Feeling guilty when we have wronged another is a crucial aspect of prosociality. People not only feel guilty for transgressions of social norms/expectations that they are directly responsible for but also feel guilty for transgressions that are committed by those they identify as in-group (i.e., collective or group-based guilt). Professor Xiaolin Zhou will present studies conducted in the laboratory that investigates the neurobiological bases of both interpersonal guilt and collective guilt. In these studies, they developed real-time interpersonal interaction games and combined them with functional magnetic resonance imaging (fMRI). Both general linear modelling (GLM) and multivariate pattern analysis (MVPA) are conducted on the data. It also examined the cultural universality of the neurocognitive processes of guilt by identifying a distributed guilt-related brain signature across two independent neuroimaging datasets that used interpersonal interactions to evoke guilt in two different cultures. The findings help to understand how social emotions arise from social interactions, how group membership is integrated into social emotions, and how social emotions are translated into social behaviors.