**MIT Schwarzman College of Computing Task Force**

**Working Group on Faculty Appointments**

**Final Report**

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# OVERVIEW

In the Faculty Appointments Working Group for the Schwarzman College of Computing (SCoC), we began our deliberations with an in-depth discussion of the key objectives that our proposed models, structures, and processes must promote and serve. We then developed and evaluated our models for faculty appointments based on the potential of each model to fulfill these guiding principles:

- Attract truly outstanding faculty.

- Hire faculty at the interface of computing and other areas/disciplines.

- Enrich the involvement of existing MIT faculty currently engaged with computing—this applies equally to faculty who identify as computer scientists and to multi-community faculty (MCF).

- Recruit, hire, mentor, and promote a diverse and talented faculty with particular attention to historically underrepresented groups in computation.

- Include those who will define the future of computing but who have not thrived in traditional electrical engineering or computer science departments.

- Ensure fair treatment for every faculty member hired in connection with the SCoC.

- Recognize the value of all appointment types to the SCoC.

- Acknowledge the aims and values of a plurality of contributing disciplines.

- Prevent "double jeopardy" in faculty hiring, appointments, and promotions.

- Account for the changeability of what is considered interdisciplinary—some of what was interdisciplinary several years ago is now embedded in a recognized discipline.

- Eliminate bureaucratic boundaries between disciplinary computer science and multi-community faculty (MCF) while preserving MIT's excellence in computer science.

- Proceed carefully in establishing a structure for the SCoC so that anything that isn't working can be changed.
- Preserve flexibility in the SCoC so that it can evolve and adapt to changing times.
- Nurture and enhance the excellence of programs and research currently being conducted in MIT's existing electrical engineering and computer science disciplines.

The overarching goals guiding our proposals are equity, inclusivity, and appropriate rights and responsibilities. In particular, fairness must guide treatment of all faculty affiliations, multi-community and otherwise. By equity, we mean something quite distinct from quantitative equality of resources for all faculty (as illustrated in Figure 1 below).
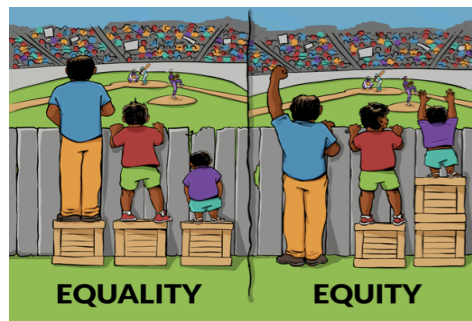


**Figure 1: The SCoC must strive for equitable rights and responsibilities for faculty members.**
Image courtesy of Interaction Institute for Social Change | Artist: Angus Maguire

We must be inclusive because computing extends beyond disciplinary computer science. As the National Academies of Sciences, Engineering, and Medicine report *Beyond Productivity* explains:

> The benefits of information technology (IT) extend far beyond productivity as it is usually understood and measured. Not only can the application of IT provide better ratios of value created to effort expended in established processes for producing goods and delivering services, but it can also reframe and redirect the expenditure of human effort, generating unanticipated payoffs of exceptionally high value. Information technology can support inventive and creative practices in the arts, design, science, engineering, education, and business, and it can enable entirely new types of creative production.

Heeding such insights, we must be inclusive of the full range of computing research and practice. As noted above, we expect to recruit, hire, mentor, and promote a diverse and talented faculty with particular attention to historically underrepresented groups in

computation. We also expect faculty appointments associated with the SCoC to include colleagues who:

- Focus on the societal implications of computing in their research and teaching.
- Challenge technologists to consider issues of ethics and justice.

In keeping with the OneMIT initiative, we expect the SCoC to:

- Enable a true collaborative and interdisciplinary hub that brings together faculty who focus on the use and evolution of computer science and computing in artful and impactful ways within other fields.
- Strengthen computation and enhance collaboration at MIT in the many forms in which it shows up in all the schools at MIT.
- Articulate principles and models that can be adopted and help change current practices beyond the Institute.

# KEY IDEAS

**CATEGORIES OF MULTI-COMMUNITY FACULTY (MCF) APPOINTMENTS**

For the purposes of our report, we have defined five categories of MCF appointments that the SCoC could apply to several potential hiring models. The first three models are based on existing MIT practices. The last two represent new ideas generated by our working group.

### *Dual Appointment*

A faculty appointment is called a dual appointment if it is made within more academic units than one, with the following constraints:

- Any of the participating units can be designated as the home unit.
- Alternatively, units could share distribution and responsibility equally (50%-50%).
- At any given time, a dual appointment has a salary-and-commitment distribution that may lie anywhere between 50%-50% and 75%-25% (for two participating units).
- A dual appointment has a single rank and tenure status.

### *Joint Faculty*

A faculty appointment is called a joint appointment if it is made in more academic units than one, with the following constraints:

- One of the participating units is designated as the primary (home) unit.
- A joint appointment has a single rank and tenure status, and one unit will always have a majority of the distribution (more than 50%).
- A joint appointment also could be a courtesy appointment (100%-0%).

### *Affiliated Faculty*

An affiliate appointment program would act as a force multiplier that could leverage the strength of existing units to increase the size of the SCoC faculty while at the same time integrating the SCoC further within the existing MIT structure.

In one approach to affiliate appointments, the faculty member has no formal responsibilities to a secondary unit, but is included in the intellectual and social life of the unit as a result of common scholarly interests. The following constraints apply:

- An affiliate appointment has no teaching obligations and no committee work.
- Affiliates would not be allowed to attend faculty meetings or any other business meetings in their secondary units, nor could they vote on matters in those units.
- Affiliate status should provide clear value to the SCoC and to the faculty member.
- Requests for such an appointment should make the case that research opportunities, teaching opportunities, or both will be enhanced by the appointment.
- Salary and other financials remain in the primary (home) unit.

Questions that arise in connection with affiliate appointments include:

- Will the SCoC dean invite any faculty to affiliate, or will it always be the responsibility of faculty to make a request? If these affiliations are to be mutually beneficial, invitations—equitably made—may be appropriate.
- Will any faculty (outside the SCoC dean's office) help to evaluate requests for affiliation? If so, this seems to be an ideal way for joint faculty, who are familiar with computing at the interface, to participate in some service to the SCoC.
- Should some affiliate-level appointments be reviewed and renewed (or not renewed) periodically, such as every five years?
- Is the risk of stifling innovation and interdisciplinary work at the inception of the SCoC worth the potential problem with "free riders" who may retain their affiliations when not involved with computing? Should such cases be dealt with on an ad hoc basis?

Because some faculty members may have research and teaching that has more or less to do with computing over the course of their careers, a review-and-renewal mechanism would help to ensure that the SCoC's resources are matched to those who are active in computing. This is currently done for joint appointments in some departments (e.g., Physics), and it appears to work well.

