Dear Marsha,

This might be helpful to your part:

* An assessment of the nominee’s intellectual challenge to the students in classes

Professor Shasha believes in pushing students to do work on their own in small groups. Among his freshman seminar’s requirements is the obligation to design and carry out an experiment (usually a behavioral experiment) and then to evaluate the results using statistics. Shasha teaches resampling statistics to help the students evaluate the results of the experiments they do. This is advanced for freshmen. Further he has them design a program that is supposed to compete with other programs to acquire three paintings from the same painter before any other program does so. This is difficult software to write and requires incorporating a certain competitive intelligence into the program.

[I’ll send you the syllabus separately.]

* Contribution to the academic advancement of your students through research and thesis supervision

Shasha works with many of his students after they have completed their course work, including

George Wong,

Jocelyn Schultz – both followed my course by doing research with Ted Rappaport and are co-authors in award-winning papers.

Nathaniel Weinman – wrote a paper with some phd students and Shasha

Cole Smith – wrote a technical report with Shasha having to do with robotics

Joe Jean – wrote a technical report with Shasha having to do with machine learning

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Mentoring

My part:

The philosophy of the Problem Solviing seminar is that freshmen can understand even the most complex ideas if they feel motivated to use them.To that end, I have them work on mathematical and logical puzzles to enhance their ability to break down complex problems, study case studies in behavioral economics to understand the kind of fallacies people commit when faced with choices, have the students design and carry out their own experiments, and teach them enough statistics so they can evaluate those experiments. Finally, I teach them programming up to a level where they can program a bot that bids on a series of auctions. From that seminar, I have gotten to know many students who have done research with me in robotics, wireless, computational biology, and graph theory. The students often use problem solving techniques in their efforts. For example, the student who designed a robot to search for signals in a room combined an iphone with a Roomba to determine efficient ways to explore a space.

To me, it’s a great pleasure to see students learn by creating experiments, programs, and solutions to problems. Sometimes, they solve even puzzles that I have designed better than I do. When that happens, I throw them a kit-kat. To me, smart students should be given as much autonomy as possible while giving sufficient guidance so they don’t get lost. I encourage them to think of themselves as future creators and researchers.

CV:

http://cs.nyu.edu/cs/faculty/shasha/papers/resume.pdf