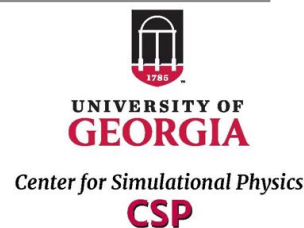


CSP NEWS



The University of Georgia - Center for Simulational Physics (CSP)

CSP Members

David P. Landau, CSP Director

CSP Faculty: Michael Bachmann, Michael R. Geller, Cassandra Hall, David P. Landau, Steven P. Lewis, Heinz-Bernd Schüttler, Robin L. Shelton, and Phillip C. Stancil

Adjunct: Kurt Binder, Robert Buenker, Wolfhard Janke, Brendan McLaughlin, Joao Plascak, Dennis Rapaport, Robert Swendsen, Shan-Ho Tsai, and Thomas Wuest

Research Staff/Visitors: Benhui Yang, and Boyi Zhou

Graduate Students: Dilimulati Aierken, Mona Asadi Namin, Yifan Dai, Garrett Floyd, Kellan Gibson, Eric Goetz, Steven Hancock, Zizhe Hu, Anastashia Jebrailli, Nima Karimitari, Maninder Kaur, Darin Mihalik, Kedkanok Sitarachu, Eric Suter, Zahra Taghadomi, Jason Terry, Chen Wang, Ruihan Wang, Sydney Whilden, Matthew Wilson, and Shengming Zhang

Undergraduate Students: Alexander Bergeron, C. Hampton Burnside, Sabastian Byrd, Elijah Courtney, Anson Dao, Zach Dorsey, Alicia Flowers, Ana Jabraeilli, Nick Kruegler, Tyler Leachman, Bjorn Leicher, Nathan Neal, Cameron Shadmehry, Clark Veazey, Mark Williams, Jackson Wright, and Aojie Xue

Administrative Coordinator/

Newsletter Editor: Traci McKinney

WANTED: News & photographs for future Newsletters! Please send information to:
traci.mckinney@uga.edu

Many thanks to all who have given to the CSP fund!

Message from the Director

During the first half of 2021 the CSP has faced the same challenges due to the pandemic that I outlined in our last Newsletter, but we have become more adept in dealing with them. The CSP lunch seminar remained virtual and we had attendees from multiple foreign countries. We also took advantage of the virtual format to have lunch seminars on Astrophysics by Prof. Laibe from U. of Lyon, on Non-equilibrium phenomena by Prof. Schilling from U. of Freiburg, and a wonderful presentation on Growing Computational Physics in Africa by Prof. Chetty, Dean of Science at U. of Witwatersrand. This year's 34th Annual CSP Workshop was also held in a purely virtual format. In order to enable participants from varied time zones to attend the largest number of talks, the schedule was reduced to 10:00am – 4:00pm from Monday-Thursday. Over 130 registrants from throughout the U.S. and from international institutions in all six inhabited continents joined us. We were particularly pleased to have registrants from Sri Lanka, Peru, Ethiopia, and Cameroon in addition to the centers of scientific activity in more developed countries. We are now taking steps to enable Zoom “broadcasting” of our events even after we return to face-to-face activities. A spring highlight was the presentation of the 2nd Annual Chhabra-Landau Lecture by Prof. Roberto Car from Princeton U., Machine Learning Based Ab-Initio Molecular Dynamics. Unfortunately, the High Velocity Cloud Astrophysics meeting, the Quantum Computing Workshop, and the U.S.-China Bilateral Symposium were all canceled/postponed because of the pandemic. Nevertheless, we were active in other ways, as outlined elsewhere in this Newsletter. Lastly, I would also like to thank all of you who have donated to the CSP Alumni Foundation Fund.



In The News

Prof. Michael Geller gave a seminar entitled "Quantum Error Mitigation for SPAM" via Zoom at the Polish Academy of Sciences on March 25, 2021.

Prof. Robin Shelton and her collaborators published a paper: "An intermediate-velocity HI cloud falling to the galactic disk; Possible evidence for low-metallicity HI gas originating outside the galactic disk", by Fukui, Koga, Maruyama, Hayakawa, Okamoto, Yamamoto, Tachihara, Shelton, and Sasaki, Publications of the Astronomical Society of Japan.

Prof. David P. Landau co-organized a Focus Session "Computational Approaches in Statistical Mechanics" for the March Meeting of the American Physical Society. the meeting was held online.

UGA graduate student Steven Hancock, along with Prof. Yohannes Abate and Prof. David Landau, presented a paper entitled "Monte Carlo Simulations of Non-Linear Evolution of Materials Resistivity" at the APS March meeting held virtually.

Alfred Farris, Daniel Seaton and Prof. David Landau, presented a paper entitled "Effects of Lattice Constraints in Coarse-Grained Protein Models: A Wang-Landau Study" at the APS March meeting

Lijun Pang, Kurt Binder and Prof. David Landau presented a paper entitled "Probing prediction due to the nonlocal interface Hamiltonian: Monte Carlo simulations of interfacial fluctuations in Ising films" at the APS March meeting.

Zhuofei Hou and Prof. David Landau presented a paper entitled "Spin dynamics simulations on the Surface of a nanoscale Heisenberg antiferromagnet" at the APS March meeting.

UGA graduate students Kedkanok Sitarachu and Dilimulati Aierken from Prof. Michael Bachmann's group presented talks at the APS March meeting held virtually March 15th-19th, 2021.

Prof. Cassandra Hall has received the Winton Capital Award for astronomy for 2020 from the Royal Astronomical Society. The Royal Astronomical Society awards medals and prizes to scientists around the world for significant achievement in the fields of astronomy and geophysics.

Prof. Cassandra Hall was also awarded the Lilly Teaching Fellowship. Each spring semester, ten tenure-track assistant professors, who are recent recipients of a Ph.D. or terminal degree in their discipline or profession and who are in their first, second, or third year at the University, are selected for the Lilly Teaching Fellows Program.

Student Awards

Nick Kruegler, undergraduate student of Prof. Steven Lewis, has been awarded a CURO Research Assistantship for this Fall 2021.

Eric Suter, graduate student of Prof. Steven Lewis, has been awarded a Covid-related summer assistantship from the Graduate School.

Congratulations to the CSP students for receiving the following Departmental Awards: **Matthew Wilson**: Outstanding Teaching Assistant Award, **Jason Terry** : Anderson-Pioletti Award

Student Degrees

Yifan Dai, PhD Physics

In Spring 2021, Yifan successfully defended his thesis, "Generic Structural Transitions of Helical Polymers with Confined Torsion Strength", under the direction of Prof. Michael Bachmann. He is currently enjoying time with his family and plans to find a job next year.



Shengming Zhang, PhD Physics In

Spring 2021, Shengming successfully defended his PhD thesis about structural phases of polymers doubly-grafted to a homogeneous substrate under the direction of Prof. Michael Bachmann.

