

GIST Program Chair's Report

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1. MSIS Admission

This year, we reach another admission record. We have 601 applications (up from 451 last year) and despite a more selective admission, we ended up with 119 matriculated students (up from 107 last year and 89 a year before).

It is likely that the further growth of applications and enrollment is related to Big Data specialization. We have seen many applications for this track and despite rejecting quite a good number due to the lack of technical background, we ended up with 43 matriculated students who selected Big Data track (in contrast to 34 in 2014). This is much larger than 22 who selected General MSIS (27 in 2014) and much larger than 15 who selected Database track (29 last year). While our data shows that only a subset of students graduate within the originally selected specialization, it is clear that Big Data program significantly impacts enrollment and the orientation of enrolled students.

Another continuing sign is that the dominant majority of students are coming from PRC. There are some changes in the national distribution this year, however. Specifically, we have several admitted and matriculated MSIS students from Iran. This is a new trend. In the past, we had several good PhD students from Iran fully funded by us, but no MSIS students paying tuition.

2. Engaging PhD students and PhD Admission

Last year, we had a good number of PhD applicants, but all our top choices selected other programs. This was a serious concern that we discussed at the meetings. We decided to focus on better promoting our PhD program and to speed up application processing. To address the first issue, we significantly updated SIS pages targeting new PhD students: faculty research, PhD program, pages of current students, alumni stories.

<http://www.ischool.pitt.edu/ist/degrees/phd.php>

<http://www.ischool.pitt.edu/alumni/profiles/phd/index.php>

<http://www.ischool.pitt.edu/people/phd-students.php#ist>

<http://www.ischool.pitt.edu/research/>

To address the second issue, we redesigned admission letter and made admission decisions and offered financial aid several weeks earlier.

This year, we were able to retain several of our top choice students. Especially valuable was to retain 3 PhD students working on security topics, the area where we recently graduated almost all students. Still the majority of top choice students selected other programs and it affected most our younger faculty Rosta Farzan and Yu-Ru Lin who need students to advance their research. One of the obstacles this year was our inability to offer enough Financial Aid packages.

3. New classes, class sizes, and adjuncts

In addition to the record number of new students, we also have the largest number of continuing students in the Fall – 159 (up from 118 last year). Students increasingly spend Summer semester doing internships, so the majority took 4 semesters to graduate (Fall-Spring-Summer-Fall). This leads to especially high numbers in the Fall. This Fall we have 277 matriculated students vs. 227 last year. In total, MSIS is for the third year the largest program at SIS, well ahead of BSIS and LIS, which is encouraging, but creates challenges to absorb this number.

We offered several key classes with two sections this semester – Data Structures, Web Technologies and Standards, Data Analytics, Database management. We also offered several additional classes that were originally offered in Spring only – Human Factors, Algorithm Design, Neural Networks. We kept two sections of English for IS introduced last year that was a good addition to our program. For the second semester, we continued to offer a revived course on Information Visualization. To absorb especially high numbers of Data Analytics students, we piloted an important Machine Learning class as special topics.

Yet, due to the increase in enrollment, many classes are large. We have now 12 classes with over 40 students, out of them 6 classes have over 50 students that is a practical limit for our building. In particular, almost all classes required or suggested in Big Data Analytics program are at their capacity or above. Both Database classes are over 50, both Data Analytics are over 40, even Neural Networks, a usually small class has 50 students. Database and HCC track classes are quite full as well. On the other hand, is ample capacity left in GIS, TELE and SAIS track classes.

The increased class sized demand more GSAs. While we have only 3 PhD engaged as teaching fellows (against 4 last year), but we still have too PhD students to support MSIS and BSIS classes. For the second semester in a row, we have engaged our best MS students as GSAs. A longer term solution, however, will be admitting more PhD students that also better aligns to our research priorities.

4. Attracting US students, online classes

We continue our attempts to attract US students, specifically to courses with extra capacity. Specifically focusing on US students, we offered now fully approved CAS specializations in Information Security and Big Data Analytics. We also developed and offered online versions of several SAIS classes (specifically targeting CAS). So far, it worked only to a limited extent. We have 3 new US students starting Big Data CAS, but the security CAS is failing to attract students and online classes have very low enrollment. Yet, we plan to continue these efforts.

5. Collaboration Across University

Over the last year we started active collaboration with Department of Biomedical Informatics on the topic of Big Data. We organized a joint faculty meeting of both programs with presentations made by both IS and DBMI faculty. We also had several rounds of talks with DBMI and Dental Informatics program chairs on collaboration and joint funding application. This work has been interrupted by the merger announcement and is now being reconsidered in a broader context. Since the merger announcement, we started to investigate collaboration with CS (Big Data,

Security) and LRDC/CIDDE (Big Data in Education). Collaboration in the area of Big Data is very important for us since the design of our Big Data program included the provision for students to work in real world tasks and real data in their classes. For that we need collaborate with departments that can provide data. The collaboration is also important for our faculty enabling them to answer a broader set of funding opportunities.

6. Next Five Years

Before the merger, we were quite limited in our planning since our ability to expand to a large extend was defined by existing faculty. This is why we attempted to reach to DBMI, LRDC, CIDDE, and establish better collaboration and joint efforts. We also planned to further strengthen our Big Data program, update and promote SAIS program and review our course catalog. The opportunity to join with CS and more to become a center of gravity considerably extends our options. Together with CS faculty and faculty from other schools we can establish centers of excellence in several areas as well as to start several joint programs. We are currently exploring these opportunities.

7. Key problems (in order or priority)

- We need to re-think our graduate programs in the context of moving to the new “Center of Gravity” School
- We need to increase the engagement of US students while sustaining the flow of PRC students
- We need to expand our promotion campaign to address several kinds of prospective US students. We already target graduates of STEM degrees from Pitt and need to extend it beyond Pitt. A 4+1 accelerated BS+MSIS option is also an opportunity.
- We need to improve our internships, placements, and related industry contacts. We should be able to do it much better with the new staff member Alka Singh.
- We need to improve PhD recruitment strategies and approaches.