

Abstract Submitted
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OMFIT: A Community and Framework for Integrated Modeling and Analysis¹ STERLING SMITH, ORSO MENEGHINI, General Atomics, OMFIT TEAM² — OMFIT is a software framework developed for integrated modeling and data analysis, whose main applications have been developed by the magnetic fusion community. At the core of the OMFIT framework are a series of application programmer interfaces (API) for common tasks such as remote code execution, data transfers, file parsing and writing, database fetching, and GUI building. A set of over 110 physics modules (the collection of data and scripts for carrying out scientific studies, see <https://omfit.io/modules.html> for the full list) enable over 400 scientists, spread across 25 institutions worldwide, to carry out a wide plethora of leading edge fusion research, including validation of models against experiment. Software engineering best practices such as extensive documentation, automated regression testing and software deployment, and code review have been critical elements in supporting its nearly 100 community contributors. Overall, the OMFIT project has consolidated the efforts of many talented independent scientists into a technical solution and a community that are greater than the sum of their parts.

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²Listed at <https://omfit.io/contributors.html>

Sterling Smith
General Atomics

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