Your primary source for class information, assignments, and other material is the class web site, `http://www.cse.wustl.edu/~sanmay/teaching/cse591-fall13/`. Please check this site regularly for course announcements.

- **Where and When**: Mondays and Wednesdays 10:00-11:30 AM in Whitaker 216.

- **Prerequisites**: Admission to Washington University's doctoral program in Computer Science or Computer Engineering, or permission of course master. (Permission is unlikely to be granted to non-PhD students who have not initiated fast-track admission to the PhD program.)

- **Course Master**: Dr. Sanmay Das. You will see me regularly during the first part of the course and at intervals thereafter. Much of the course content will be provided by other department faculty and providers of various academic services at Wash U.

- **Contact Info**: You can contact me by any of the following means:

    - Send me an email at *sanmay@seas.wustl.edu*.
    - Come see me. Office hours are on an ad hoc basis. My office is Jolley 510. If you want to ensure that I will be available at a specific time, please email me for an appointment. Otherwise, feel free to drop in any time if my door is open and I'm not in a meeting, but please don't be offended if I ask you to come back later.

1 Course Philosophy and Structure

This course serves two principal functions. Its first and most important function is to help new graduate students learn about the various research activities in our department and make an informed decision about choosing a faculty research advisor. Students will meet many CSE faculty and will complete two *rotation* experiences to clarify their interests and find a good advisor match. The course will provide various forms of support to facilitate and encourage good student-advisor matches.

The course's other function is to orient new PhD students to a life in research. Where do research ideas come from? How do we judge whether they are "good"? How do we structure our working time, and how do we communicate the results of our labor? Students will engage these questions through lectures, discussions, and exercises that provide experience in directed literature reading, formulation of ideas, and development of good taste in research questions.

There will be two types of class meetings: research talks by faculty and general research skills discussions. Research talks will provide overviews of active directions of research in the department. The breadth and depth of the talks is determined by the individual faculty member, but should provide you with a flavor of research in those groups. Research skills discussions will focus on

many different aspects of the research process, including how to read and evaluate papers, how to communicate your ideas and results, and how to make the best use of available resources.

The assessment component of CSE 591 is fairly limited – if you do all the required activities in good faith and with reasonable competence, you will in all probability get an 'A'. However, you should understand that the real "final exam" for the course is whether you successfully enter into a long-term research advising relationship with one of our faculty! Most PhD students find a long-term research advisor by January or February of their first academic year.

Please note that your initial *academic* advisor is not your research advisor, and that your rotation advisors are under no obligation to accept you as a long-term advisee. Entry into a long-term research advising relationship requires the mutual consent of both student and faculty member and generally happens only after one-on-one meetings and negotiation. If you do not find a long-term research advisor after one year, you will not be able to remain in our PhD program.

2   Overview of Rotations

The most important part of the course is the opportunity to participate in *research rotations* with faculty members. A rotation is a short, directed research project that you will carry out under the direction of a faculty advisor. The primary purpose of a rotation is for you and your rotation advisor to assess your interest in the advisor's research area and whether the two of you might be willing to enter into a long-term advising relationship.

The class will include two four-week rotations, roughly corresponding to the months of October and November. A couple of weeks before the start of each rotation period, you will seek out a faculty rotation advisor. The course master will assist you in finding out who is offering rotation projects, and individual faculty may also advertise their projects to you directly. By the start of the rotation period, you must identify your rotation advisor and complete a written *rotation plan*, describing the project to be done and setting weekly milestones to help you and the rotation advisor assess your progress. At the end of the rotation period, you will write a brief (2-3 pages) *rotation report* summarizing your work and what you learned. Your rotation advisor will also submit an assessment of your performance.

To get the broadest exposure to potential advisors, we strongly recommend that you do two rotations with *different* faculty members. If you have already entered into a long-term advising relationship by the time rotations start, you may do one rotation with your long-term advisor; however, we recommend that even in this case, you should do a second rotation with another faculty member.

3   Grading

Your grade in the course will be weighted roughly as follows:

1. Attendance and participation: 10%

2. Each rotation: 40%

3. Other exercises: 10%