

Accepted Manuscript

Title: Machine learning detects EEG microstate alterations in patients living with temporal lobe epilepsy

Authors: Kiran Raj V, Shyam Sundar Rajagopalan, Sujas Bhardwaj, Rajanikanth Panda, Venkateshwara Reddy Reddam, Ganne Chaitanya, Kenchaiah Raghavendra, Ravindranadh C Mundlamuri, Kandavel Thennarasu, Kaushik K Majumdar, Parthasarathy Satishchandra, Sanjib Sinha, Rose Dawn Bharath



PII: S1059-1311(18)30292-9
DOI: <https://doi.org/10.1016/j.seizure.2018.07.007>
Reference: YSEIZ 3233

To appear in: *Seizure*

Received date: 12-5-2018
Revised date: 5-7-2018
Accepted date: 9-7-2018

Please cite this article as: V KR, Sundar Rajagopalan S, Bhardwaj S, Panda R, Reddy Reddam V, Chaitanya G, Raghavendra K, C Mundlamuri R, Thennarasu K, K Majumdar K, Satishchandra P, Sinha S, Bharath RD, Machine learning detects EEG microstate alterations in patients living with temporal lobe epilepsy, *Seizure: European Journal of Epilepsy* (2018), <https://doi.org/10.1016/j.seizure.2018.07.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Machine learning detects EEG microstate alterations in patients living with temporal lobe epilepsy

Kiran Raj V^{a,b}, Shyam Sundar Rajagopalan^c, Sujas Bhardwaj^{a,b}, Rajanikanth Panda^{a,b,1}, Venkateshwara Reddy Reddam^{a,b}, Ganne Chaitanya^{d,2}, Kenchaiah Raghavendra^d, Ravindranadh C Mundlamuri^d, Kandavel Thennarasu^e, Kaushik K Majumdar^f, Parthasarathy Satishchandra^d, Sanjib Sinha^d, Rose Dawn Bharath^{*a,b}

^aNeuroimaging and Interventional Radiology, National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka-560029, India.

^bAdvance Brain Imaging Facility, Cognitive Neuroscience Centre, National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka-560029, India.

^cResearch Associate, Department of Psychiatry, St. John's Medical College and Hospital, Bangalore, India

^dNeurology, National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka-560029, India.

^eBiostatistics, National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka-560029, India.

^fIndian Statistical Institute, Systems Science and Informatics Unit, Bangalore, Karnataka-560059, India.

¹Coma Science Group, GIGA-Consciousness, Université de Liège, Liège, Belgium.

²Department of Neurology, Thomas Jefferson University, Philadelphia, PA, USA.

*Corresponding Author:

Dr. Rose Dawn Bharath

Additional Professor, Department of Neuroimaging and Interventional Radiology,
National Institute of Mental Health and NeuroSciences, Bangalore, Karnataka-560029, INDIA.

E-mail: cns.researchers@gmail.com

Phone: +91 9483971399

Highlights:

- EEG microstates represent dynamics of large scale brain networks
- Patients with refractory epilepsy reveal alterations in EEG microstates
- Machine learning using microstates can predict epilepsy even when interictal discharges are absent.

Download English Version:

<https://daneshyari.com/en/article/6829654>

Download Persian Version:

<https://daneshyari.com/article/6829654>

[Daneshyari.com](https://daneshyari.com)