Disadvantages of periodic review include:

- It adds an additional review structure (i.e., a service burden on faculty and the SCoC dean's office) and a need for faculty members to continually defend their involvement in computing.
- The faculty members who will have the hardest time defending their work as it relates to computation are those conducting innovative research and teaching at new interfaces of different disciplines. This could stifle the connecting and cross-disciplinary work of the SCoC.

A model for affiliate appointments with a review-and-renewal mechanism could include the following characteristics:

- Interested faculty members might accept a two- to three-year affiliate membership in the appropriate unit within the SCoC upon agreement of the faculty member's unit head and the corresponding unit head in the SCoC.
- A letter issued by the appropriate unit head within the SCoC would delineate mutually agreed upon areas in which the faculty member would contribute in terms of teaching, managing grants, and service (e.g., serving on search committees, admission committees, joint curriculum development, seminar organization, leading new research directions, leading multi-investigator proposals).
- Affiliated faculty may access shared office space and other SCoC resources as they participate in general activities of their unit within the SCoC.
- At the end of the two- to three -year period, the relationship would be revisited, evaluated, and renewed only upon mutual agreement between the unit head and the faculty member.

### SCoC Multi-Community Faculty (MCF)

MCF members are those with (1) dual or joint appointments between departments or (2) appointments in both a department and major lab or institute (e.g., CSAIL or IDSS). In the SCoC, MCF appointments could consist of dual, joint, or more robust, innovative types of cross-departmental appointments between an existing department and the SCoC.

*Cluster Area Faculty*

Cluster area faculty are members of interdisciplinary teams that collaborate around a defined theme of inquiry. Through collaborations that would include existing faculty and targeted hires, clusters will provide the critical mass and spectrum of expertise necessary to shape and advance the understanding of complex problems, emerging issues, and future societal challenges. We have provided several examples of potential clusters in the appendix. Cluster themes and hiring will:

- Improve the diversity of the faculty.
- Establish cohorts of scholars focused on new intellectual themes or questions that cut across disciplines, departments, and schools.
- Provide the basis for new courses and curricula as well as new research opportunities.
- Draw on existing strengths and emerging areas of discovery to establish points of distinction, thus invigorating intellectual engagement.

**MODELS FOR APPOINTMENT OF EXISTING FACULTY**

While expanding the MIT faculty by 50 is an exciting opportunity, it is important to observe that far more than 50—possibly more in the range of 250—existing faculty have significant involvements with computing that should result in some sort of 100%, dual, joint, or at the very least, affiliate appointment with the SCoC. To fulfill the guiding principles outlined in our report, the SCoC needs a fair and clear process for current faculty members across the Institute to seek appointment in or affiliation with the SCoC. The same need applies to SCoC faculty who may seek appointment in or affiliation with other departments.

Given that the SCoC is a new entity, this process should not hinge on current faculty affiliations with EECS or CSAIL, nor should it disrespect those who already are institutionally connected to computing. In granting these appointments, the SCoC must maintain an inclusive perspective on computing faculty—comprising those in disciplinary computer science, those developing new ways of computing at the interface of different disciplines, and those addressing social, ethical, scientific, artistic, humanistic, and other relevant issues that engage computing in significant ways.

Existing faculty appointments could follow the model of new faculty appointments in terms of single, dual, or joint appointments. The essential concepts and terminology could be the same, with multi-community faculty (MCF) as the new comprehensive term. The values, rights, and responsibilities should be, if not identical, very closely analogous to those articulated with new faculty in mind.

### *Automatic Appointments*

Under this model:
1. Faculty who have appointments in EECS or are PIs in CSAIL would automatically qualify for faculty appointments in the SCoC. This group should not need to further document their involvement with computing to be appointed within the SCoC. No one who is now institutionally recognized as central to computing at MIT should be at risk of being demoted in terms of their connection to computing because of the founding of the SCoC. It seems evident that these faculty should be appointed as a part of the SCoC, whatever happens with EECS or a new CS department being institutionally located within the SCoC.
2. Existing faculty in the following groups could automatically qualify for MCF (dual or joint) appointments in the SCoC—subject to confirmation by the SCoC dean and a potential SCoC Council :
    a. Faculty who teach computing courses, regardless of department or school and whether or not these courses are disciplinary computer science courses.
    b. Faculty who conduct research (including scholarship, artistic practice, etc.) significantly involved with computing, regardless of department or school. This may include colleagues with humanistic and social scientific approaches to computing theory and practice who routinely collaborate with technical colleagues.

A strong overlap between faculty of type (2a) and (2b) is to be expected, but because the SCoC's purpose is to enhance teaching and research related to computing, both aspects of faculty involvement with computing should be explicitly considered.

As with faculty appointments in MIT's five schools, it seems sensible that the dean of the SCoC has the final say on appointments. We expect that the issue of existing faculty affiliation with the SCoC will be an issue primarily in the first year or two of the SCoC's existence.

Challenges that arise with this automatic appointments model include:

- Determining which faculty members belong in groups (2a) and (2b) is not as simple as determining which belong to group (1). Because it is not a disciplinary computer science question, faculty members in groups (2a) and (2b) may not be well matched to the computer science experts in group (1).
- If discussion among and advice from faculty is important in determining who belongs in groups (2a) and (2b), the conversation needs to be inclusive.

Potential solutions include:

- Convene a committee similar in composition to the Faculty Appointments Working Group to advise the SCoC dean, when necessary, on which faculty in groups (2a) and (2b) should receive SCoC appointments.
- Align these decisions with specific actions in the SCoC such that group (2a) faculty members are appointed if their classes are approved as part of the SCoC curriculum and group (2b) faculty members are appointed if they are connected to an existing or newly proposed research cluster.

### *Self-Appointments*

This model would allow any existing MIT faculty member to self-nominate for a dual, joint, or affiliate position, subject to approval by their current department head and the dean of the SCoC. A mechanism would have to be introduced that would enable evaluation of such requests for SCoC affiliations.

**MODELS FOR APPOINTMENT OF NEWLY HIRED FACULTY**

The establishment of the SCoC will enable MIT to hire a significant number of new faculty members. Our working group has considered a number of potential models for new faculty appointments.

*Collective Hiring of Cluster Area Faculty*

Under this model, hiring units (departments, a special multidisciplinary SCoC committee, etc.) would propose new priority areas (clusters) that are not necessarily present in any department associated with computing. A special SCoC hiring committee composed of representatives from all schools would review those proposals. The cluster areas should have representation and support from faculty in the interested departments.

When a cluster area is approved (based on an SCoC assessment), departments or a multidisciplinary SCoC committee would suggest searches that fall within these areas. Departments (units) would conduct searches, perhaps in collaboration with faculty members from the SCoC or other departments.

Pros of collective hiring include:
- Enables MCF to effectively take part in the SCoC, reducing the chances of their becoming isolated in their research interests.
- Increases the potential for hiring faculty that would not normally be sought through existing departmental searches.
- Creates opportunities for multiple departments or hiring units to identify common interests in hiring.

