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*On the Fourier transform and Vogan's perspective on the Local Langlands Correspondence*

Deligne's Fourier transform is an endofunctor defined on the derived category of  $l$ -adic sheaves on vector bundles. It maps sheaves with small support to sheaves with large support, and its first appearance was in the proof of the Weil conjectures. Nowadays it has proved to be a fundamental tool in geometric representation theory and in the Local Langlands correspondence. In this talk, I am going to introduce the Fourier transform via Grothendieck's function-sheaf dictionary, and I am going to apply it on some small examples that appear in Vogan's perspective of the local Langlands correspondence, just as Cunningham et al. did in their work.