

Fractional Sobolev-type spaces of functions of two variables and their application to partial differential equations

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We introduce the spaces of functions of two variables possessing the Riemann-Liouville fractional partial derivatives and give their integral characterizations as well as imbeddings. Next, we present the relationship between these spaces and some fractional Sobolev-type spaces. Finally, we apply the introduced spaces to the study of partial differential equations.

References

- [1] D. Idczak, *Fractional Sobolev type spaces of functions of two variables via Riemann-Liouville derivatives*, submitted for publication.
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