Cons of collective hiring include:
- Introduces the risk that a strong but nontraditional candidate may not be identified by a specific department that wants to clearly support that candidate's hire.
- Requires a conscious effort to seek the input of MCF who may have insights into how a nontraditional candidate who crosses communities would fit in.

*Conventional Hiring Process*

A conventional hiring process for the SCoC would match current hiring practices in the majority of units in MIT's five schools. This would give the faculty members with appointments in the SCoC homes in existing departments and enhance the horizontal impact of the SCoC across MIT.

- Faculty lines would be allocated by school deans to hiring units based on internal priorities and trajectories.
- Hiring units (departments) would manage search processes independently and decisions would be internal to each school. Alternatively, hiring could be managed jointly by the SCoC and a department, with the faculty member being part of that department for promotions.
- Mentoring would be overseen by the hiring department and jointly overseen with the SCoC and any other relevant faculty.
- Faculty hired as part of the 50 new slots for the SCoC could have 50% teaching in an area at the interface between CS and some other discipline and could be part of a research group in the SCoC.
- Alternatively, 25 slots could be allocated to MIT's existing EECS department and the rest to other departments, which would strengthen EECS but likely reduce the potential impact of the SCoC across MIT.

Another model for conventional hiring would allow departments to hire according to the typical process then recommend a faculty member for inclusion in the SCoC. This would apply equally to existing faculty and could prove to be an efficient way to seed the SCoC faculty.

*Hybrid Hiring Process*

A hybrid model for faculty appointments in the SCoC would broadly resemble the appointment structure at various MIT institutes, with some minor but important modifications. In a hybrid model, we envision equal notions of citizenship and input for all faculty types associated with the SCoC. Regardless of the location of the hiring department, we envision an equal footing for all hires associated with the SCoC.

It is important that the hires at the interface of computing and other disciplines be unique individuals whose accomplishments are recognized by *both* the hiring department and the SCoC. Hiring at the interface is always hard, and care should be taken so that hired individuals are not categorized as individuals in between fields who do not fit in either field. MIT must strive to find those unique junior and senior hires who possess the vision and background that fit both.

This means hiring will be, at times, frustrating and slow. This is necessary for the success of the SCoC. Past experiences at MIT in forming interdisciplinary divisions and centers serve a lesson that whenever this high standard was not applied, the process failed.

The hybrid model would:
- Promote cross-disciplinary interactions.
- Incentivize departments to participate in the mission of the SCoC across a set of research clusters without creating double jeopardy for new hires or isolating the SCoC from existing units.

In this model, all MCF hires would be joint with a department across themes or clusters. The following constraints apply:
- Hiring would be managed by a search committee composed of faculty members of the relevant department and representatives from the SCoC hiring committee (i.e., a broad committee formed from among multiple departments and schools). Any hiring would require agreement between both sides, regardless of whether the department is in the SCoC.
- The SCoC would provide the slot, and the (eventual) tenure and appointment would reside in the department (which itself may be in the SCoC).
- Faculty members would be full-time members of their respective departments and would have core membership in the SCoC. They would split their teaching and service between the department and the SCoC.
- Although the FTE sits within the department, the slot remains part of the SCoC's resources. In the event that a faculty member leaves MIT, the slot returns back to the SCoC.
- To minimize hesitation on the part of departments to hire together with the SCoC, slots placed in departments should be tagged as Institute slots and should not count as part of

the overall faculty count of the department. In the absence of such a provision, departments might view hiring together with the SCoC as a lost opportunity to hire in its core area.

- New faculty hires in computer science could be exceptions to the above. Depending on the SCoC structure, such hires may reside automatically within both a computer science department and the SCoC.

- Candidate identification could happen through an SCoC faculty hiring committee (i.e., a broad committee formed from among multiple departments and schools). That committee would conduct a broad search for appropriate interview candidates. Because the important task here is to define the desired unique aspects of such candidates, it makes sense for the departments to collaborate with the SCoC. We believe this approach improves MIT's chances of hiring an outstanding candidate.

- In the alternative, a department could present a candidate to the SCoC faculty hiring committee.

- Once the SCoC and a department agree on the candidate, they would arrange a single interview visit.

- Promotions would be handled in a somewhat similar manner, with the department taking the lead, letter writers decided jointly, and requests sent under the signature of the head of the department and the SCoC dean.

- Similarly, mentorship would be handled through a joint committee comprising senior members of the SCoC and the department.

- Decisions to consider promotion would be made by the department head in consultation with the dean of the SCoC.

- Tenure could be handled by the SCoC or the departments.

Pros of hybrid hiring include:
- This model has worked well within other units at MIT (e.g., IMES and IDSS). It balances the pull from the disciplines and the interdisciplinary push from the institutes.

- Departments feel that such faculty remain visible, connected, and involved with their departments.

- Departments are motivated to collaborate with the SCoC.

- Faculty from across MIT are able to organize around research clusters.

- All categories of faculty appointments would have equal standing.

- Hiring in cluster areas would enable the SCoC to be adaptive and change over time as research domains arise and evolve.
- The model prevents the possibility of two chances for tenure/promotion, i.e., "double jeopardy."
- The SCoC could hire dual faculty with departments (50%-50% or 75%-25% division of teaching and service), with the distinction being that the slot is in the SCoC and does not count against the department's totals.
- The fact that a faculty member is hired into the SCoC ensures that a department's research and teaching are aligned with the interests of the new hire and the SCoC.
- The above mentioned 50%-50% or 75%-25% division means that the faculty members would not have split loyalties. They would teach as if they were fully in the department and the SCoC, except that the accounting will be done differently.
- In the case of a cluster hire, teaching and research would, by design, be aligned with the needs of the cluster.

Cons of the hybrid hiring model include:
- The model may appear complicated to implement and manage at first glance. We note, however, that MIT has demonstrated how this type of model can work.
- It would be easier to implement when the hired faculty are senior hires.
- If tenure resides with the department rather than with the SCoC, faculty members may have fewer incentives for pursuing interdisciplinary work. A faculty member may legitimately worry that such work would not be fully valued by the department.
- This concern may be alleviated by keeping tenure in the SCoC or by splitting the tenure slot itself 50%-50% so that the department does not feel that it is using up a full slot for a dually or jointly appointed faculty member.
- Clear and frequent communication would be essential regarding the eventual composition of a faculty member's ad hoc promotion committee and letter writers.

## MODEL FOR APPOINTMENTS IN NEW SCoC DEPARTMENTS

In the event that MIT establishes one or more departments within the SCoC, our working group considered options for faculty appointments under that scenario. Such departments would be

natural focal points for leadership and hiring and would enable structural elements for MCF appointments.

