

# INTEGRAL TRANSFORMS WITH RESPECT TO THE EULER CHARACTERISTIC INTEGRATION

HUY MAI

Euler Characteristic Integration comes equipped with its own set of integral transforms, which proves to be essential to some recent developments. We will show that the Persistent Homology Transform (and some others) completely characterize compactly supported functions in any Euclidean space. We will also discuss the interactions between the classical Fourier-Sato transform and a certain pseudo-inner product on the space of constructible functions.

## REFERENCES

- [1] R. Ghrist, R. Levanger, and H. Mai: *Persistent homology and Euler integral transforms*, J Appl. and Comput. Topology (2018).

(Huy Mai) UNIVERSITY OF PENNSYLVANIA  
*E-mail address:* huymai@sas.upenn.edu