C.S. Town Hall, October 2018

Intro / State of the department

• Impetus: now have 900 students in the department. The community here is special, something we want to maintain and grow. Informal mechanisms get harder with more people, though. So now creating formal mechanisms.

• Department only works when there’s agreement between faculty and students. These mechanisms will help foster that agreement.

• Lots of value from student involvement (CSX, Tufts Girls of Code, etc.).

• Town hall is one of these mechanisms, but we’re not sure yet how often that will meet. Tufts Student council is too, which will meet twice a semester.

• Senior graduating focus group is another one of these mechanisms. One thing out of the focus group is more formal TA training. This semester Donna Qualters is teaching COMP5, TA training; Megan Monroe will teach it in the Spring. Long term goal is that every TA in 11, 15 can take that course.

• TA Ombudsperson – Sam Guyer is current person. Any issues related to TAing (e.g. a TA unsure how to handle certain students, how to handle a problem with the course).

• Hiring – One teaching track position, interviewing this semester. Two tenure track positions, interviewing in the spring. Come to job talks! They’re designed to be presented to a broad audience. And then you can also give us your feedback about the candidate.

Q&A

Q: I heard there’s a building. Can you tell us ko
A: There is a building! Last demolition will happen when the gas gets taken apart. Construction to start this June (2019), scheduled to be finished in January 2021.

The architect’s been picked. CS, Math, Econ and part of DISC, Gordon Institute will be moving in.

Large classroom (150) that we’ll have priority for. Large number of teaching labs.

All of CS is supposed to move in; 196, 200 Boston Ave; Halligan. We’ll know more in a week or two how the design will handle all of those people in the same space.

The donor (Cummings) is a builder and is donating all of the construction, so I’m pretty confident that they’ll meet this schedule.

Q: Can you give a general idea of the scale of Cummings?
A: I don’t know the scale yet, but the design is supposed to be big enough to fit all of those groups.

At least 6 stories tall, some 8 stories tall. Bigger than SEC, and Halligan will still be around but will look like tiny in comparison.

Q: Cummings move into ECE?
A: I think not everyone can move to Halligan (e.g. cleanroom facilities) but they’ll all mostly be in Halligan.

And there’s a chance all of CS won’t fit, so . . .

Q: With the change to semester hour units, some of the historical semesters were retroactively given 4 credit hours. How does that affect the students looking to graduate in the Spring, when now with all those credits they’re ready to graduate in the Fall?
A: If you’ve satisfied the requirements, you’re welcome to graduate early! You don’t have to though, you can stay and take more classes.

The faculty hopes that people don’t graduate before a student thinks they’re ready even if they’ve technically met the requirements.

Q: One more question about construction, about the green line. I heard they’re building a station here?
A: That’s a big part of the construction. The tracks nearby, with the commuter rail, will be for the green line. It’s scheduled to finish in 2021 and Tufts (right by Cummings/Halligan) will be the last stop on the green line. The MBTA is building a pedestrian bridge over the railroad tracks, so there’ll be an easy way to get from the station.

Q: Related to the new micro station and the new building as well, do you know of new security measures around Halligan and the new building?
A: I don’t know the details of that, but it’s definitely something that the planning/oversight committee is making sure the architects are handling. We definitely want students to be able to access the building, and with the Math wants very quiet faculty offices, and CS wants students everywhere. So one of the design challenges is making a space for those constraints that manages to be relatively homogenous, which helps keep costs down.

Q: Can you go into more detail about that thoroughfare?
A: There’s a bunch of houses that go behind Halligan, and there are only a few places to cross the tracks along Boston Ave. And the new station will be across the tracks from those houses, so the
shortest route to the station will be right by Halligan/Cummings and across the footbridge. There’s currently stairs there if you’ve been by the back of Halligan.

