Contribution ID: **42** Type: **Invited talk**

Mechanism in Reversibly Switchable Fluorescent Proteins

Tuesday, June 24, 2025 4:25 PM (30 minutes)

Reversibly switchable fluorescent proteins (FPs) are critical to superesolution bioimaging. The widely used negative switching FPs are well characterized. The under-used positive and decoupled switching FPs much less so. Here we report complementary ultrafast transient optical and infra-red absorption measurements of photoswitching in Padron, Kohinoor (+FPs) and Dreiklag (dcFP). The two measurements allow independent study of chromophore and host protein matrix. It is well established that the protein matrix greatly influences chromophore photophysics. The present result suggest the matrix actively 'steers' the chromophore on the reactive surface.

Authors: Prof. LUKACS, Andras (Biophysics, University Pecs); Prof. TONGE, Peter (Stony Brook University, NY); MEECH, Steve (University of East Anglia)

Co-authors: Dr FATIMA, Anam (UEA); Prof. GREETHAM, Greg (STFC Harwell); Dr MALAKAR, Partha (STFC Harwell)

Presenter: MEECH, Steve (University of East Anglia)

Session Classification: Session 8 - Biosystems II