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*Overconvergent Eichler–Shimura morphism for families of Siegel modular forms*

Classical results of Eichler and Shimura decompose the cohomology of certain local systems on the modular curve in terms of holomorphic and anti-holomorphic modular forms. A similar result has been proved by Faltings' for the étale cohomology of the modular curve and Falting's result has been partly generalised to Coleman families by Andreatta–Iovita–Stevens. In this talk, based on joint work with Hansheng Diao and Ju-Feng Wu, I will explain how one constructs a morphism from the overconvergent cohomology of  $\mathrm{GSp}_{2g}$  to the space of families of Siegel modular forms. This can be seen as a first step in an Eichler–Shimura decomposition for overconvergent cohomology and involves a new definition of the sheaf of overconvergent Siegel modular forms using the Hodge–Tate map at infinite level.