Q: Where will the exit from the subway be?
A: By the intersection of College Ave and Boston Ave. (Something about an open air platform and new walkways)

Q: Are there plans to increase road throughput and parking?
A: I don’t know about parking. Since the parking in Dowling and Cousens isn’t typical public parking, I imagine people won’t be using that. Architects have definitely been talking about it and trying to add better ways to cross the street so to avoid making more

Q: I’ve noticed two contingencies in the student body: those focused on software engineering and those focused on theoretical sides/research. Have the faculty noticed a similar grouping, and have there been discussions about catering to those contingencies?
A: Faculty thinks that the core for both of those contingencies should be similar. Electives though we hope allow people to cater more to specific needs.

Out of the senior meeting we heard that people aren’t sure what electives to take that make sense, so that’s where the security specialization/track came from. And we want to grow that idea of tracks, not necessarily by adding more courses, but by giving more guidance around electives.

And some new tracks we plan on having: comp bio, machine learning/human+robotics interaction, theory/algorithms/comp. geo., and maybe HCI. We want to build on the faculty and course resources we already have. A PL one could happen too but many PL faculty are teaching core courses or otherwise required courses, and so it’s hard to plan for a PL track.

Q: Are there conversations about the student advising model? Like about students that want to declare a CS major?
A: For major advising, Megan Monaghan is the frontline of major advising. And she’s the resident expert about what courses meet what requirements, outside of CS and all. Her work load (700 students and increasing) is too much though so we’re trying to help support her more.

But as far as your faculty advisor, it’s always good to email them asking to talk sometime before the

Those faculty advisors specialize though in arts/sciences or engineering, and get assigned respective arts/sciences or engineering students, so they too can help with those kinds of questions.

Some problems with SIS and major declarations slowed down advising assignments, but we’re working on getting things automated better.

For freshman advising, particularly in SOE, we’re trying to give all SOE CS-interested students a CS faculty advisor. And we’re also looking to do a big group session/dinner for

And for freshman advising in A&S we’re working on how to improve that too. (Something about

Something about an online Q&A for the department where you can ask a question and if it’s useful for other folks it might be

Q: I have questions about undergraduate research. Current impression is that the department doesn’t do a good job promoting it, but a lot of undergraduates are too intimidated to find a project by going straight to an advisor. How can we coordinate making new relationships with
A: Faculty have talked about and struggled with this for a long time. Research experiences are very 1 on 1 and personalized and so faculty don’t have a lot of capacity to give research experience to undergraduates. Even though doing that is one of the most fulfilling things for faculty, they typically don’t have enough time. So we’ve avoided broadcasting information about undergraduate research.

So instead we’ve talked about how to identify students that could benefit from research opportunities.

World of CS/Frontiers: Lenore Cowen likely offering a 1 credit course, where every week there’s a faculty member talking about an overview of their respective subdiscipline in CS. One goal of this is to make students aware of research areas and what faculty are working there.

Q: Follow-up: has the alternative considered outsourcing in some sense to larger research organizations in the US/abroad?
A: There are a few things you could apply to (but what?). A lot of places though are in the same situation as Tufts, though, where the faculty are far fewer than the students.

Q: We talked a little about the value students get out of TAing, and I’ve gained a lot out of it. But it seems like in a lot of these classes the TAs have job descriptions that include logistics, and course setup, and other large pieces that are harder to scale when the course gets larger. Is there a conversation in the department about offloading some of these logistical pieces, off of TAs and instructors, that would help run courses easier?
A: Definitely looking at tools to help run courses, using commercially available things. For homegrown stuff though we hired Helen to help develop those.

In 105, for example, there’s been a big push to make its software more standardized/user friendly.

We set up a faculty committee, that Megan Monroe is head of, to identify problems in (broadly construed) TA relationships and things that TAs may need help with.

Q: Do you know if there are any new hires for cyber security?
A: Areas of focus for the two tenure track positions: - machine learning, AI, NLP, robotics - systems, security

We’re looking for folks that can do cryptography, network security. There will probably be a crypto and a reverse engineering
course offered in the spring. We’re trying to find support for part-time lecturers to handle these, hopefully eventually hiring full-time.

Security unfortunately is one of the hardest places to hire in, but we’re trying.

Tufts is working towards offering a MS in cybersecurity and policy. Need another security faculty and another policy faculty in Fletcher. It’s a high priority for the university

Q: Any info about next semester course offerings? e.g. what about compilers?

