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Beilinson-Flach elements for the Rankin-Selberg convolution

I will talk about my joint work with David Loeffler and Sarah Zerbes on the construction of cohomology classes for the Rankin-Selberg convolution of two weight-two modular forms, that is, to construct a collection of elements in $H^1(\mathbb{Q}(\mu_m), V_f \otimes V_g)$ where f and g are modular forms of weight two and V_f and V_g are the corresponding Deligne representations. I will also talk about how such construction is related to Perrin-Riou's conjecture on the existence of an Euler system for $V_f \otimes V_g$ and other applications.