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Frank Löffler* (knarf@cct.lsu.edu). *Building communities around computational challenges.*

Solving computational challenges is no longer driven by individuals, but typically by large teams, distributed around the globe. Expertise in a variety of scientific fields is necessary to develop solutions to interesting science questions. The Einstein Toolkit Consortium is such a community. It is developing and supporting open software for relativistic astrophysics. Its aim is to provide the core computational tools that can enable new science, broaden our community, facilitate interdisciplinary research and take advantage of emerging petascale computers and advanced cyberinfrastructure. The Einstein Toolkit is supported by a distributed model, combining core support of software, tools, and documentation in its repository with partnerships with other developers who contribute open software and coordinate together on development. It currently has over 78 registered members from over 36 research groups world-wide. (Received July 09, 2012)