

# Foro Nacional de Estadística

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Universidad Autónoma del Estado de México; Facultad de Geografía. Toluca Estado de México, 26 al 28 de septiembre de 2012.

We consider a problem where the analyst wants to estimate a trend with different amounts of smoothness for segments of an observed time series. This need may arise because the series shows different variability regimes. We deal with the two-segment case in detail and extend the results to the three-segment situation. Once the size of each segment is chosen, the procedure produces smooth trend estimates with their corresponding estimated variances, neither of which show discontinuities at the segment joints. To make an appropriate selection of the smoothing constants involved we start the analysis by fixing a desired percentage of smoothness for the trend. The smoothing constant is derived with the aid of an index that measures the relative precision share attributable to the smoothness component of the underlying statistical model. We illustrate the usefulness of our proposal by means of empirical examples with demographic and economic data.

# XXVII FORO NACIONAL DE ESTADÍSTICA

*Estadística en la Industria y en los Sistemas de Información Geográfica*

La Universidad Autónoma del Estado de México  
y la Asociación Mexicana de Estadística

otorgan la presente **CONSTANCIA** a:

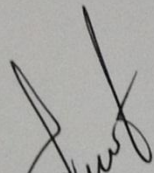
**Eliud Silva**

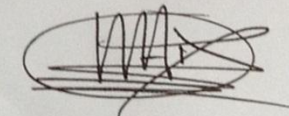
Coautor: Víctor M. Guerrero

Por su participación con la ponencia:

***“Smoothing a Time Series by Segments of the Data Range”***

Toluca, México, del 26 al 28 de septiembre de 2012.

  
**Dr. Sergio Hernández González**  
Presidente del Comité  
Organizador Nacional

  
**M. en C. Miguel Angel López Díaz**  
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