A: For compilers specifically unlikely next semester; Jeff or Sam would likely offer it. Sam next semester though is doing 11 and Jeff will be doing a SE course.

It’s maybe worth trying to get a petition together for courses like compilers that a lot of students are interested in but aren’t necessarily being offered.

As an example: Jason Wiser has been running the game design course which initially wasn’t a repeated sure-thing. Such a petition though led to hiring Jason and running the game design course long term.

Q: When I first came here some classes were once a year, and there were classes like compilers which were offered once. What course will be offered long-term on a regular schedule?

A: Not sure off the top of my head, but could extrapolate from past semesters. These come to mind though:

  Every semester: machine learning, AI, game design
  Once a year: DB, OS

There’s a lot of serendipity to course offerings (e.g. instructors taking sabbatical) so it’s a little hard to make a concrete plan. We’re skating at the edge of our capacity, so it’s hard to make concrete plans without turning away students who want to take CS classes. But we’re not sure how to balance teaching every student and how to staff teaching all of their requirements.

Q: Could you talk a little bit about if the department load issue is e.g. demand still outpacing supply, or will supply eventually meet up with demand?

A: We’re slowly getting more supply, e.g. by being more efficient around TAing and other infrastructure for teaching larger classes.

Student growth is a bit unpredictable though (last year a few percent, the year before around 10 percent). This year we’re predicting to grow though quite a bit.

SOE is investing a lot in computer science. We have two faculty hiring lines this year, a few last year. And adding staff is something they’re also helping with—one new one last year, another hopefully this year.

As long as enrollment just creeps up we can probably adapt, but if e.g. enrollments double this next year I don’t know what will happen.

We’ve accommodated the number of students we have in large part because of all of the students working together to support each other through student organizations and other department contributions. And I really want to thank you all for doing that; we couldn’t help all the students we want to without your help.

I’m excited to see how we grow and improve the department, but there will probably be some more rough patches along the way.

Q: Collaborative environment here is great, it’s helped me a lot to learn with other people in Halligan. Can we get more lab spaces during their down time?

A: The extension does sort of have the quiet space thing with cubicles, but I don’t think it has the monitors. It might not always be quiet (e.g. because of office hours), so let me know if that’s changed.

One of the challenges of the new building is its really wide footprint, which makes giving windows to everyone really hard.

Q: In 105 we have a lot of conversations about fitting all the students in collaborative spaces. So I just wanted to emphasize a student perspective on how important it is.

A: Definitely. Thank you for emphasizing it!

Q: We’re starting to see a lot of people using GPUs for deep learning, with AWS or e.g. hardware on their computers. Could the department get GPU resources on a new sort of compute server?

A: Looked into that when we first offered deep learning, but that wouldn’t work out for the department to be cost effective. So that’s why the deep learning course has department funding for students to get AWS time.

If you’re doing deep learning research, then definitely talk to your advisor about getting access to a GPU machine.

(Follow-up comments from the audience: the Tufts high performance computing cluster might have something, and Ming’s security course gave folks access. Also, I’ve seen workshops about HPC but these feel a little inaccessible since they’re multi-day things which mean I’d need to miss classes.)

Q: How can I stay engaged as an alum? What’s the department looking for?

A: Some things:

  • Facebook group
  • LinkedIn group we’re working on rebuilding
  • Alum newsletter
  • Every April there’s an alum/student meet up at Mead Hall in Kendall Sq, more than 100 people showed up with about 10 or so students/faculty
  • End of year party at Winthrop Hall
• Stay in touch with Ming and Donna Cirelli (Ming e.g. keeps good track of where people end up, and keeps ties with the community)

Yuki, a senior last year, is on the department advisory board and should have some news soon about how to help new alums stay engaged.

The reverse career fair is another way, too. We get a lot of alums and their companies who come to that.

If there’s anything you can think of that you’d like to do, we want to encourage that.

