



**ILLINOIS STATE
UNIVERSITY**
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2023 UNIVERSITY RESEARCH SYMPOSIUM
April 15, 2023
DEPARTMENT OF PHYSICS ORAL PRESENTATIONS



(D7) Moulton Hall: Department of Physics Oral Presentations 9:00 a.m. - 10:45 a.m. Room 309

The oral presentations for the Department of Physics will take place on Saturday, April 15, 2023.

DEPARTMENT OF PHYSICS

Oral Presentations (April 15, 2023)

Moulton Hall 309

Faculty mentors: Dr. J. Bergfield; Dr. M. Caplan; Dr. R. Grobe; and Dr. Q. Su

9:00-9:15

Brendan Czajka

BIRTH PLACE OF ELEMENTARY PARTICLES?

9:15-9:30

Luis Rizo

SOLVING ORDINARY DIFFERENTIAL EQUATIONS USING NEURAL NETWORKS

9:30-9:45

Alex Furcoiu

SYMBOLIC REGRESSION AND ITS USE IN ITERATIVE MAPS

9:45-10:00

Ian Freeman

DISTILLATION OF ^{56}Fe IN ULTRAMASSIVE O-NE WHITE DWARFS

(See additional presenters next pg.)

Presenters Cont.

10:00-10:15
Nevin Smith

SUBSTRUCTURE AT PHASE BOUNDARIES IN O/NE/FE COULOMB CRYSTALS

10:15-10:30
Andy Santarelli

COLLISION RATE OF SOLAR SYSTEM BODIES WITH PRIMORDIAL BLACK HOLES

10:30-10:45
Riley Wasler

QUANTUM THERMOELECTRIC ENHANCEMENT OF ACYCLIC
CROSS-CONJUGATED POLYMERS