

Overview and Timeline of our PhD program

R. Dermisek Grad Day 3/25/23

Events

Colloquium Calendar LENS/Condensed Matter Physics Seminars

Past Events

High-Energy Physics/Astrophysics Seminar

Department news

Graduate Visitation Day Saturday, March 13, 2021

9:00 A.M.

Location: Zoom

Welcome students!

Thank you for your interest in our physics PhD program. Our goal for this visitation day is to introduce you to our department and give you a chance to interact (albeit virtually) with our faculty and students. The program today consists of:

- a welcome from our department chair,

- overview of graduate program requirements and our research activities,
- an opportunity to talk with some of our current graduate students,
- discussions with faculty about their research, and
- a virtual tour of the physics building (Swain Hall West) in beautiful Bloomington, Indiana.



Introductions, Physics Graduate Student Services



ΠΠ

INDIANA UNIVERSITY BLOOMINGTON

Introductions



-	Harold Evans
	Professor, Physics
	10 kgwanz@indiana.adu
	V (\$12) 858-5828
	Easearch Internate
	elementary particle physics (experimental)
A	Herbert A. Fertig
Wine Party	Professor, Physics
1	S2 Hertig@indiana.edu
ALC: NO.	% (\$12) 856-1980
AND PARTY IN	9 Sivaln West 227
	Research Interests
	condensed matter physics (theoretical)
	Charles J. Horowitz
	Charles J. Horowitz

Therewit@indiana.ex · (812) 222-1650 avain West 222 Research Interests ruclear physics and astrophysics (theorectical)

Jorge V. José James H. Rudy Distinguished Professor, Physics 12 hobindiana.ada . (812) 855-7929 9 Saulo Wast157



Olatingulahad Professor, Physica R kostelec Öinglans adu 4 (\$12) \$55-1c85 9 Styain West 229

Research Interests theoretical physics



9 Smain West 251 Research Interacts elementary particle physics (superimental)



Chen-Yu Llu James H. Rudy Professor, Physics 10 CL21@Volars.edu

4 (812) 856-5806 Smain West 275; Center for Exploration of Energy and Matter
too. Research Interests nuclear physics (experimental)



Gerardo Ortiz Professor, Physics Scientific Director IJ Quartum Science and Engineering Center (()\$50) El ortizz@indiana.edu % (\$12) \$55-0957 9 Strain West 200 Research Interests condensed matter and guartum information theory





E nettus@indiana.ed L 812-855-2026 9 59 271 Essearch Interests rectring physics (experimental), nuclear physics (experimental)

Roger Pynn rofessor, Physics R myrr@rdara.ad . (SOS) 670-8708

asserch interests

dented matter (accertments)



Sil babakadindlana adu 9 Swain West 229 Essenth Interacts



V Swain West 206 Research Interests Bioghysics



V Swain West 255







Research Interests condensed matter physics (experimental)





condensed matter physics: atomic physics: guantum information



Matthew Shepherd Si mashephe@indiana.adu









9 227 Susin West

Adam Szczepaniak





ψ

3

Plus research scientists and support staff!

https://physics.indiana.edu/about/directory/ all-faculty-scientists/faculty/index.html

Introductions

Graduate Students:

- ~90 students
- 19% female
- 28% international
- 17% from under-represented groups
- average time-to-degree for 2021 grads was 6.6 yrs
- Employment: for 60 PhDs 2014-18
 - 37% career research
 - 10% industry or business
 - 37% post-doc research
 - 7% non-tenure track faculty



Department of Physics, Indiana University Swain Hall West 152, 727 E. 3rd Street, Bloomington, IN 47405-7105 Tel: 812-855-1247 / Email: physofc@indiana.edu

Summary of IU Physics graduate program requirements

<u>Year 1:</u>

- Take the recommended 1st-year core courses for solid physics foundation and to succeed on the qualifying exam (EM1/2, QM1/2, class/stat mechanics¹)
- get connected with a research group with goal of research credit (and support) by summer after 1st year
- prepare for/a take the qualifying exam in August at end of 1st year
- (likely) teaching assignment

<u>Year 2:</u>

- Take courses in major and minor areas of concentration.
 - 2 courses for major (eg: subatomic physics, solid state/condensed matter, or biophysics)
 - 3 courses for minor (eg: quantum field theory, computational physics, other non-major course)
 - Ramp up involvement with research

<u>Year 3:</u>

- Finish any course requirements in major or minor areas and meet 90 credit hour requirement²
- Complete candidacy seminar in 5th semester
- Meet teaching requirement (if not done in previous years)
- Complete any language requirements

You are then "nominated for candidacy".

Years >3:

- Do advanced research in G901.
- average time to PhD, IU physics, over last 5yrs \approx 6 yrs.

