Report NNPSS 2023 @ UCR. Co chairs : Miguel Arratia and Kenneth Barish.

The 2023 National Nuclear Physics school was hosted in UC Riverside from July 10 to July 23th. The school website is: https://nnpss23.ucr.edu/. The format of the school was the following: 4 one-hour lectures, and a panel discussion and Q&A at the end of the day. There were two social events in the botanical garden (welcome reception and farewell), as well as an excursion to the Huntington Beach and Loma Linda Proton Therapy Center.

Speakers:

Jamie Nagle	Hot QCD	jamie.nagle@colorado.edu
Gabriel Orebi-Gann	Neutrinos and neutrinoless double-beta decay	gabrielog@berkeley.edu
Aaron Angerami	AI/ML	angerami1@llnl.gov
Martha Constantinou	Lattice QCD	marthac@temple.edu
Carl Gagliardi	Spin physics	c-gagliardi@tamu.edu
Abhay Deshpande	EIC	abhay.deshpande@stonybrook.edu
Alex Zylstra	Nuclear Fusion	zylstra1@llnl.gov
Jacklyn Gates	Super Heavy Elements	jmgates@lbl.gov
John Despotopulos	Isotope harvesting at FRIB	despotopulos1@llnl.gov
Jorge Piekarewicz	Neutron Stars	jpiekarewicz@fsu.edu
Alexandros Gezerlis	Nuclear Astrophysics	gezerlis@uoguelph.ca
Heather Crawford	Nuclear Structure	hlcrawford@lbl.gov

Special speaker: Nobel Laurate Barry Barish on gravitational waves, and Dr. Baldev Patyal on medical physics during a visit at Loma Linda Proton Therapy Center. We also had a special lecture on nuclear security by Prof. Bethany Goldblum.

Students

Diego	Venegas-Vargas	dvenega1@vols.utk.edu
Samuel	Lascio	saliv@umd.edu
Md Mahmudul Hasan	Anik	anik@vols.utk.edu
Matthew	Kafker	kafkem@uw.edu
Rashika	Gupta	rashika.gupta@uky.edu
Bassam	Aboona	bem4r@physics.tamu.edu

Joseph	Derkin	jd039218@ohio.edu
Brian	Hanley	bghanley@wayne.edu
Sarah	Skinner	sarahski@andrew.cmu.edu
Katherine	Evans	ktevans@wm.edu
Jay	Bhambure	jay.bhambure@stonybrook.edu
Nuwan Chaminda	Gunawardhana Waduge	mra2mh@virginia.edu
Yunshan	Cheng	yunshancheng@physics.ucla.edu
Zhengxi	Yan	zhengxi1yan@gmail.com
Aman	Dimri	aman.dimri@stonybrook.edu
Zachary (Alexander)	Akridge	zakridge@iu.edu
Ashwin	Nagarajan	anagaraj@vols.utk.edu
ANNA	PETER	apeter2@vols.utk.edu
Ruoyu	Fang	rfang@nd.edu
Ryan	Corbin	racorbin@wsu.edu
Ariella	Atencio	ama572@drexel.edu
Brady	Eckert	be348@drexel.edu
Tsung-Han	Yeh	thyeh@triumf.ca
Jordi	Salinas San Martin	jordis2@illinois.edu
Willian	Serenone	willian.matioli@gmail.com
Nikolas	Cruz Camacho	cnc6@illinois.edu
Debora	Mroczek	deboramroczek@gmail.com
Hannah	Erington	erington@msu.edu
Xincheng	Lin	xincheng.lin@duke.edu
Zaki	Panjsheeri	zap2nd@virginia.edu
Joshua Beethoven	Bautista	rzp9zf@virginia.edu
Abinash	Pun	abipun@nmsu.edu
Md Forhad	Hossain	forhad16@nmsu.edu
Kalu Arachchige	Harsha Sirilal	harsha92@nmsu.edu
Maria	Satnik	msatnik@wm.edu
Aditya Prasad	Dash	aditya55@physics.ucla.edu

Xilin	Liang	xlian046@ucr.edu
Joseph	Arroyo	jarroyo1@nd.edu
Dinupa	Nawarathne	dinupa@nmsu.edu
Alexander	Clevinger	acleving@kent.edu
Rajesh	Kumar	rkumar6@kent.edu
Shaswat	Tiwari	sstiwari@ncsu.edu
Max (Tripp)	Moss	mlmoss2@cougarnet.uh.edu
Robert	Cabral	rcabral@iu.edu
Manjinder	Oueslati	manjinderoueslati@gmail.com
Robert	Kao	rqk@physics.ucla.edu
Sean	Preins	sprei001@ucr.edu
Ananya	Paul	apaul029@ucr.edu
Ryan	Milton	rmilt003@ucr.edu

When asked about their gender, 9 responded female, 1 prefer not to say, and the rest male.

- Financial support provided by the host institution or other organizations

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Brookhaven Lab Support			$5,000
Jefferson Lab Support			$5,000
Campus Support			$10,000

Report for DNP Newsletter:

REPORT ON THE 2023 NATIONAL NUCLEAR PHYSICS SUMMER SCHOOL

The 2023 National Nuclear Physics Summer School (https://nnpss23.ucr.edu/) was held at UC Riverside from July 10-21 and organized by Miguel Arratia and Ken Barish. The school featured a particularly engaged set of 49 participants (10 female/other) and 15 interactive lecturers (5 female). Topics included Electron-Ion

Collider (Abhay Deshpande), Superheavy Elements (Jacklyn Gates), QCD Factorization and Nuclear Structure (Zhongbo Kang), Lattice QCD (Martha Constantinou), Low Energy Nuclear Structure (Heather Crawford), RHIC Cold QCD (Carl Gagliardi), Applications of Machine Learning in Nuclear Physics (Aaron Angerami), Nuclear Astrophysics (Alexandros Gezerlis), Nuclear Security (Bethany Goldblum), Hot QCD (Jamie Nagle), Gravitational Waves and Nuclear Science (Barry Barish), Proton Therapy and Loma Linda Research Center (Baldev Patyal), Nuclear Science at NIF and Isotope Harvesting at FRIB (John Despotopulos), Neutrinoless double-beta decay (Gabriel Orebi Gann), Neutron Stars in the Multimessenger Era (Jorge Piekarewicz), Nuclear Fusion at NIF (Alex Zylstra). The lecturers also engaged in panel discussions about careers in physics, including their own trajectories. Students presented posters, with two winners that presented flash talks: Sarah Skinner (Carnegie Mellon University) "Nπ Finite-Volume Energy Spectrum from Nf = 2 + 1 Lattice QCD", and Joseph Derkin (Ohio University) "Constraining the 13C(α,n)16O reaction rate via 16O + n direct measurements". Excursions included a trip to Huntington Beach and a tour of the proton cancer therapy center at Loma Linda University, the first hospital-based treatment center in the world. The feedback from students and lecturers during the school was overwhelmingly positive, with the lecturers praising the quality and engagement of the students. The school was supported primarily by the NSF, with contributions from UC Riverside, California EIC Consortium, Lawrence Berkeley National Laboratory, Brookhaven National Laboratory, and Thomas Jefferson National Accelerator Facility. A UCR news article about the school with some photos can be found at https://insideucr.ucr.edu/stories/2023/07/11/summer-school-focuses-nuclear-physics