Academic history has shown that it is difficult to promote transformational change in the context of existing structures. One example of positive change at MIT is the Media Lab and its associated department of Media Arts and Sciences, which framed the application of computational thinking and media in a new way. The success of that endeavor was only possible by freeing it from the value system imposed by existing departmental hiring and promotion systems.

### *Inventing New Departments in a New Space*

To realize the full potential of the SCoC, MIT may need to take a risk and create a new department that focuses on the invention and application of new computational methods and machines to tackle important problems. The products of this new department are hard to predict in advance. Such products must not be viewed solely as applied (i.e., using methods developed by others). In addition, this new department must operate with the highest caliber people—individuals who are energized by challenging problems and who develop methods and machines that are broadly applicable.

One structural innovation would be the granting of temporary secondary space in this new department to faculty from other MIT units. These temporary spaces would serve as the launching pad for close collaborations with other units enabled by proximity. The physical layout of the department's primary space must be designed with collaboration in mind. We see examples of this in the experience of other institutions, including the Berkeley RAD lab.

Features of faculty appointments in new SCoC departments:
- Departmental faculty would be 100% in the new department.
- Tenure decisions would begin in the departmental unit, then pass to the dean of the SCoC.
- Courtesy appointments in other departments would be welcome provided that the new departmental faculty have the commitment and incentives to work with one another in an inward facing way (as well as facing outward towards their application domains).

*Defining New Departments*

In addition to a computer science department, we see the potential for one or more departments that include faculty who are centrally engaged with computing but who do not identify their research with traditional, disciplinary computer science (e.g., whose conference contexts, publishing activity, teaching, and other intellectual engagements are within other communities). A department of transdisciplinary computing, for example, could be a coherent organization for faculty who are working at the active interface of computing with the sciences, social sciences, humanities, arts, management, architecture, and design.

Faculty whose investment in computing is most significant to their intellectual work and to their appointment at MIT could have a majority appointment within this department, giving them an official voice in the SCoC. The unit could serve as a way to allocate teaching resources so that teaching about computing can extend beyond existing departments. A newly hired faculty member could teach a general course about computing for the social sciences in addition to doing specific departmental teaching. The unit could have the main responsibility for hiring, mentoring, promotion, and tenure of those faculty who are centrally working with computing in these types of interface and practice areas.

Pros of appointments in new SCoC departments include:
- A department devoted to transdisciplinary computing could enable the hiring, promotion, and tenuring of innovative, influential faculty who would not be hired in any single department.
- Such a department, and its faculty, would be a natural organizational focal point for advocacy of interdisciplinary work.
- If/when interdisciplinary faculty slots within the SCoC are spent, this structural innovation would ensure a lasting impact on MIT's teaching and research.

Cons of appointments in new SCoC departments include:
- A transdisciplinary computing department may lack the intellectual focus that gives more traditional departments their coherence.
- The idea of computing naturally integrates traditional computer science and more transdisciplinary work. The synergistic nature of having both in the same department is

powerful. Splitting MIT's existing EECS department might reinvoke the boundaries that the SCoC is intended to break down, thus inadvertently introducing new hierarchies (e.g., with traditional computing being attributed higher esteem than the transdisciplinary counterpart or vice versa).

- If a traditional computer science department was the only department in the SCoC, it would impede the goal of attracting and retaining faculty who foster computational research and teaching across campus. The SCoC would essentially be the Computer Science Department, perhaps with some additional hooks or interfaces to other departments, but with a very limited ability to foster interdisciplinary innovation or innovation in computing applications and practices.

## FACULTY RIGHTS AND RESPONSIBILITIES

The roles of MCF in the SCoC entail certain rights as well as a responsibility to contribute in a variety of ways to the ecosystem of the SCoC and MIT at large. Academic units must embrace SCoC faculty and provide opportunities for interdisciplinary exchange within non-SCoC departments.

### *Rights*

We articulate our view of rights as follows:
- MCF should play a central role in decisions made about other MCF (i.e., roles related to faculty tenure, promotion, search, rules for appointments, etc., should be allocated equitably in relation to other SCoC faculty).
- All MCF with substantive appointments should have the right to admit graduate students into the SCoC and otherwise participate equitably in the graduate admissions process.
- No MCF should be in jeopardy of losing their computing affiliation.
- MCF should equitably have the capacity to pioneer and explore in their research. Tenured single-discipline SCoC faculty are not likely to have their affiliation challenged based on this, but MCF might not have that freedom if their affiliations are judged by a core of single-discipline faculty.
- MCF should be treated equitably (note: equitably vs. equally) regarding the allocation of space and other resources.

- The SCoC should equitably recognize the value of a variety of disciplinary approaches to teaching.
- MCF faculty should participate in the mentoring of other MCF faculty.
- MCF faculty based at the SCoC who are productively working in an area related to a non-SCoC department should expect meaningful privileges in that non-SCoC department. The SCoC cannot be an effective unit if other departments do not reciprocate with SCoC faculty.
- Non-SCoC departments should grant appointments, full laboratory memberships, space, and access to  unique resources such as experimental  facilities to MCF on a routine basis. Note that that the granting of space to MCF by non-SCoC departments may, under some circumstances, require a second office location in the non-SCoC departments.

## *Responsibilities*

We articulate our view of responsibilities as follows:
- MCF members must participate in the steering of tenure and hiring cases for other MCF.
- MCF members must participate in the steering of teaching responsibilities for other MCF.
- Grants should be run through the SCoC in a manner that is relatively proportional to appointment.
- MCF members must  equitably participate in graduate admissions processes.
- MCF members must be cognizant of equitable use of resources.
- Members must commit to funding and advising students they admit in a manner equitable to single-discipline faculty.

## TEACHING AND SERVICE

Teaching in the SCoC will be commensurate with categories of appointments. Given the inclusive nature of these appointments, they should be made with the understanding that different types of computing courses offered in the SCoC (introductory courses, disciplinary computer science courses, ethics courses, design courses, etc.) will require different formats, pedagogical styles, and class sizes, for example. Courses in formats taught by all of MIT's five schools should be valued. Interdisciplinary team teaching should also be encouraged because the SCoC is meant to help develop such teaching innovations.

While faculty members' service work should not increase, the hope is that opportunities for innovative and cross-cutting service will arise that are beneficial for enhanced community building.

**FACULTY MENTORING HANDBOOK**

We believe that current MIT mentoring guidelines such as those by SHASS, Sloan, and the departments of Physics and Urban Studies and Planning can provide a good base for the development of a mentoring handbook for SCoC.

In recruiting junior faculty, we should be mindful of their likely concerns about tenure. We urge the leadership of SCoC to establish well-reasoned guidelines for evaluating the promotion cases of junior faculty that include criteria based on current evaluations within MIT's five schools.

In particular, those guidelines should specifically include a criterion that candidates will not be evaluated based on the traditional criteria employed in promotion cases within the existing Computer Science department. Junior faculty should start with clear expectations related to activities in their disciplinary domain as well as those that connect to computer science.

