



**Name/Degree/Title:** Demetrio Labate, Ph.D., Professor  
**Institutional Affiliation:** UH, Department of Mathematics

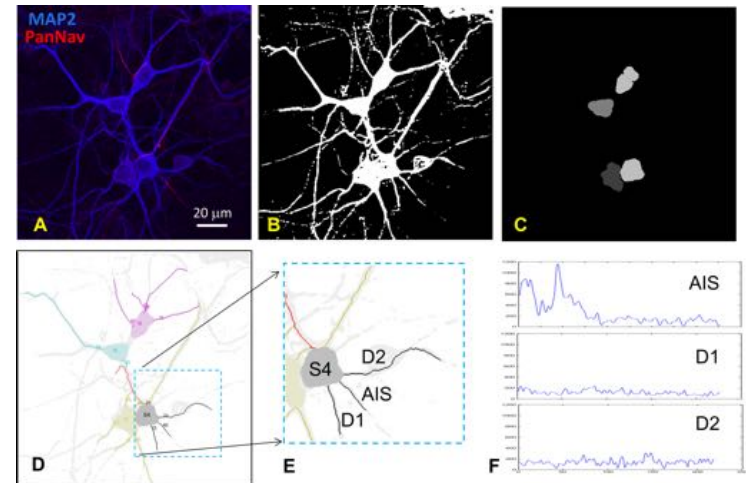
**Email Address:** [dlabate@math.uh.edu](mailto:dlabate@math.uh.edu)

**Research Interests:** sparse approximations, image processing, data analytics, machine learning.

**Strengths or unique resources:** ability to develop original and unconventional methodologies using emerging ideas from applied mathematics, experience of interdisciplinary research.

**Type of collaborator you seek:**  
Basic scientists and clinicians that need expertise in image processing and data analytics.

**RFA (s) of interest:**  
RFA-NS-18-041, RFA-TR-19-005



Automated cell profiling. Starting from a confocal image of a neuronal culture (A) our algorithm segments the image (B), detects somas (C), sorts neuronal trees (D), labels individual neurites (E) and computes fluorescence intensity profiles (F). *Scientific Reports* 2018, doi: 10.1038/s41598-018-24753-w