



UNIVERSITY OF DELAWARE
**BARTOL RESEARCH
INSTITUTE**

Workshop on Machine Learning for Cosmic Ray Air Showers

Welcome

Frank Schroeder

Workshop Organization

Workshop idea born out of the IceCube EPSCoR Initiative (IEI), a collaborative grant between 6 IceCube and IceCube-Gen2 institutions in EPSCoR jurisdictions:

NSF award # 2019597 RII Track-2 FEC: The IceCube EPSCoR Initiative (IEI) - IceCube and the Data Revolution

Organization started last summer. We planned for a small workshop on site with some remote participants. It still is small on site, but the number of remote participants much larger than expected:

82 registered remote participants from 20 countries in 5 continents

23 expected on-site participants from the U.S. and Germany

Workshop Committee

Frank Schroeder
Marcos Santander
Matthias Plum
Serap Tilav
Xinhua Bai

Sponsors

Bartol Research Institute
possibly NSF EPSCoR

Workshop Goals

- Bring together machine-learning experience on air-shower reconstruction from different detection techniques and for different primary particles → are there synergies?
- Show also work in progress and give opportunity to discuss failed approaches, ideas, questions, ...
- Allow plenty of time for questions and for discussion during breaks.

Zoom participants:

- Please also use the chat for discussions. However, we will *not* monitor the chat during the talks. We will have a look to the chat in the questions time after each talk.

Proceedings:

- Create a lasting and citable resource: we will upload abstracts and PDF slides to Zenodo
- Let us know if you want to make any modifications to your abstract or slides later this week

Schedule: Tuesday - Thursday

Time in EST (= UTC – 5)	Workshop Function
09:00 – 10:30 am	Talks
10:30 – 11:00 am	Coffee Break
11:00 – 12:30 pm	Talks
12:30 – 02:00 pm	Lunch Break
02:00 – 03:30 pm	Talks
03:30 – 04:00 pm	Coffee Break
04:00 – 05:30 pm	Talks

Dining:

- drinks (coffee, water, etc.) are available all day;
- food during breaks is included
- breakfast and dinner on your own

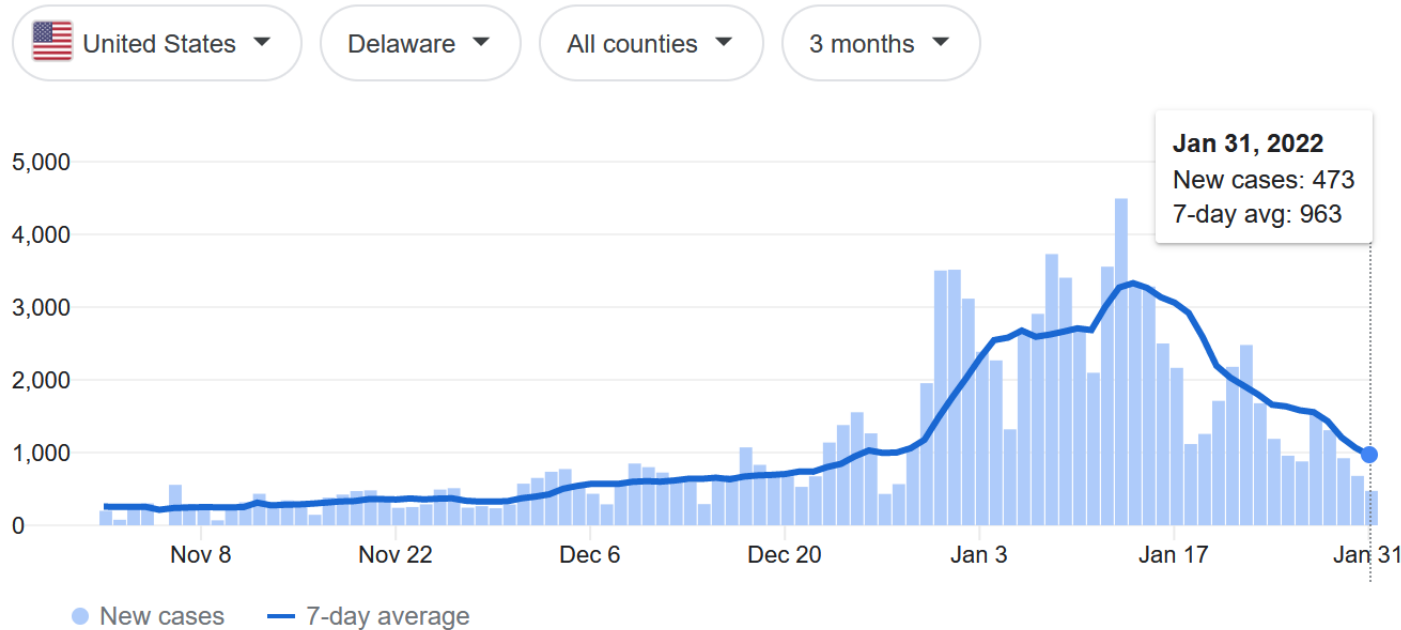
Conference Dinner:

