

# Translation-modulation invariant Banach spaces of distributions and ultradistributions

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We introduce and study a new class of translation-modulation invariant Banach spaces of distributions and ultradistributions. These spaces show stability under Fourier transform and tensor products; furthermore, they have a natural Banach convolution module structure over a certain associated Beurling algebra, as well as a Banach multiplication module structure over an associated Wiener-Beurling algebra. We also investigate a new class of modulation spaces, the Banach spaces of distributions  $\mathcal{M}^F$  on  $\mathbb{R}^d$ , associated to translation-modulation invariant Banach spaces of distributions and ultradistributions  $F$  on  $\mathbb{R}^{2d}$ .

Joint work with P. Dimovski, B. Prangoski and J. Vindas

## References

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