Those guidelines, moreover, should be made clear to external tenure writers who may not have experience writing for multidisciplinary promotion cases. The promotion committee should be provided with detailed guidelines about the types of feedback they are looking for in their requests for letters.

# KEY QUESTIONS THAT EMERGED

Our options for faculty appointments depend strongly on the academic structure adopted for the SCoC. Fundamental questions include:

- What will the organizational structure of the SCoC be?
- Will the SCoC have departments?
- Will faculty slots be allocated by the five deans (with departments as leads)?
- What will the SCoC's curriculum and teaching roles be?

**ASSUMPTIONS TO CONSIDER**

*Structure*

- SCoC would be nucleated by a core of computer science faculty (and perhaps others) who work and/or teach at the interface of computer science and some other discipline. Several units at MIT already encompass this interface and would have a presence in the SCoC (e.g., IDSS, CSAIL).
- In addition to these units, other groups would be formed around common research interests/clusters. These groups should be cross-disciplinary and aim to merge/integrate computer science with other fields. This would enable computer science to become embedded in those fields and benefit from the different approaches and problems implicit in those fields. We believe that knowledge of problems faced by specific fields will modify how computer scientists approach solutions in some of these areas and vice versa.
- The focus and composition of those groups would be flexible. Mechanisms for determining such groups must be established, but decisions could be made by a committee or committees with the very close involvement of the SCoC dean.

*Teaching*

- Recognizing that different departments have very different styles and approaches to teaching, the 50% devoted to teaching through the SCoC should be 50% of whatever is the norm in the home department.

- MCF hired with one of the new positions should probably have 50% teaching in the SCoC or in a subject that involves computation and some other field.
- Many existing subjects already involve computation as it relates to some other field. These subjects could be considered for possible joint offerings between a department and the SCoC.
- It is possible that most/all computer science subjects would be offered through the SCoC. This could be flexible, however, with some staying in computer science and subjects at the interface between computer science and another area to be offered by the SCoC.

### *Degrees*

- The SCoC could offer no degrees (i.e., leave degrees with departments or other degree-granting entities). Consider at a later date which degrees, if any, should be offered through the SCoC.
- The SCoC could offer some degrees, undergrad and/or grad.
- An increasing number of joint majors involving computer science could be offered through the SCoC (or jointly with the SCoC and another department). The undergrad majors and how they are counted presents a challenge to every non-computer science department.
- Perhaps all joint degrees should be modified to be a minor in CS and a major in something else.
- The Computational and Systems Biology graduate program seems like a good fit for the SCoC, and others may arise in the future.

# WHAT WE DIDN'T GET TO

**TEACHING STAFF**

Our working group has not examined or deliberated about academic appointments for individuals not on a tenure track but who may teach in the SCoC (e.g., technical instructors, instructors, lecturers, professors of practice, research scientists).

# APPENDIX

**DISCUSSIONS TO DATE**

- Co-chairs presented the task, gathered input, and discussed possibilities at different venues (e.g., Engineering Council, EECS faculty lunch, CSAIL faculty lunch, Science Council, MIT community forum).
- Members of our working group and co-chairs met with key individuals from MIT and from outside MIT to gather input and suggestions (e.g., Anantha Chandrakasan , John Hennessy, Katherine Newman).
- Our working group gathered information about how interdisciplinary or cross-unit faculty appointments are handled within MIT (e.g., IMES, IDSS, Broad)  and at other universities (Harvard, CMU, Georgia Tech). We also gathered data on past and current dual and joint appointments at MIT.
- We discussed the principles we would like to see supported in faculty appointments within the SCoC.

**CONTEXT AND STAKEHOLDERS**

Factors in MIT's broader context that must be considered in order to make recommendations:
- MIT has established the SCoC in response to the importance of computational thinking as a core aspect of the future of many fields.
- Many units at MIT are identifying computational thinking and capability as a strategic area, and they are creating organizational structures to increase their impact and research progress in computation.
- MIT undergraduates exhibit a high demand for computational education, and they often choose to take classes related to computer science, software development, or computational engineering even when they are from departments outside computer science.
- Many departments at MIT are examining how to increase the capability of faculty and researchers to apply computation or to create new computational research findings within their departmental communities. Some of these departments have expressed a

desire for more support from the Institute to access computational infrastructure or skill building.

- MIT has the opportunity to create new research areas with both theoretical and applied impact by creating cross-fertilization across disciplines.
- Within society, many issues that relate to computationally based technology will need in-depth research to address potential issues related to access, unintended negative consequences, or negative externalities This may apply in areas such as artificial intelligence, bias within algorithms, diversity within computational education and research, etc.). Our working group sees value in academic research that examines the complexities of society's relationship with new and expanding computational technologies.

Our stakeholder analysis identifies and categorizes stakeholders and lists their needs.

- Stakeholders who have decision-making authority within the SCoC:
    - MIT administrative and academic leadership
    - Dean of the SCoC
    - Deans of other MIT schools
    - MIT Academic Council
- Stakeholders who are providing recommendations and influence to decision makers:
    - Members of the SCoC Task Force working groups
    - MIT faculty community
    - MIT peer institutions
    - MIT students
    - MIT staff
- Stakeholders who are impacted by actions of the decision makers:
    - Prospective faculty

The following table suggests potential needs from the perspective of each stakeholder group:

**SCoC STAKEHOLDER GROUPS' POTENTIAL NEEDS, BY STAKEHOLDER CATEGORY**

| Stakeholder Category | Stakeholder Group | Stakeholder Needs |
|---|---|---|
| Stakeholders who may have decision-making authority within the SCoC | MIT administrative and academic leadership | Define and execute a vision and strategy for establishing MIT as a leader in computing-related research that has theoretical and academic impact |
| | SCoC dean | Establish both individual leadership and the SCoC as valued and contributing members within MIT |
| | Other MIT school deans | Ensure that the SCoC infrastructure, hiring opportunities, and novel research opportunities benefit faculty and research communities within their schools |
| | Members of Academic Council | Ensure that MIT faculty hiring, promotion, and tenure processes foster innovation and rigor and support the creation of the research agenda of the future |
| Stakeholders who are making recommendations to or influencing decision makers | Working group members | Identify options and related costs and benefits of different operational models for the SCoC |
| | MIT faculty | Develop relationships, pursue teaching opportunities, and access students, resources and infrastructure to pursue computational research |
| | MIT peer institutions | Establish their areas of leadership in the field of computing and build institutional influence and impact |
| | MIT staff | Understand the systems, |

| | | |
|---|---|---|
| | | rules, and operations of the SCoC in order to effectively support faculty and student collaborations |
| | MIT students | Build skills, participate in research, pursue entrepreneurship, and develop leadership in future-focused fields, including computing |
| Stakeholders who are affected by the decision makers' actions | Prospective faculty | Identify an academic home for building a novel and impactful research portfolio in a fulfilling intellectual and social environment |

**POTENTIAL CLUSTERS**

The SCoC could be thought of as an incubator for new subdisciplines and for ways to work across disciplines. It will be important to create mechanisms that facilitate this. One very positive result: when new faculty or existing faculty achieve distinction by creating new fields. We believe that creating cluster areas could be one such mechanism. Potential cluster groups include:

***Political Agency and Democratic Decision-Making*** (e.g., computing in the public interest, prosocial computing, AI for public policy, etc.)

