Regulated Research Institutional/Industrial Setting Form (1C)

This form must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s) Kevin Hoxha

Title of Project Modeling the Conductance of Single-Molecule Electron Transport in a Symmetric Break Junction

To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation:
(Responses must be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)

The student(s) conducted research at my work site:

1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher? ☑ Yes ☐ No
   a. If no, describe your and/or your institution's role with the student researcher and his/her project (e.g. supervised use of equipment on site without ongoing mentorship and sign below.

   b. If yes, complete questions 2–5.

2. Is the student's research project a subset of your ongoing research or work? Use questions 3, 4 and 5 to detail how the student's project was similar and/or different from ongoing research or work at your site. ☑ Yes ☐ No

3. Describe the independence and creativity with which the student:
   a. developed the hypotheses or engineering goals for the research project

      The hypotheses and goals were developed before Kevin was part of the project.

   b. designed the methodology for his/her research project

      Kevin built the data pipeline and implemented code to investigate the hypotheses. This required him to learn python and about computational tools more generally. I assisted in this process, but most of the work was done independently.

   c. analyzed and interpreted data

      Kevin used the computational tools he developed to analyze data sets and visualize the results. He was then able to interpret the data and conclude that our hypothesis was correct.

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Regulated Research Institutional/Industrial Setting Form (1C) Continued

Student's Name(s) Kevin Hoxha

4. Detail the student's role in conducting the research (e.g. data collection, specific procedures performed). Differentiate what the student observed and what the student actually did.

Kevin wrote computational tools to reformat experimental data (obtained from external collaborators) and fit it with existing tools developed by my research group. Obtaining these fits was the primary objective of the research project, and allowed us to investigate the underlying physics of the experimental data (the models used by Kevin to fit the data are signatures of various physical mechanisms). After fitting the data against various models, Kevin plotted the data and the fits, concluding that conductance occurred via a single channel. This was our hypothesis. We are currently drafting a short communication about these results.

5. Did the student(s) work on the project as part of a group? ☑ Yes ☐ No
If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

Only Kevin and I worked on the project.

I attest that the student has conducted the work as indicated above and that any required review and approval by institutional regulatory board (IRB/IACUC/IBC) has been obtained. Copies are attached if applicable.
I further acknowledge that the student will be presenting this work publicly in competition and I have communicated with the student research regarding any requirements for my review and/or restrictions of what is publicized.

Matthew G. Reuter		Assistant Professor
Supervising Adult's Printed Name	Signature	Title
Stony Brook University		01/22/20
Institution		Date Signed (must be after experimentation) (mm/dd/yy)
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Address		Email/Phone