fluctuation index:

"to measure the feature of divergence in amplitude between the time series successive points of the dataset"

```
for     channel=1:numberOfchannels          %looping on each channel

        N=1024;                                  % 265 or more than to avoid aliasing

    data=data(1:floor(length(data)/N)*N,1);     %normalizing the data of the record to its
                                                floor  %approximated integer' and one column to have time series

for     i=1:length(Features_selected) %loop with a counter from one to the length of array of selected features

      if (Features_selected(i) ==2 )  %if one of the elements of selected features array = 2, the if condition will be  true
                                      %as I put this feature as number two in my code

 abs_between_succsessive=abs([data(2:length(data));0]-data); %This vector will have the absolute 'without
                                                             %negative' difference between two successive EEG
                                                             %data points and ;0 is used to put the matric in form
                                                              %of one column while : is for ranging

  abs_between_succsessive=abs_between_succsessive(1:floor(length(abs_between_succsessive)/N)*N,1);
          % taking the data points of only one column and rows of no. approximated to int to avoid non integers

 op=reshape(abs_between_succsessive,N,length(abs_between_succsessive)/N); %reshape the op to matrix not only
                                                                          % one column but more

        FI(channel,:)=sum(op,1);                        %coastline vector with the values from reshaping saved in a
                                                         %matrix of FI at each row = no. channel of the for loop
                                                          %,without changing the previous row

        FI(isnan(FI))=0;                % this 'isnan' function terminates the appearance on not a number returns


    end
end
```