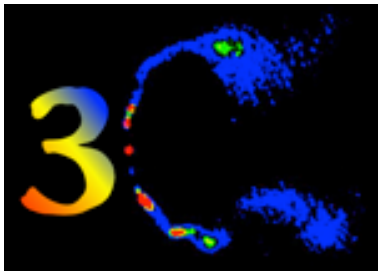

Contribution ID: **116** Type: **talk**

Exploring new data and imaging frontiers with the Event Horizon Telescope

Tuesday, 17 September 2019 16:50 (20 minutes)

The Event Horizon Telescope (EHT) is a global array built to resolve the innermost region of the supermassive black hole candidates at the Galactic Center and the center of the M87 galaxy. The EHT reached an angular resolution of 25 uas at a wavelength of 1.3 mm in the 2017 science campaign, joined for the first time by the highly sensitive phased Atacama Large Millimeter/submillimeter Array (ALMA). The EHT however faces many challenges: in addition to the difficulty of campaign coordination and acquisition of VLBI data, the heterogeneity of the array and its susceptibility to weather and atmospheric turbulence make the data calibration particularly arduous. The sparsity of the array also causes an additional difficulty: the 'missing information problem', plaguing high frequency VLBI, hinders the imaging process and requires more sophisticated tools and analysis than what is typically done for interferometric imaging. In this talk, I will present the data processing and imaging techniques developed and used by the EHT to overcome these challenges and achieve its science goal: obtaining the first image of a black hole.

Presenter: Dr ISSAOUN, Sara

Session Classification: The most famous 3C sources