Wednesday 6:30pm at Gelato, Main Street
food + 2 drinks (beer/wine) included in fee

Covid Situation

- Omicron wave on decline in Delaware, but absolute case numbers still high → risk is generally high
- Vaccination mandate without exceptions + booster for those eligible
- Mask mandate during complete workshop, except for short times while eating and drinking at 6ft distance
- Fill daily (to confirm no symptoms): <http://covidcheck.udel.edu/>

From [The New York Times](#) · Last updated: 13 hours ago



692 detected cases per week and per 100,000 population in Delaware

University of Delaware

Main Campus in Newark, DE



University of Delaware – Few Facts

23,613	students, of these are 4,285 graduate students
1,265	faculty
\$1,100 M	budget
2	Nobel laureates (not yet in physics)
1	U.S. president as alumnus (Joe Biden; not in physics, neither)
Several	IUPAP C4 awardees at ICRC are or were active in Delaware

Bartol Research Institute

A Center in UD's Department of Physics and Astronomy



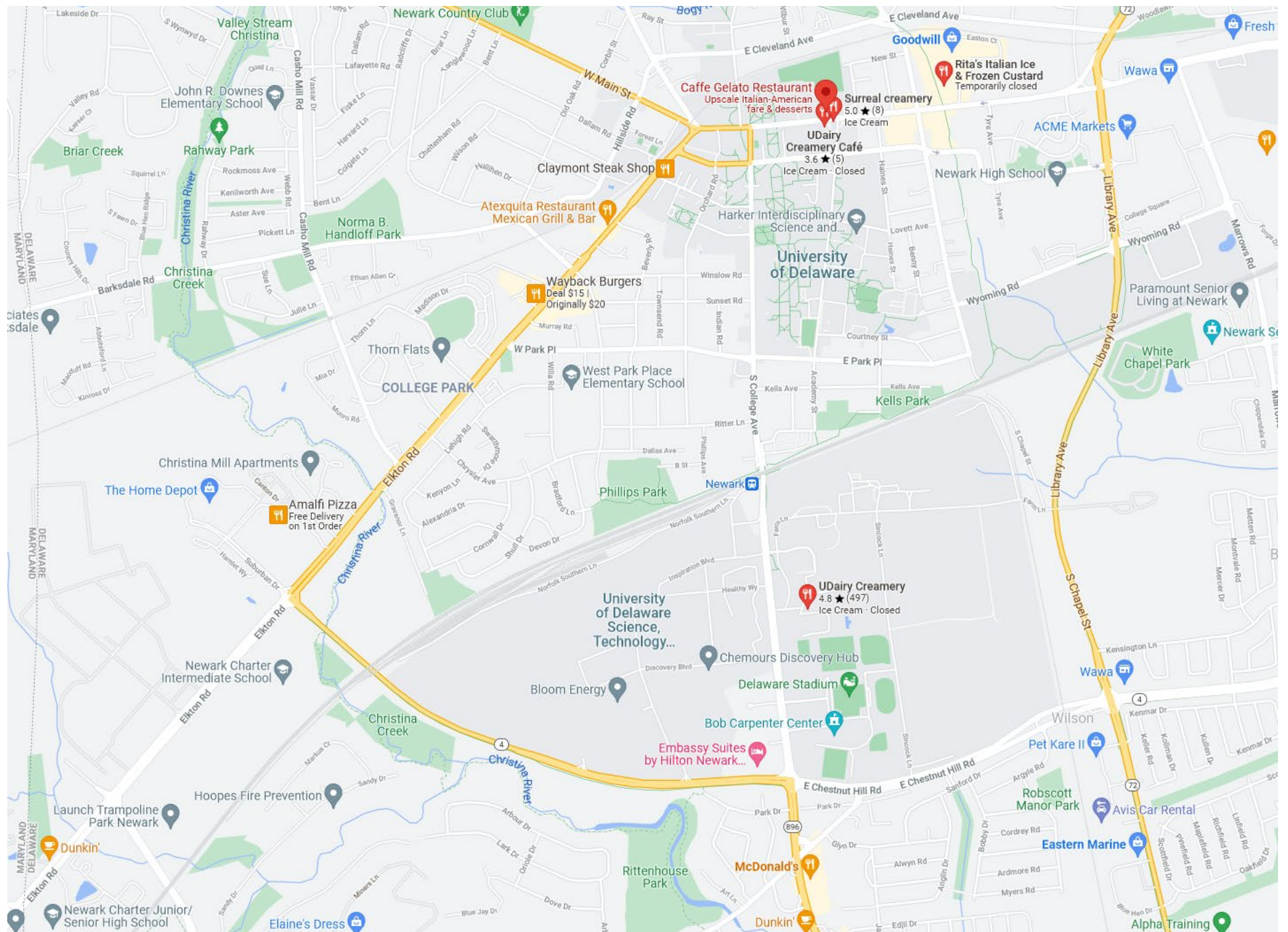
Workshop Site: Embassy Suites Hotel

Lunch and Coffee Breaks included





Google



Welcome in Newark Delaware

Welcome worldwide on Zoom

Any questions?