***Computing, Art, and Creative Practices***

- Computing can be deeply integrated with inventive and creative practices in the arts, design, entertainment, education, and business, for example, and it can enable entirely new types of creative production.
- A spectrum of computing-enabled creative practices is suggested (but by no means exhausted) by a host of coinages that have recently entered common language—computer-based art, computer animation, procedurally generated content, computer music, computer games, digital media, interactive narrative, extended reality, interaction design, and UX design.

- Work in this cluster must be computationally-rich (not just deploying commercial apps, for instance).
- Topics of focus could include social impacts, expression, reflection, social analysis, and ethics, for example, and need not focus on utilitarian or productivity-oriented aims.

### *Meaning and Computation (or Minds, Machines, and Meaning)*

- Combines AI, cognitive science, philosophy, neuroscience, and media that convey meaning ("meaning" is intended to foreground topics like needs, values, expression, media, ethics, etc.).
- AI/cog sci/philosophy nexus with creating and analyzing meaningful systems (as done in computational media or HCI) makes this cluster unique.
- Similar programs without this latter aspect include Symbolic Systems at Stanford, Pure and Applied Logic/Logic and Computation at CMU, Logic and Computation at UPenn.

### **Computational Ecology** (e.g., climate change)

### *AI in the Workplace*

- Decision-making with algorithmic input.
- Interaction of human and machine expertise.

### *Physics and Computation (e.g., computation beyond transistors)*

- Realizations of computing systems beyond silicon.
- Utilization of laws of physics for computation beyond electromagnetism (e.g., quantum).
- Computing in living systems.

### *Computational Science and Engineering*

- Creates opportunities to include more members from MIT's School of Science, School of Engineering, and School of Management.

**POTENTIAL HYBRID HIRING PROCESS**

(see also diagram below)

1. SCoC standing committee* (SCoC council?) approves a cluster hire (e.g., cluster in Climate Science and Climate Action).

2. Department X, in concert with existing faculty in the cluster of Climate Science and Climate Action, proposes hiring in the area of Computational Ecology within this cluster.

3. Department Y proposes hiring in the area of Risk and Uncertainty within the cluster of Climate Science and Climate Action.

4. Department Z proposes hiring in the area of Climate Modeling and AI within the cluster of Climate Science and Climate Action.

5. SCoC standing committee (MCF + others) reviews and recommends (to the SCoC dean) approval for departments X and Z to hire but not to Y because MIT faculty are already pursuing this line of work. **

6. Department X and department Z establish search committees with representatives from the SCoC standing committee.

7. Search process is run and administered within each department.

8. Short list is vetted and approved by the department and SCoC standing committee. Two thumbs up are needed for each hire. **

9. Decision on final candidate made by the search committee and the department.

10. A faculty line is allocated by the SCoC to the department for the hire (the line is an SCoC line but is on loan to the department as long as the faculty serves in part with the SCoC). The department is considered the home department for the newly hired faculty for all purposes (mentoring, promotions, etc.), but the slot doesn't count against department's faculty slots.

_____

* SCoC standing committee is composed of faculty reps from MIT's five schools plus a rep from EECS. This committee is similar to the current school councils and is headed by the SCoC dean.

** An appeal or reconsideration process can be taken by the department or search committee in front of the SCoC Standing Committee with the participation of the department head and/or chair of the search committee.

