

POINCARÉ INEQUALITY AND RELATED FUNCTION SPACES ON FRACTALS

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Given a nondegenerate harmonic structure, we elementarily prove a Poincaré-type inequality for functions in the domain of the Dirichlet form on nested fractals, involving the Kusuoka energy measure. We then study the Hajlasz-Sobolev spaces on nested fractals.

The results were obtained jointly with Andrzej Stós (Clermont-Ferrand).

REFERENCES

- [1] K. Pietruska-Pałuba, A. Stós, *Poincaré Inequality and Hajlasz-Sobolev spaces on nested fractals*, preprint.