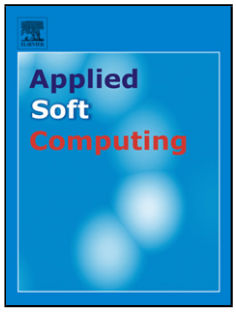


Title: A Novel Approach to Signal Classification with an Application to Identifying the Alcoholic Brain

Author: Arnab Roy J. David Schaffer Craig B. Laramee

PII: S1568-4946(16)30100-4
DOI: http://dx.doi.org/doi:10.1016/j.asoc.2016.02.048
Reference: ASOC 3508

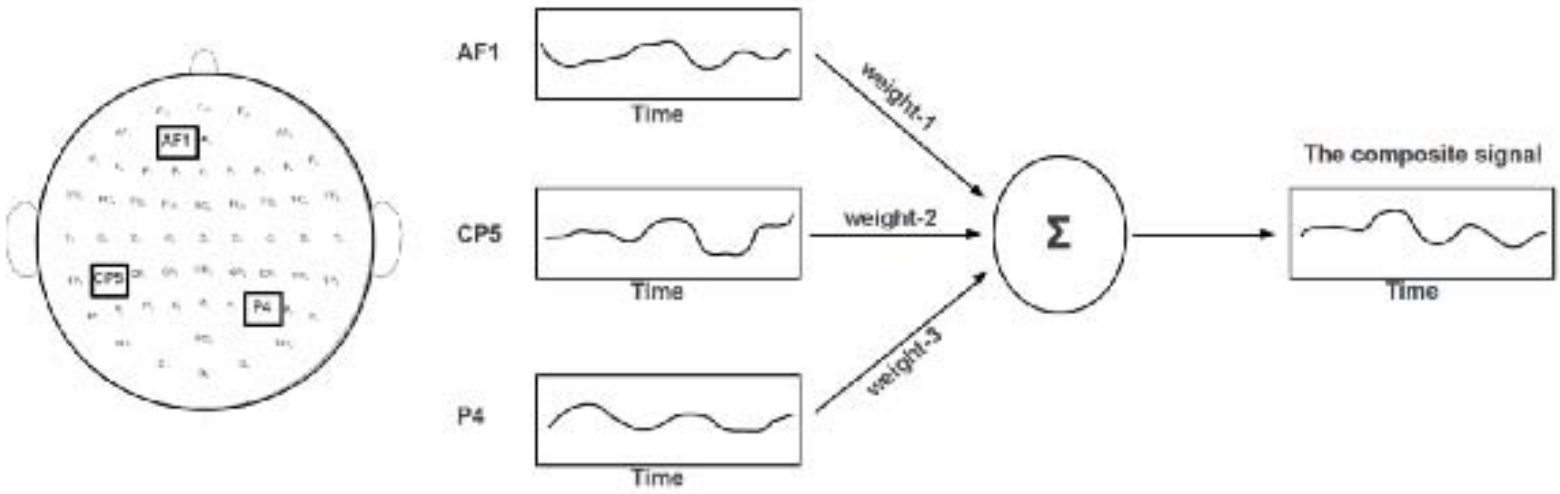
To appear in: *Applied Soft Computing*

Received date: 7-8-2014
Revised date: 2-1-2016
Accepted date: 27-2-2016

Please cite this article as: Arnab Roy, J. David Schaffer, Craig B. Laramee, A Novel Approach to Signal Classification with an Application to Identifying the Alcoholic Brain, *<![CDATA[Applied Soft Computing Journal]]>* (2016), http://dx.doi.org/10.1016/j.asoc.2016.02.048

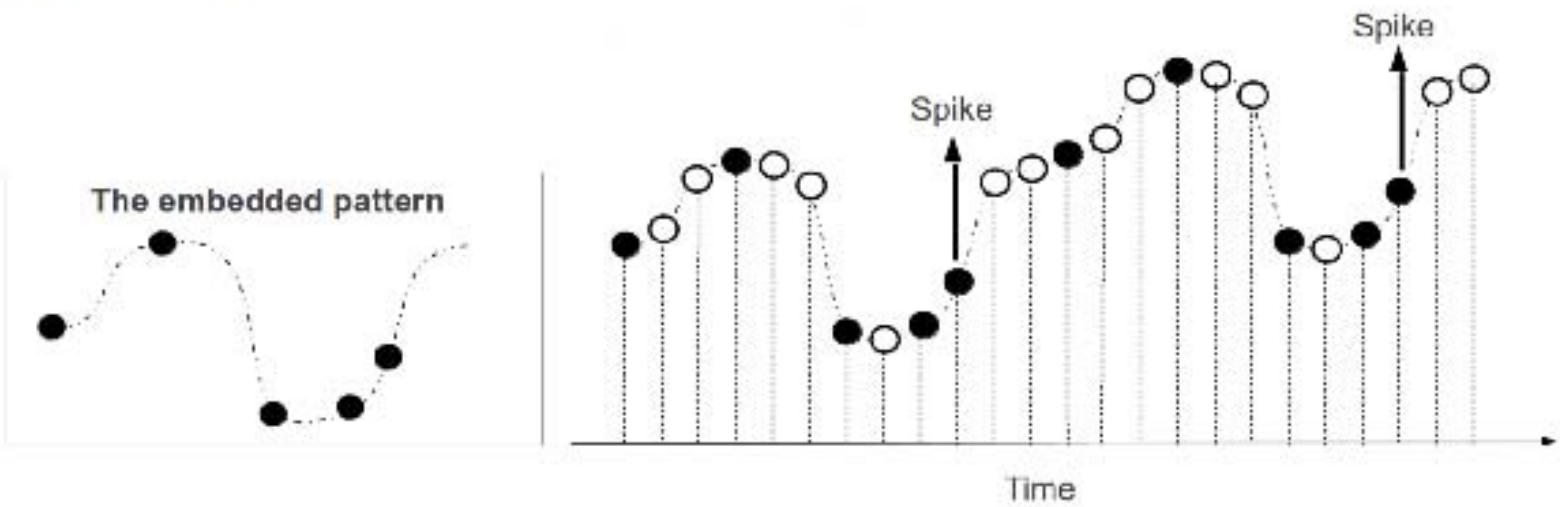
Spatial-task:

Define a subset of EEG leads/lead-weights using which a composite signal can be created for each subject



Temporal-task:

Detect hidden temporal patterns that are more prevalent in the alcoholic composite signals than control composite signals



1. We use an evolutionary computation based approach to solve the spatial and the temporal tasks simultaneously

2. This procedure may also be applied to other signal classification problems that contain multiple channel data