## HYBRID MODEL FOR FACULTY HIRES

Suggested by all faculty ⟹

Departments suggest topical hires within each cluster ⟹

Selection of topics/fields by SCoC special MCF committee ⟹

Allocation of slot to department

By department with SCoC rep ⟹

By department with SCoC approval ⟹

CLUSTER  CLUSTER

Candidates  Candidates  Candidates

SELECTION

SEARCH

Hiring Appointment
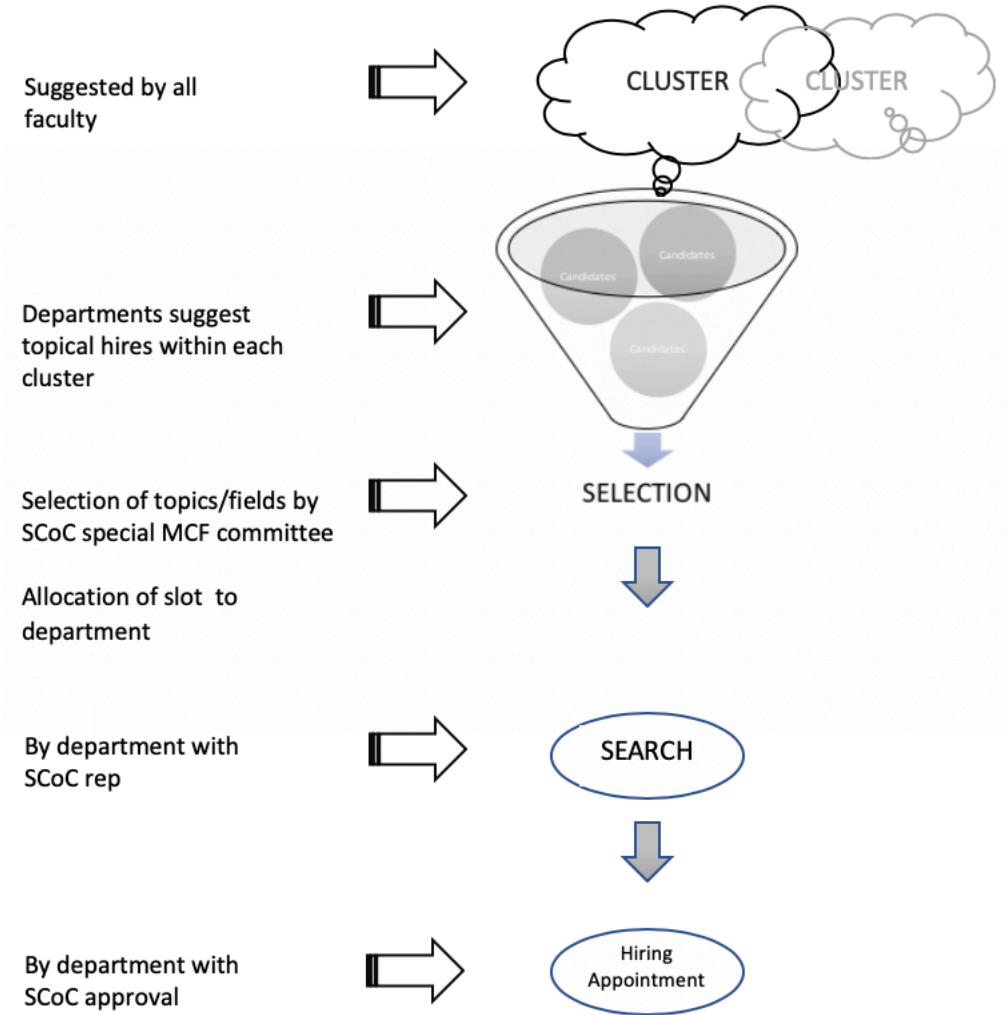
**RELEVANT DATA**

## Current joint and dual appointments at MIT (stats)

**Overall Data Summary: Dual and Joint Faculty at MIT**

|        | # of Faculty | # of Secondary Orgs | # of Engineering Secondary | # of Non-Engineering Secondary |
|--------|--------------|---------------------|----------------------------|--------------------------------|
| Dual   | 64           | 14                  | 57                         | 3                              |
| Joint  | 180          | 28                  | 96                         | 84 (27 SHASS, 11 HST, 46 Science) |

### Number of faculty holding dual appointments, by year, 1999–2019
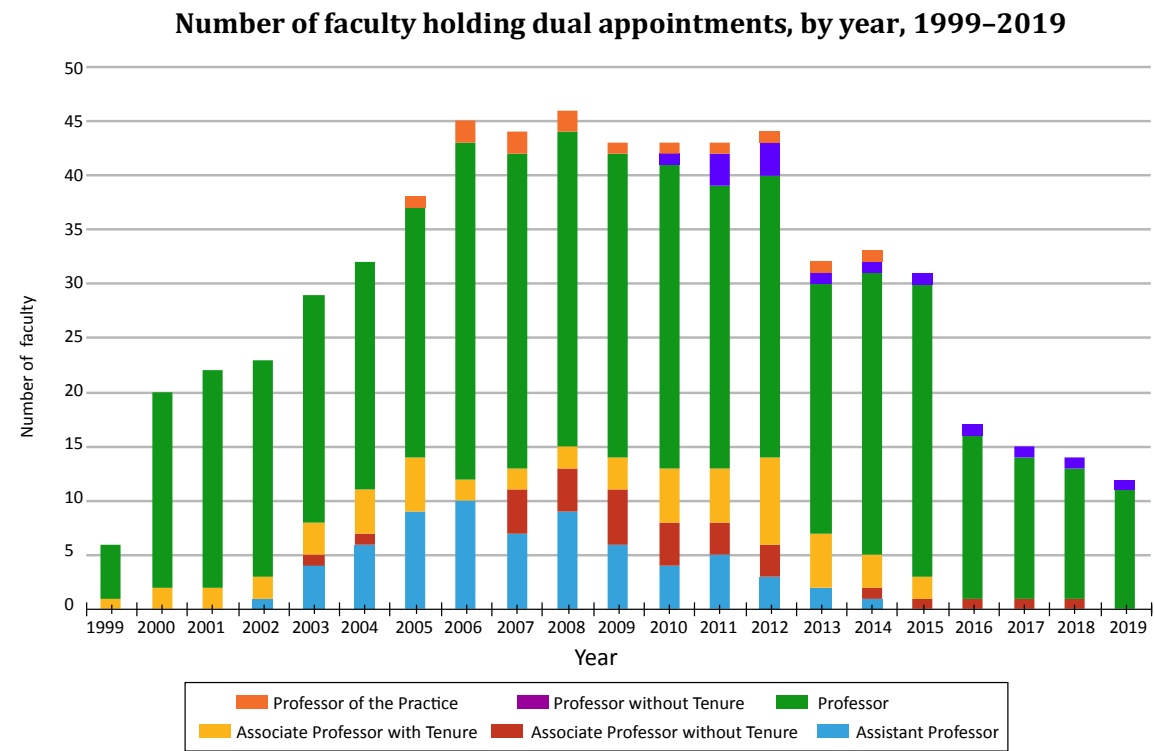
## Number of faculty holding joint appointments, by year, 1999–2019*
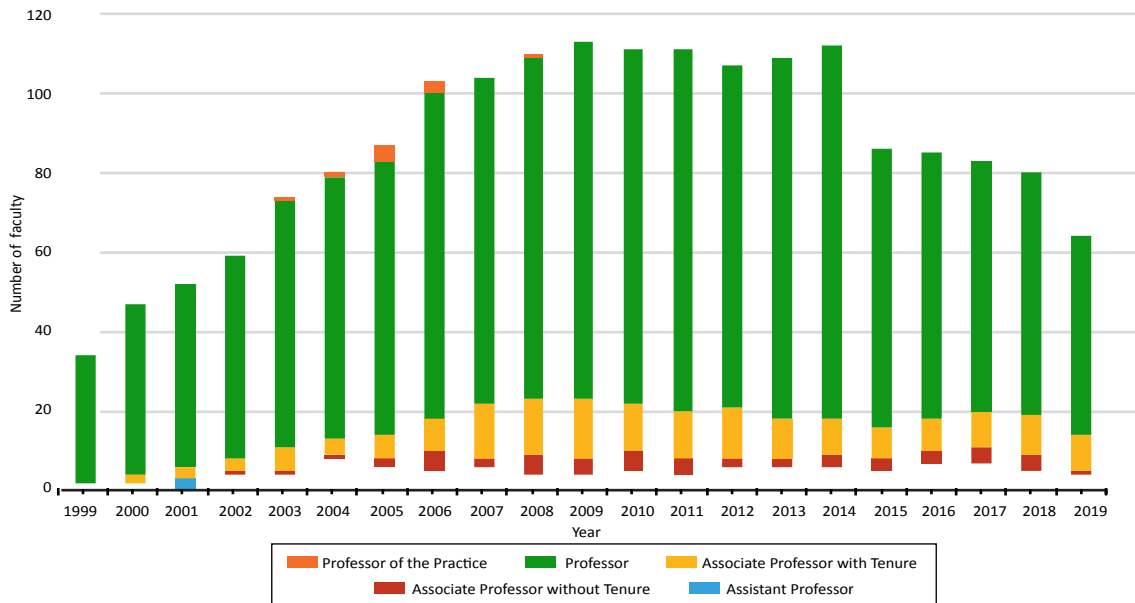


*Because MIT's decisions for joint appointments are made at the department level, data are incomplete.

