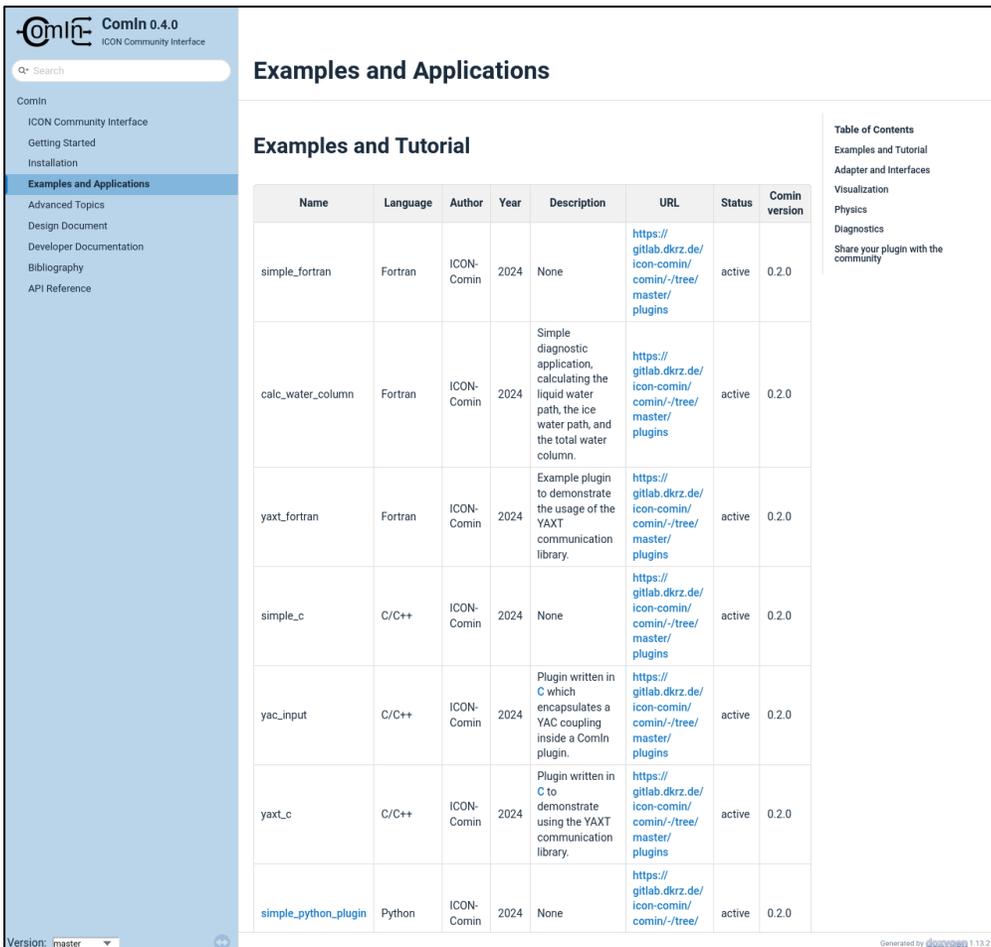# ComIn – ICON Community Interface Applications and Examples

Information on ComIn Plugins and Plugin Examples can be found in the ComIn documentation

9 Examples/Tutorials

1 Adapter/Interface

2 Visualisation

2 Physics

3 Diagnostics

If you want to share your plugin with the community, we can add it to the list!