1) biophysics tract is somewhat different

²) 90 cr hr requirement met after 3 yrs with 12/12/6 cr hr in Fall/Spring/Summer

Qualifying exam:

- details: https://physics.indiana.edu/student-portal/graduate/doctoraldegrees/qualifying-exam.html
- in Aug after 1st year
- on material covered in undergraduate and 1st year grad courses
- Passing the qualifying exam is based not only on the student's performance on the written examination, but also on their performance in courses and, in particular, in research.
- Large majority of our students pass

Summary of IU Physics graduate program requirements

<u>Year 1:</u>

- Take the recommended 1st-year core courses for solid physics foundation and to succeed on the qualifying exam (EM1/2, QM1/2, class/stat mechanics¹)
- get connected with a research group with goal of research credit (and support) by summer after 1st year
- · prepare for/a take the qualifying exam in August at end of 1st year
- (likely) teaching assignment

Year 2:

- Take courses in major and minor areas of concentration.
 - 2 courses for major (eg: subatomic physics, solid state/condensed matter, or biophysics)
 - 3 courses for minor (eg: quantum field theory, computational physics, other non-major course)
 - Ramp up involvement with research

<u>Year 3:</u>

- Finish any course requirements in major or minor areas and meet 90 credit hour requirement²
- Complete candidacy seminar in 5th semester
- Meet teaching requirement (if not done in previous years)
- Complete any language requirements

You are then "nominated for candidacy".

Years >3:

- Do advanced research in G901.
- average time to PhD, IU physics, over last 5yrs ≈ 6 yrs.

1) biophysics tract is somewhat different

2) 90 cr hr requirement met after 3 yrs with 12/12/6 cr hr in Fall/Spring/Summer

Much more information at:

https://physics.indiana.edu/student-portal/graduate/index.html



Life at IU

A beautiful, vibrant, and supportive campus/department!

See our www site for links to many resources related to the community, health and wellness, housing:

IU Bloomington Interactive Campus Map	+
IU Student Health Center	+
IU Recreational Sports	+
Bloomington Visitors Center	+
Indiana Daily Student - Housing & Living Guide	+
Apartment Guide	+
Indiana Daily Student - Source Campus Visitors Guide Spring 2020	+





Life at IU

A beautiful, vibrant, and supportive campus!





The University Graduate School

ACADEMICS &

RESEARCH

ABOUT ADMISSIONS

THESES & DISSERTATIONS

SES & STUDENT LIFE & FATIONS SUPPORT FACULTY & STAFF RESOURCES



Life at IU

ABOUT

MEDICAL

A beautiful, vibrant, and supportive campus!

WELLNESS

Student Health Center

COUNSELING (CAPS)

MAKE AN APPOINTMENT / PATIENT PORTAL / CONTACT HEALTH ANSWERS

GET INVOLVED



FEES & INSURANCE

ABOUT

New Patients Hours & Location Emergency & After Hours Meet Our Team **Diversity & Inclusion** Records Parents

We specialize in you

As a college student, you face unique health issues. You're living and studying in close quarters, which means increased exposure to colds, flu, and other diseases. You're juggling school, work, and social obligations-and that's stressful. And for the first time, you're making a lot of your own choices about your health.

Who can be a Student Health **Center patient?**

We welcome all IU Bloomington students and their:



STUDENT RECREATIONAL SPORTS CENTER

> 1601 Law Lane, Bloomington, IN 47408 Information: (812) 855-7772



Join us virtually for trivia on the dates below!

BILL GARRETT FIELDHOUSE

1025 E. 7th Street Bloomington, IN 47405 Information: (812) 855-5222

RECREATIONAL SPORTS

ПТ

We connect, inform, and inspire people to lead active, healthy lifestyles

INDIANA UNIVERSITY BLOOMINGTON

IU Recreational Sports About Us Facility Information Hours Memberships & Day Passes Aquatics Club Sports Faculty & Staff Group Exercise Intramural Sports Personal Training Strength & Cardio Special Events Employment Opportunities Get Involved

MARCH 10 @ 8 PM NCAA Basketba MARCH 24 @ 8 PM APRIL 7 @ 8 PM APRIL 21 @ 8 PM Must be an IU student to participate

INTRAMURAL SPORTS

Home > IU Recreational Sports

Reality TV Shows Presented by Xfinity



50

ψ

ψ

Thanks for applying to our program, thanks for attending today, and we hope you join us this fall!

<u>Today</u>

Graduate	e Student Visitation Day 2023		INDIANA UNIVERSITY BLOOMINGTON
			THE COLLEGE OF ARTS + SCIENCES
Morning: Sw	ain West 130 (Tea Room)		
~8:45 AM	Light morning refreshments		Department of Physics
9:00 AM	Welcome	Walter Pettus	
9:05 AM	Department and research overview	Dave Baxter, Chair	
9:20 AM	Overview of PhD program and requirements	Radovan Dermisek, DGS	
9:30 AM	Breakout discussions with research groups		
10:35 AM	Coffee break		
10:50 AM	Tour of Simon Hall	Phil Richerme	
11:10 AM	Tour of Swain Hall	Dave Baxter et al.	
12:00 PM	Lunch and walking tour of campus with graduate students	Nick Parris et al.	
Afternoon: M	ESH NLCR		
2:30 PM	CEEM Overview	Scott Wissink	
2:45 PM	Tour of MESH	Mike Snow, Rex Tayloe	
4:00 PM	Grad student panel	No faculty allowed	
5:00 PM	Reception	All	Questions/discussion welcomed
7:00 PM	Event conclusion and return to hotel		
8:00 PM	Bloomington excursions Meet in hotel lobby	Graduate students	10