Using the Attouch-Thera duality, we study the cycles, gap vectors and fixed point sets of compositions of proximal mappings. A primal-dual framework provides an exact relationship between the cycles and gap vectors. We also introduce the generalized cycle and gap vectors to tackle the case when the classical ones do not exist. Joint work with Bauschke and Alwadani.

XIANFU WANG, University of British Columbia Attouch-Thera Duality, Generalized Cycles and Gap Vectors