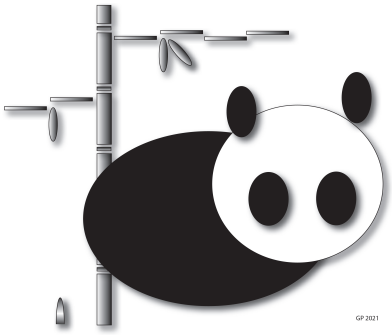

Flash GAMP

An online seminar series on:

Geometric Algorithms and Methods in Physics

June 21-24, 2021 @ 8:30-10:00 CDT

Overview

The aim of this workshop is to share new ideas and foster contacts between physicists and other scientists using geometrical methods and mathematicians specialized in geometrical numerical integration. **If you are interested in attending, send an email to one of the Organizational Committee members for the Zoom link.**

GAMP (formerly GAMPP, focused specifically on plasma physics) was created to provide a forum for introducing and discussing novel ideas at the intersection of geometry and computational science. The meeting's previous two installments took place in-person in Hefei, China (2014) and Garching, Germany (2016). The COVID-19 pandemic disrupted plans to hold a third in-person meeting in 2020. As a way of embracing the new realities of remote work, and in light of exciting recent developments in the area of geometric numerical methods, we have designed this webinar as a lightweight GAMP aperitif and precursor to in-person GAMP meetings post-COVID.

Organizational Committee

Philip Morrison (chair)	University of Texas at Austin
Joshua Burby	Los Alamos National Laboratory
John Finn	Tibbar Plasma Technologies
Melvin Leok	University of California San Diego
Hong Qin	Princeton Plasma Physics Laboratory
Eric Sonnendrücker	Max Planck Institute for Plasma Physics
Cesare Tronci	University of Surrey, Tulane University

Invited Speakers *(dates below tentative)*

June 21st	Yichen Fu (PPPL)	*Topological waves in magnetized cold plasma*
	Francois Gay-Balmaz (CNRS & ENS Paris)	*Geometric variational finite elements methods for fluids with application to MHD*
June 22nd	Denys Bondar (Tulane University)	*Symplectic integrator for the Dirac equation in the phase-space*
	Michael Kraus (IPP)	*Degenerate variational integrators – Variations on a motif*
June 23rd	Yuan Shi (LLNL)	*Using quantum computers to simulate a toy problem of laser-plasma interactions*
	Tyrus Berry (George Mason U)	*An introduction to the spectral exterior calculus*
June 24th	Lee Ricketson (LLNL)	*An implicit, energy conserving and asymptotic preserving full-orbit time-integrator for particle-in-cell schemes*
	Qi Tang (LANL)	*HénonNet: a symplectic neural network*

Click here for link to talk slides!