

# Seminar

by

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## *Observational and Numerical Approaches to the Flare-productive ARs on the Sun*

### Abstract:

Solar flares, especially the strong ones, emanate from active regions (ARs) including sunspots, where high magnetic non-potentiality resides in a wide variety of forms. Here we introduce several topics related to the flare-productive ARs on the Sun: (1) statistical survey on flare-productive ARs [Toriumi et al. 2017]; (2) numerical modeling of such flaring ARs [Toriumi & Takasao 2017]; and (3) flare loop modeling and reproduction of SXR light curves [Reep & Toriumi 2017]. Through discussing these topics, we broaden our scope to the possible applications of our knowledge of the Sun to corresponding stellar activities.