

Department of Physics
Research Areas Open to Undergraduate Students

Research Opportunities are open to all Undergraduate Students at all levels. (see chart below for more information) 1/2026

DRAFT
Feb-26

Interested students should: **1)** Identify three or four Physics faculty whose research interests matches yours; **2)** Review the Faculty's Research Page at www.physics.emory.edu/research/index.html; and **3)** Contact the faculty directly and schedule a time to meet.

Reserch Areas	Faculty	1st Year Students	Sophomore	Juniors	Rising Seniors (i.e., start of Sumer)	Seniors	Qualification
Condensed Matter and Optics	Hayk Harutyunyan		X	X			Must committ to 12+ months, preferably 24 months
	Jiang-Xiazi Lin	X	X	X	X	X	
	Luiz Santos (Theory)			X	X	X	Some prior exposure to quantum physics required, preferably PHYS 461
	Sergei Urazhdin	X	X	X	X		Preferable interest in nanoscience
	Wladimire Benalcazar		X	X	X	X	Some prior exposure to quantum physics required
Biophysics	Keith Berland (Energy & Environment)						Contact Dr. Berland if interested
	Tankut Can						Contact Dr. Can if intereted
	Minsu Kim (soft matter, experimental)			X	X	X	
	Ilya Nemenman (theory)	X	X	X*			Multivariate calculus, ability to program in som computer language (*begin. of Junior year)
	Jennifer Rieser (sot matter experimental)	X	X	X	X	X	
	Shashank Shekhar (soft matter)	X	X	X	X	X	Must committ to 12+ months, preferably 24 months
	Gordan Berman (theory)	X	X	X	X	X	Ability to program, multivariate calculus or differential equations, and 12+ months commitment

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Biophysics	Kurt Warncke (Experimental)						Contact Dr. Warncket if interested
	Daniel Weissman (theory)	X	X	X			Must be familiar with at least 3 ou tof 4 probability, statistics, programming, and differential equations & must commit to 12+ months
Soft Matter	Stefan Boettcher (<i>statistical and computational physics</i>)		X	X	X	X	Student must have either programming or math skills
	Justin Burton	X	X	X	X	X	Must have PHYS 151 & 152 or equivalent
	Connie Roth	X	X	X	X	X	Looking for a serious commitment to research beyond a single semester
	Daniel Sussman (theoretical/computational)	X	X	X	X		Ability to program strongly prefered
	Eric Weeks	X	X	X	X		Projects can be experimental or computational, depending on your interests

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Physics of AI	Stefan Boettcher						Reach out to the faculty of your choice for more information regarding Physics of AI
	Gordon Berman						
	Justin Burton						
	Tankut Can						
	Ilya Nemenman						
	Daniel Sussman						
Physics & Astronomy, Astronomy, & Astrophysics	Alissa Bans (Astrophysics)		X	X	X	X	Contingent on teaching schedule & availability
	Merida Batiste						Contact Dr. Batiste if interested
	Erin Bonning (Astrophysics)		X	X	X	X	Contingent on teaching schedule & availability
	Horace Dale			X	X	X	Must be able to work over night; PHYS 116 required
Physics Education Research & Novel Instructional Experiments	Tom Bing (PHYS Education)						Contact Dr. Bing if interested
	Jed Brody (Instructional Experiments)						Contact Dr. Brody if interested