Time-Domain Discovery in the 2020s

A combination of technological and sociological advancements will make the 2020s the the decade when time-domain astronomy grows exponentially. Across the multi-wavelength landscape, large-scale surveys will generate orders of magnitude more time-domain alerts than the astromical community has encountered in the past. Chief among these is the Large Synoptic Survey Telescope, which will produce ten million alerts per night. With follow-up systems already over taxed, astronomers will need a robust time-domain ecosystem to maximize the science possibilites presented by these surveys. I will discuss this ecosystem, focusing on the ANTARES project, a time-domain event 'broker' under development at the National Optical Astronomy Observatory. ANTARES is already processing the public Zwicky Transient Facility alert stream in real time. As it grows to LSST scale, it can provide astronomers with a tool to annotate, filter, and classify alerts.