

The UCLA Particle-in-Cell and Kinetic Simulation Software Center (PICKSC)

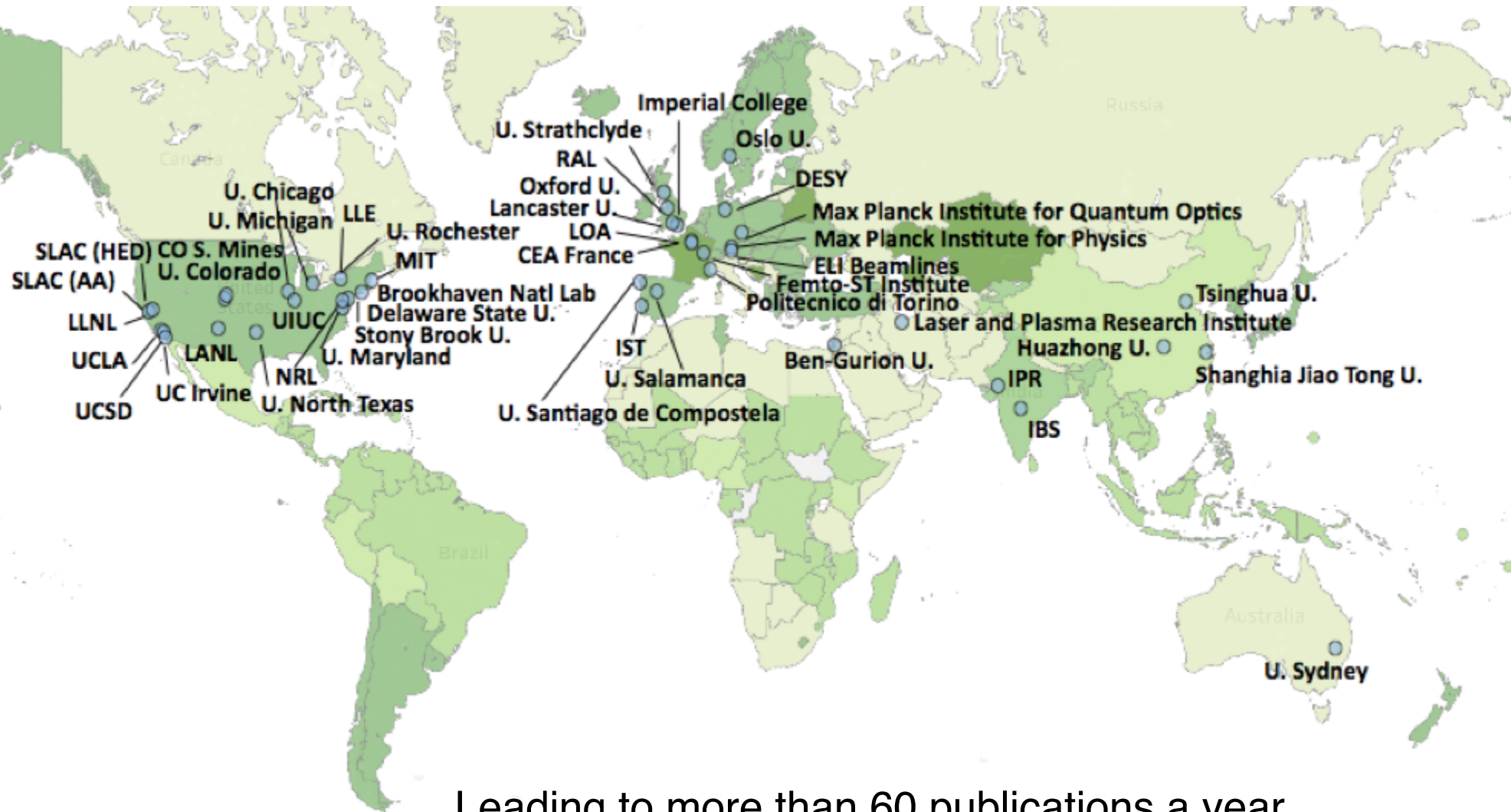
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The mission of the Particle-in-Cell and Kinetic Simulation Software Center (PICKSC) at UCLA is to support an international community of PIC and plasma kinetic software developers, users, and educators, and to increase the use of this software for accelerating the rate of scientific discovery. It aims to make available and document illustrative software programs for different computing hardware, a flexible Framework for rapid construction of parallelized PIC programs, and several distinct production programs. It will also include activities on developing and comparing different PIC algorithms and documenting best practices for developing and using PIC programs. The Center will also develop educational software for undergraduate and graduate courses in plasma physics and computer science. It will also sponsor an workshops to help build of community of developers and users. The PI is W.B. Mori and the co-PIs are V.K. Decyk, and F.S. Tsung.



PICKSC software is widely used internationally: Over 40 user groups and 200 users



Software and activities

PICKSC is currently focused on:

1. Developing open source and open access production software for scientific discoveries: OSIRIS, UPIC, QuickPIC, and OSHUN
2. Developing educational software for teaching plasma concepts for undergraduate and graduate students, and new researchers.
3. Growing a community of users and developers of the software.
4. Developing easy to use deployment methods for the software including a Gateway.
5. Creating a repository of input files for education, beginning and advanced users, and teaching best practices.

