

## # FTDRF: Short Proposal for Jülich Submission

### Summary

- Small research code implementing the Fibonacci Threshold Dyadic Recursive Filter (FTDRF) recurrence and simulation utilities.

### Why it fits Jülich

- Focus on quasiperiodic systems and recursive dynamics; small, reproducible experiments; easy to extend for topological or many-body simulations.

### Reproducibility

- Deterministic tests (`tests/`) and an executable notebook (`notebooks/validation.ipynb`) demonstrate baseline behavior and parameter scans. Release artifacts and a wheel are available (`v0.1.0`).

### Suggested next steps

- Add physics validation against an analytic or literature case.  
- Expand notebooks with parameter sweeps and performance benchmarks.  
- Prepare a short poster or 1-pager describing results and potential collaborations.

### Contact

- Andreas Zeller — see repository for details.