

# Numerical approximation of the first eigenfunction of the fractional Laplace operator

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During this presentation it will be shown that method presented by M. Kwaśnicki (2012) is good to obtain estimates of eigenfunctions of the fractional Laplace operator. We will show a modification of this method which allows us to obtain estimates of eigenfunctions for different sets.

We will also present results obtained for either one and two dimensional simple domains, the pace of convergence to the boundary limits and some results which are treating about concavity.

## REFERENCES

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- [3] Mateusz Kwaśnicki, *Własności jąder Martina dla funkcji  $\alpha$ -harmonicznych*, Diploma thesis, WPPT, Wrocław University of thechnology, Wrocław, 2006.
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