

# PSimPy - Predictive and probabilistic simulation with Python

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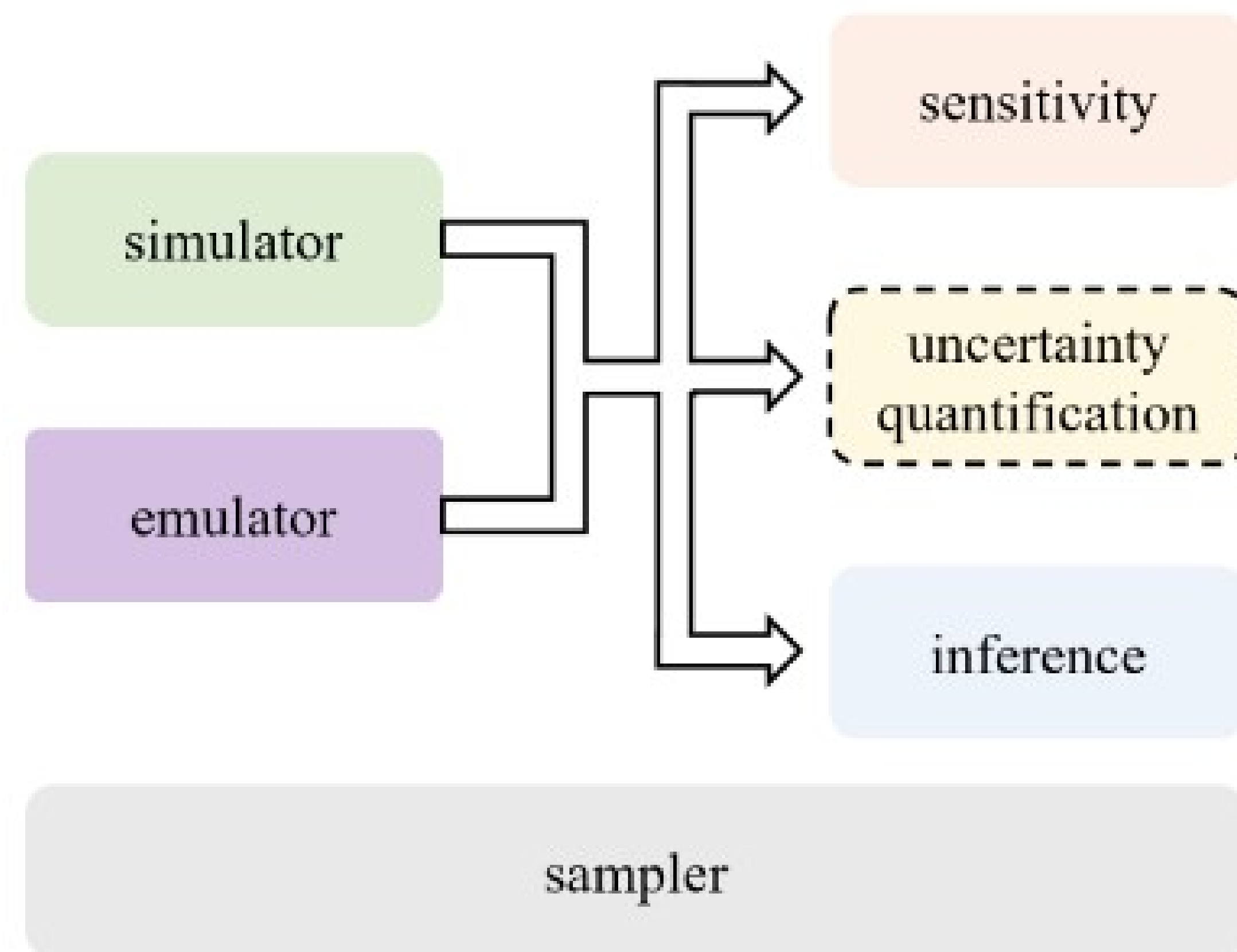
Gaussian Process, Multiphysics Simulation



## Acknowledgments

THIS POSTER IS STILL UNDER CONSTRUCTION!!!!!!!!!!!!

## Main Structure



## Acknowledgments

## Features

- Gaussian process–based uncertainty framework
- Fast emulation of expensive simulators
- Supports global sensitivity analysis
- Probabilistic uncertainty quantification
- Parameter calibration and inference
- Scalar and multi-output GP emulators

# PSimPy

[1]

## Research Studies Using PSimpy

[2],[3],[4]

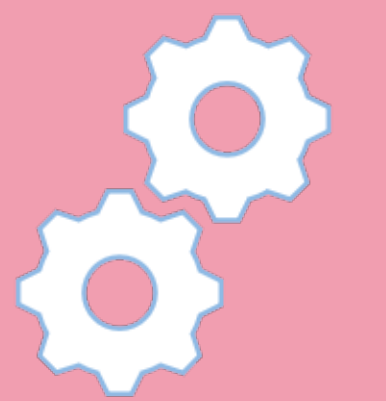
## Bibliography

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- [2] V. M. Kumar and J. Kowalski, “A unified Bayesian model selection workflow for geophysical free-surface flow,” in *EGU General Assembly 2024*, Vienna, Austria, 2024.
- [3] S. Tillmann, M. Behr, and S. Elgeti, “Using Bayesian optimization for warpage compensation in injection molding. Materialwissenschaft und Werkstofftechnik,” *Materials Science & Engineering Technology*, 2024, doi: <https://onlinelibrary.wiley.com/doi/10.1002/mawe.202300157>.
- [4] A. Correa, “Seamless Reproducibility of Complex Simulation Workflows [Conference presentation],” in *Juliacon 2024*, Eindhoven, Netherlands, 2024.

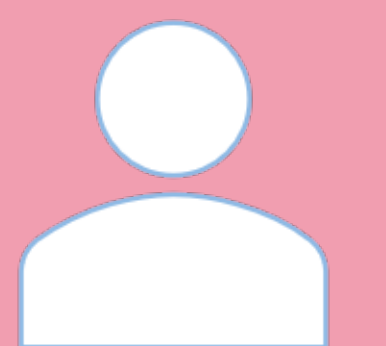
## Overview



## Documentation



## Examples



## Contact

