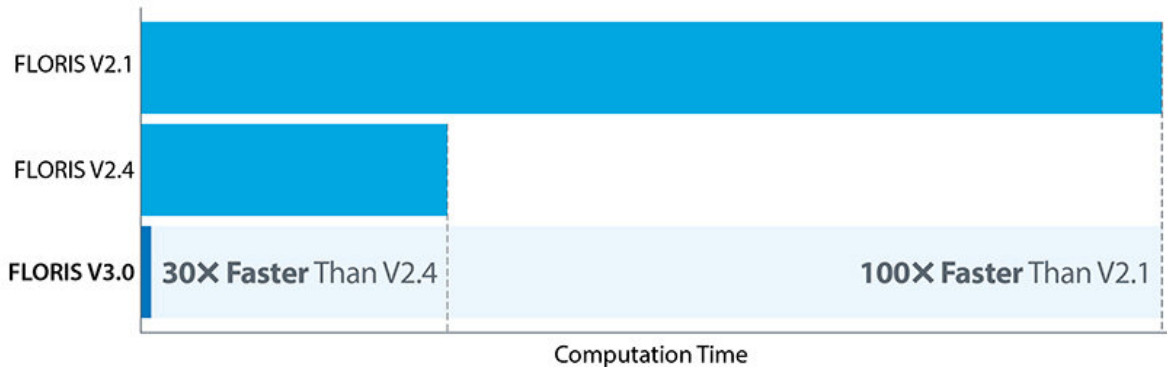


# New FLORIS release significantly increases computation speeds

April 26 2022



The new and improved FLORIS 3.0 enables users to consider wind power plant control strategies with much shorter computation times. Credit: Taylor Henry, NREL

The National Renewable Energy Laboratory's (NREL's) Wind Energy Controls Research Team announced the release of Version 3.0 of the FLOW Redirection and Induction in Steady State (FLORIS) wind farm controls software. FLORIS optimizes flow control strategies so that existing wind energy facilities can improve productivity and future projects can maximize profits.

"This [version](#) of the open-source software represents a major redesign,

rewrite, and enhancement," said Paul Fleming, NREL researcher and principal investigator. "It's much faster—100 times faster than Version 2.1 and 30 times faster than Version 2.4. It's also more accurate and supports more varied computations."

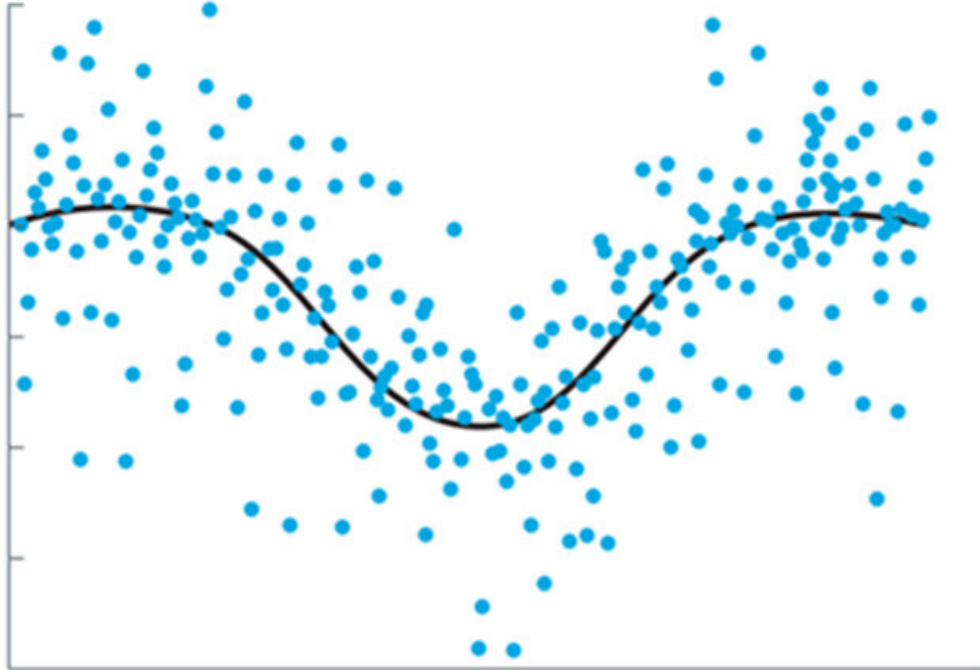
Some of the most significant improvements that are now available to academics, manufacturers, developers, and [small businesses](#) include:

- Improved computation speeds for calculating [wind](#) farm annual [energy](#) production
- Enhanced offshore wind farm models
- Mixed-turbine-model capabilities
- FLORIS-based Analysis for Supervisory Control (FLASC) companion repository.

The release of FLORIS Version 3.0 comes after a six-week beta-testing period, during which additional features were added and minor bugs were fixed—but there is more to come.

"Ongoing development of FLORIS continues," Fleming said. "We're planning several new features, including even greater computational speed, the ability to couple to hybrid plant models, continuous improvement to wake models, and modeling of axial-induction-based wind farm controllers."

### FLORIS-based Analysis for SCADA (FLASC)



Also new for users is the release of FLORIS-based Analysis for Supervisory Control and data acquisition (SCADA) data (FLASC), which includes FLORIS-to-SCADA data comparison. Credit: Taylor Henry, NREL

Provided by National Renewable Energy Laboratory

Citation: New FLORIS release significantly increases computation speeds (2022, April 26) retrieved 10 June 2023 from <https://techxplore.com/news/2022-04-floris-significantly.html>

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