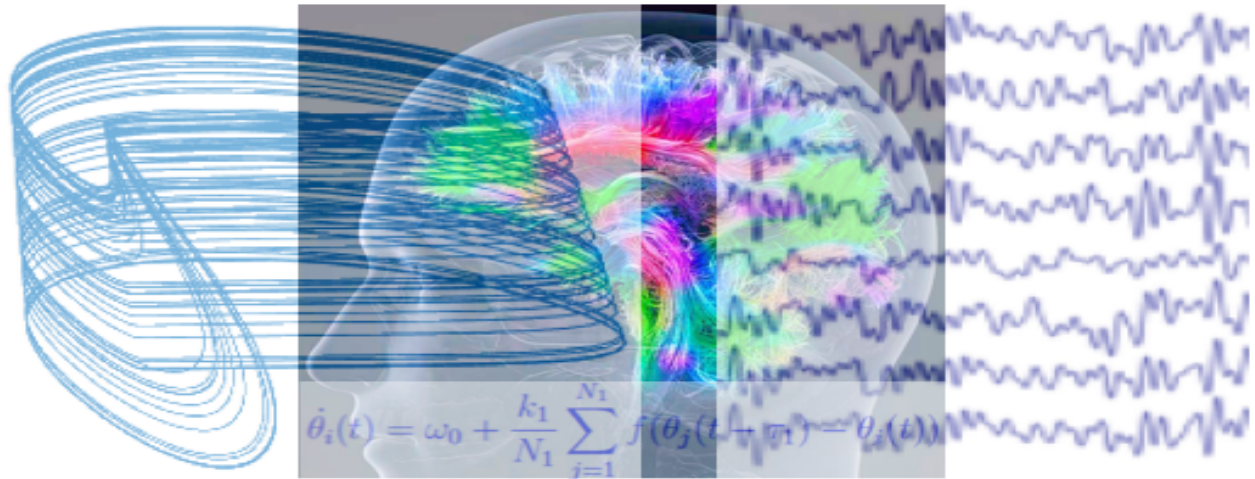


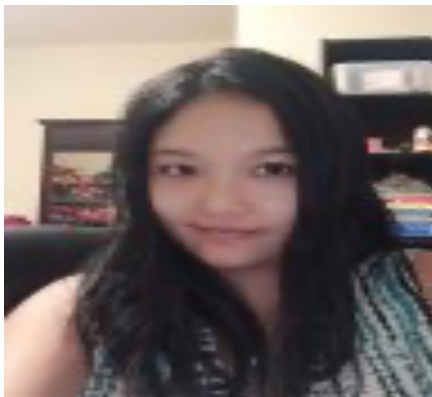
Summer School on Nonlinear Dynamics and Applications



This summer school will offer a 5-day course on nonlinear dynamics and their applications. Students will learn about this interdisciplinary field and its broad reach to many disciplines, from natural and physical sciences, biomedical sciences to engineering.

The course will (i) cover the basic topics of nonlinear dynamics: discrete and continuous dynamical systems, bifurcations, synchronization of coupled systems and applications to sciences including brain sciences, and (ii) provide hands-on experience on computer simulations of nonlinear dynamical systems and time series analyses of brain data.

Instructors



Heather Wu, PhD
Associate Professor Of Mathematics
Clark Atlanta University
hwu@cau.edu



Mukesh Dhamala, PhD
Associate Professor Of Physics,
Mathematics and Neuroscience
Georgia State University
mdhamala@gsu.edu

Date and Time: July 21 – 26, 2022; 10am – 12:30 pm (July 22 – 26)

Location: CAU campus (Meet and Greet at 11 am + Course overview on July 21) and Virtual (July 22 – 26).

Registration: is free and open to undergraduate and graduate students; a registration by an email is accepted; please send an email to Dr. Heather Wu for registration. HBCU students will receive a daily allowance or compensation for their time.

Schedule

July 21

Meet and Greet in CAU Math Department at 11 am + Course overview at 11:30 am

July 22 (via Zoom, 10am -12:30pm)

Nonlinear Dynamics: definition, history and examples

July 23 (via Zoom, 10am -12:30pm)

Discrete and continuous dynamical systems

July 24 (via Zoom, 10am -12:30pm)

Bifurcations

July 25 (via Zoom, 10am -12:30pm)

Synchronization of coupled nonlinear systems

July 26 (via Zoom, 10am -12:30pm)

Nerve cells and their dynamics in the brain