Q: Could we get a panel of sorts about academic alums?
A: Definitely! Please

Q: Are there any planned changes to the MS or PhD program? e.g. dropping quals?
A: We’ve decided, going forward, that quals talks should be 30 minutes presentation+10 minutes questions instead of longer.

Faculty aren’t particularly happy with the current quals structure, e.g. it stresses students more than we want. The students that stress end up doing too much work, and the students that don’t stress end up not doing enough work. There’s been a previous effort to revise quals, but that failed and so we went back to the system we’re at—

New MS programs in HRI, Comp. Eng., Data Science We’ll need to offer some courses more frequently for people to ensure everyone in these programs will be able to graduate on time.

We’re encouraging more folks to stay for the 5th year to get their BS+MS, and you can get the MS in any of those programs.

Q: I’d like to ask about discrete math. There’s a general sense that people coming into 160, 170, 105 don’t get the knowledge from discrete that we expect them to.
A: We’ve been looking at this for a while, have done various pre tests in courses to get a pulse on this. And although the classes do teach things like induction and time complexity, the results of those pre tests is that people learned things and then forgot them. We’re more or less seeing what you hear about with middle school/high school students taking a summer off: you just forgot so much over the summer.

(Comment from audience: Adding to that discrete math conversation, the discrete course in the math department is more helpful for folks with a weaker background in proofs.)

Q: CS students typically can’t take courses from other departments for credit. Is there a system to petition those other courses to count towards CS?
A: There’s definitely a system. If there’s a course you have in mind you can always petition for it.

If it’s more of a long term thing, we can also cross-list courses so that CS students can get credit. We can even cross-list special topics courses. Talk to Alva.

Q: Could we in advance cross-list those special topics courses, and have the Math department do the same?
A: Math worried about being overwhelmed by CS

Q: Urban Planning and Environmental/Civil engineering joint degree. Does CS have plans to offer joint degrees?
A: No plans yet but we’re definitely open to it. Faculty though are limited and joint degrees need a faculty person specifically for the degree.

Q: For a school that teaches C/C++ as its primary languages, it seems like Tufts doesn’t spend enough time on teaching secure coding in these languages. And that worries me. Have there been discussions about this?
A: Not that I know of.

Q: Plans to move 11/15 away from C++?
A: Not at the moment. The Python experiment last semester did happen. But shifting away from the existing courses is hard resource-wise. Pedagogically it would be interesting, but it’s also a market advantage to know C really well. It might also be a disadvantage too.

Q: What kinds of international opportunities, like study abroad, are available that are optimized for CS/STEM?
A: We’ve been working with the romance language department to put something together for students to take a semester of Italian, study a data science course in Italy + an intensive Italian language course.

Q: What’s one thing you’d really like to do in the next couple years? What’s your dream for the department?
A: Hire 5 more tenure track, 2 more teaching track. One at least in cyber security. I’d like the new building such that all the departments and students fit in that building, so we can fit classes and teaching labs and everything.

I’d like the department to do a better job on inclusivity and diversity for all students; we do a good job for some students, and all’s hard, but we’re doing better. WICS is doing a great job. But first in college/students in financial distress we can do a lot better to support them. And folks form underrepresented and minority groups; we don’t have enough representation for them.

Next week there will be a social jointly hosted by the CS Department and the Center for STEM diversity to explore the experience of underrepresented students in the CS department.

Data buddy study Q: How much do you feel like you belong? Our data from last year showed that white men felt 4.6/5 and women felt like they belong 3.6/5 and underrepresented minorities felt like they belong 2.6/5. I don’t know if we can fix that entirely due to larger societal issues but we can definitely do a lot better.
Q from KF: Was this useful for you? Should we do it again?

Audience: Maybe later in the year, e.g. 2/3 through the year. Maybe also have professors plug this meeting in their courses.

**Action items**

KF: Meetings w/Cummings building people to raise issue about hotel space for students (in addition to collab space)
KF: Investigate student access into the Tufts HPC cluster
KF: Raise cybersecurity concerns with 11/15/40 instructors
KF: Ask faculty about announcing town hall in their courses
KF: Weekly digest of events coming up?