title Wireless Relay of Multi-Channel Neuro-Electrode Data

Design Challenge Currently, no solution exists on the market for an efficient recording of neural brain activity that is not restricted by a physical tether. Our project goal is to develop a low-power wireless recording device that digitizes neural signals from a 16-channel, 16-element electrode array and send the neural data wirelessly to a portable receiver. The wireless neural recorder will first be wireless embedded ECoG system implemented in animals and eventually humans.

Project Thumbnail Image



Date Updated Sunday, December 13, 2015

Sponsors Brenner Foundation with Ellen Kirk

Department(s) Electrical and Computer Engineering

Faculty Advisor 1 - Name Gary Woods

Faculty Advisor 1 - Department ECE

Faculty Advisor 2 - Name Aydin Babakhani

Faculty Advisor 2 - Department ECE

Rapid Prototyping Tools Used
PCB Mill
Reflow Oven
Soldering Station
Oscilloscope

Hand Tools

Facilities Used Conference Rooms
Computer Lab or Computer Nook
Specialty Software
Printers/ Copiers
Electronics Lab or Tools from Electronics Lab

Electronic Tools Used TI Microcontroller (MSP 430)
TI DSP Chip (eg C2000)
Arduino
ARM
Hand assembled Protoboard/perf board
Prefabricated PCB (eg evaluation modules, LaunchPAD
FPGA
Freescale
LED
LCD display
Digital Multi-meter

Software Used C
C++
Matlab
Eagle
Code Composer

---

PROPER ACKNOWLEDGMENT: This project was sponsored by Brenner Foundation with Ellen Kirk. The design work for this project was supported by the resources of the Oshman Engineering Design Kitchen.

Member photo albums (2 Albums)



Team Photo Album (3)



Team Photo Album 2 (5)

ABOUT

Mission
Our Team
Visit the OEDK
Curriculum
Immersion
Programs

QUICK LINKS

Current Projects
Award Winning Projects
Project Videos
Project Sponsors - coming soon
Tour Request
Safety Guidelines

RICE PARTNERS

Rice University Homepage
Brown School of Engineering
Rice Center for Engineering
Leadership
Beyond Traditional Borders
Rice 360° Institute for Global Health

OEDK Statistics
News

Resources
Events

Technologies

Contact us

Oshman Engineering Design Kitchen - Rice University

6100 Main Street MS 390 | Houston, Texas | 77005

Phone: 713.348.OEDK

Email: loedk@rice.edu

Industry Partners



[Events](#) | [News](#) | [FAQs](#) | [Get Involved](#)

Enter search string



RICE | OEDK

Oshman Engineering Design Kitchen

[Back](#)

Team Photo Album 2 (5)

Created on: Sunday, December 13, 2015

Cycle 2



ABOUT

- Mission
- Our Team
- Visit the OEDK
- Curriculum
- Immersion
- Programs
- OEDK Statistics
- News

QUICK LINKS

- Current Projects
- Award Winning Projects
- Project Videos
- Project Sponsors - coming soon
- Tour Request
- Safety Guidelines
- Resources
- Events

RICE PARTNERS

- Rice University Homepage
- Brown School of Engineering
- Rice Center for Engineering Leadership
- Beyond Traditional Borders
- Rice 360° Institute for Global Health Technologies

Contact us

Oshman Engineering Design Kitchen - Rice University
6100 Main Street MS 390 | Houston, Texas | 77005
Phone: 713.348.OEDK
Email: oedk@rice.edu

Industry Partners

