

Sobolev spaces on metrizable groups

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Abstract

We study Sobolev spaces on locally compact abelian groups. I will present analogs of the Sobolev embedding and Rellich-Kondrachov compactness theorem and explain what happens when the dual group is metrizable. Moreover, in this case we investigate the limiting case of L^p embedding, the so called Moser-Trudinger inequality. Furthermore, new embeddings of Sobolev spaces defined over p -adic numbers are shown. This talk is based on joint work with P. Górką.

References

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