→ comin@icon-model.org

https://icon-comin.gitlab-pages.dkrz.de/comin/index.html

MESSy as ComIn Plugin

Roland Wirth (DWD)
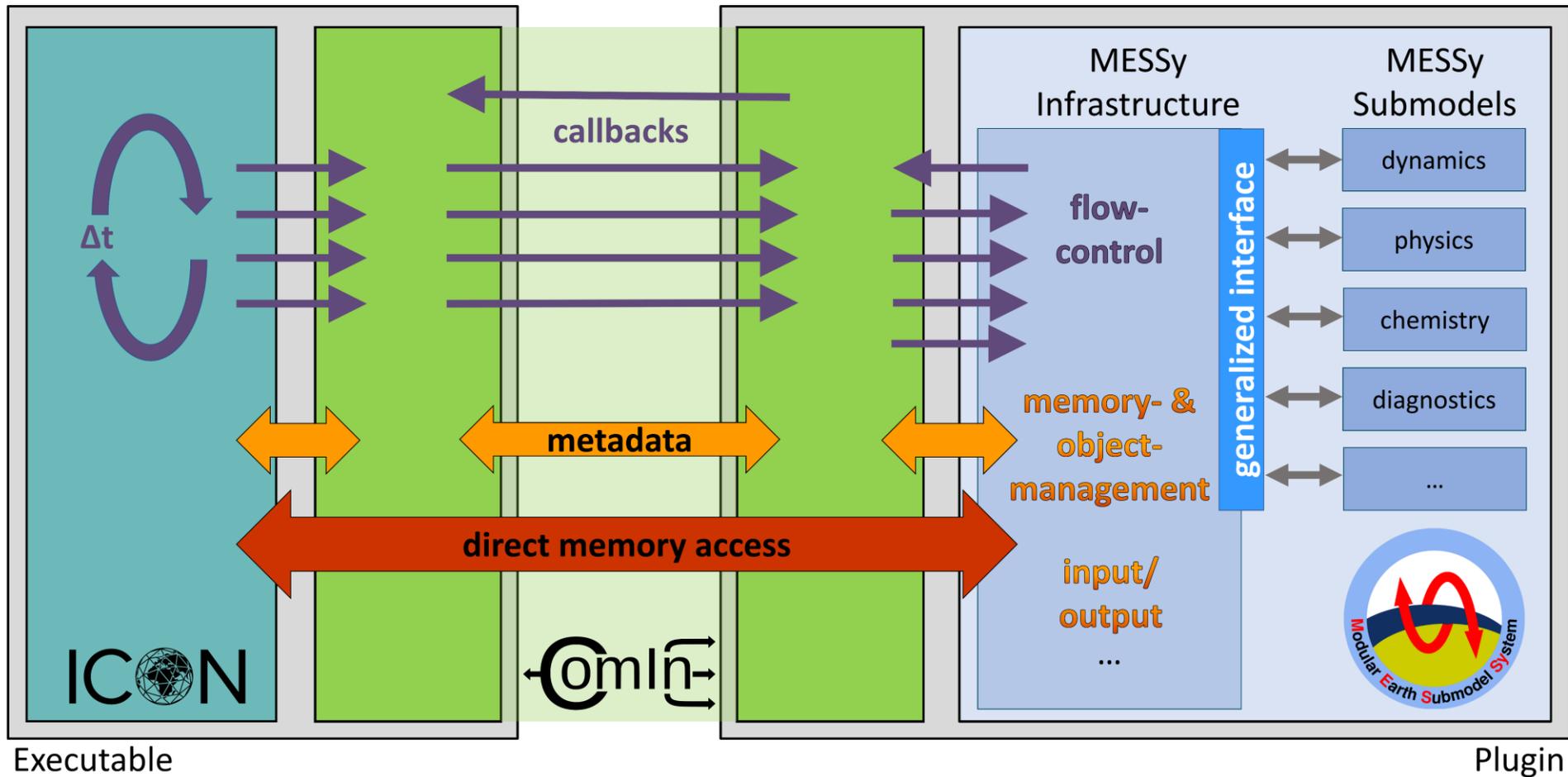
WindWaker

- Wind farms

  – extract power from flow

  – create turbulence

- Add parameterization via ComIn plugin

- ICON dynamics create observed wakes behind farms

Wind

Turbulence

Power

Farms

Wakes

vmax_10m 22 sep 2025 15UTC vv=15h

Deutscher Wetterdienst
Wetter und Klima aus einer Hand

EuroWindWakes

DWD

James Panton (Uni Köln)
Nils-Arne Dreier (DKRZ)

Pamtra – insitu

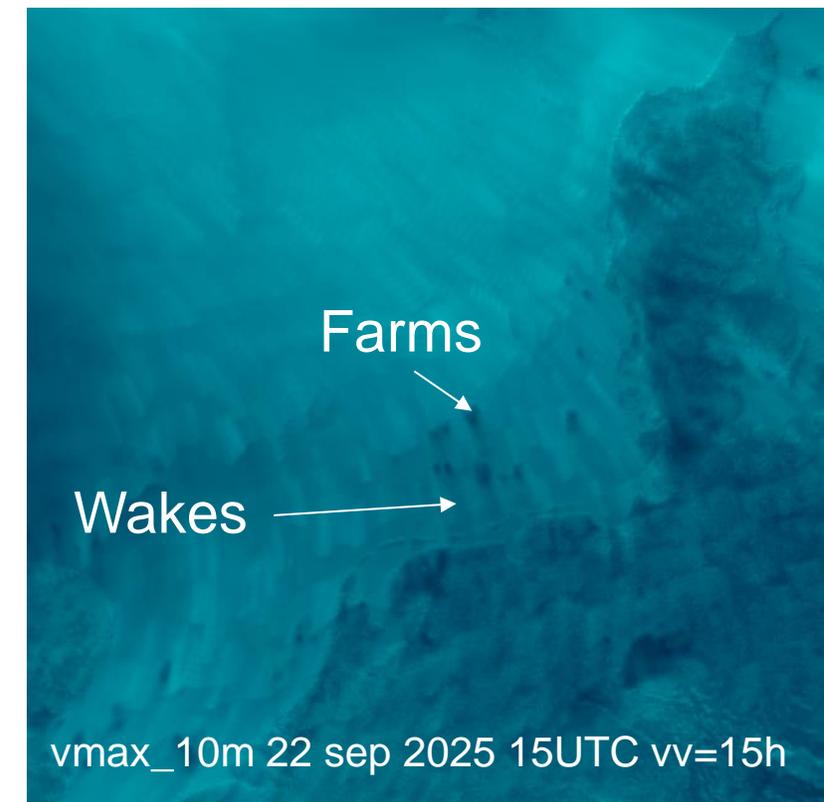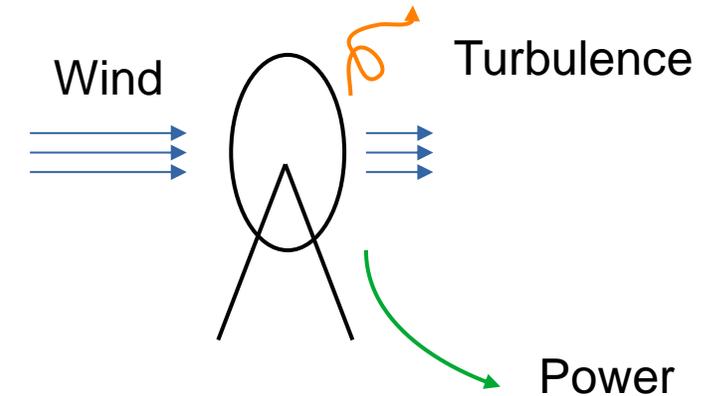- **PAMTRA**: Requires ICON data in high time frequency on complex domains

- Replace legacy post-process workflow with insitu-processing to reduce large intermediate data storage

- Python plugin sends data over MPI to an external process (1 ICON process)

- External Python process

  - Receives data (from arbitrary ICON process)

  - Runs pamtra

  - Writes processed data to dataset

UNIVERSITY OF COLOGNE

DKRZ