## Tenure Rates: Dual and Joint vs. Norm

| Faculty with Dual Appointments | | | | | | Faculty with Joint Appointments | | |
|---|---|---|---|---|---|---|---|---|
| latest tenure status | # | % | tenure status during dual appointment | # | % | latest tenure status | # | % |
| tenure track | 5 | 8% | no tenure yet | 5 | 8% | tenure track | 13 | 7% |
| tenured at MIT | 46 | 74% | tenure during appt | 10 | 16% | tenured at MIT | 129 | 72% |
| came tenured | 11 | 18% | tenure before appt | 31 | 50% | came tenured | 38 | 21% |
| | | | tenure after appt | 5 | 8% | | | |
| | | | came tenured | 11 | 18% | | | |
| | | | | | | | | |
| **Total** | **62** | **100%** | **Total** | **62** | **100%** | **Total** | **180** | **100%** |

**Teaching: Joint vs. Norm**

Analyzing subjects taught in AY18, we found that:

- 16% of faculty with joint appointments taught at least one class that was in a subject different from their home units. This includes any cross-listed subject where at least one of the listed subjects is outside their home units.
- For all other faculty without joint appointments, the rate was 8%.

**NON-EXHAUSTIVE EXAMPLES OF OTHER INSTITUTIONS**

***CMU—faculty can have appointments between not only departments, but institutes, centers, and schools***

- HCI Institute
- Computer Science Department
- Machine Learning Department
- Entertainment Technology Center
- Institute for Software Research
- Joint appointments between the HCI Institute and the Entertainment Technology Center

***Georgia Tech—joint appointments exist between schools (e.g., 60%-40%)***

- School of Interactive Computing
- School of Computer Science
- School of Literature, Media, and Culture
- School of International Affairs

# MIT
# Faculty Multicommunity Survey

Survey Preview: https://mitresearch.ca1.qualtrics.com/jfe/preview/SV_cRZRJ4jGawj7PTL?Q_SurveyVersionID=current&Q_CHL=preview

Launch date: April 11, 2019                    Invitations sent:  1,057
Close date:   April 27, 2019                    Response rate:    44%

## How many appointments (including present) have you had?

| Appointme.. | Breakout | Textual Ans.. | | |
|---|---|---|---|---|
| Joint | All responses | 1 | | 68% |
| | | 2 | | 19% |
| | | 3 | | 8% |
| | | 4 | | 3% |
| | | 9 | | 3% |
| Research Appointment | All responses | 1 | | 41% |
| | | 2 | | 33% |
| | | 3 | | 18% |
| | | 4 | | 4% |
| | | 5 | | 3% |
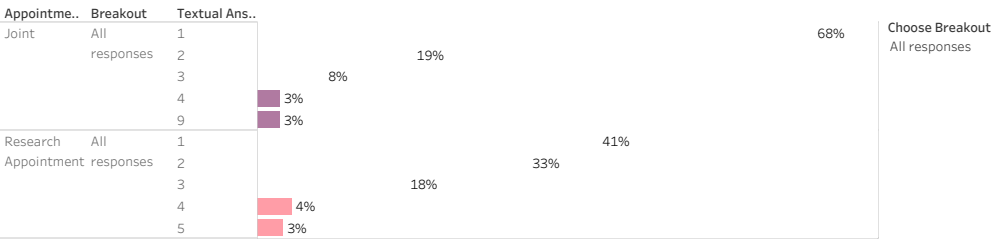
# I am afforded the opportunity to serve on admissions committees
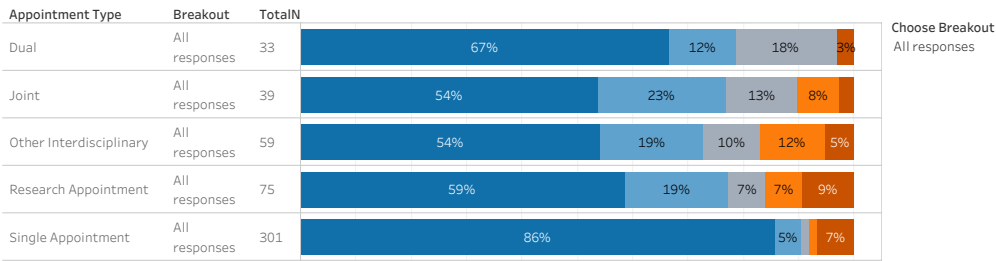
| Appointment Type | Breakout | TotalN |
|---|---|---|
| Dual | All responses | 33 |
| Joint | All responses | 39 |
| Other Interdisciplinary | All responses | 59 |
| Research Appointment | All responses | 75 |
| Single Appointment | All responses | 301 |



Legend: ■ Strongly agree  ■ Somewhat agree  ■ Neither disagree nor agree  ■ Somewhat disagree  ■ Strongly disagree

- Dual: 67%, 12%, 18%, 3%
- Joint: 54%, 23%, 13%, 8%
- Other Interdisciplinary: 54%, 19%, 10%, 12%, 5%
- Research Appointment: 59%, 19%, 7%, 7%, 9%
- Single Appointment: 86%, 5%, 7%

I feel that it is just as easy for me to bring on graduate students in my [secondary/other] department(s) as it is for colleagues with a primary appointment in that department

Display N/A
No

Choose Breakout
All responses
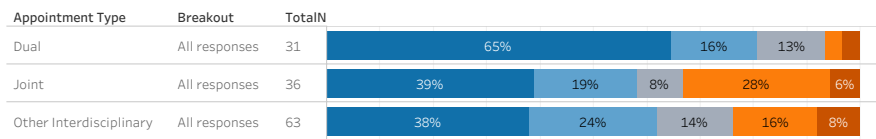
| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 31 | 65% | 16% | 13% | | |
| Joint | All responses | 36 | 39% | 19% | 8% | 28% | 6% |
| Other Interdisciplinary | All responses | 63 | 38% | 24% | 14% | 16% | 8% |

■ Strongly agree   ■ Somewhat agree   ■ Neither disagree nor agree   ■ Somewhat disagree   ■ Strongly disagree

## I have opportunities to advise graduate students

Display N/A
No

| Appointment Type | Breakout | TotalN | | |
|---|---|---|---|---|
| Dual | All responses | 34 | | |
| Joint | All responses | 36 | | |
| Other Interdisciplinary | All responses | 71 | | |
| Research Appointment | All responses | 91 | | |
| Single Appointment | All responses | 301 | | |

Choose Breakout
All responses

Dual: 88% 6% 6%
Joint: 61% 31%
Other Interdisciplinary: 56% 23% 8% 10%
Research Appointment: 70% 16% 7% 4%
Single Appointment: 84% 6% 7%

■ Strongly agree  ■ Somewhat agree  ■ Neither disagree nor agree  ■ Somewhat disagree  ■ Strongly disagree

# I am satisfied with teaching responsibilities

| Appointment Type | Breakout | TotalN | | | | |
|---|---|---|---|---|---|---|
| Dual | All responses | 33 | 52% | 36% | 6% | 6% |
| Joint | All responses | 35 | 49% | 23% | 23% | 6% |
| Other Interdisciplinary | All responses | 58 | 48% | 22% | 24% | |

■ Strongly agree　　■ Somewhat agree　　■ Neither disagree nor agree　　■ Somewhat disagree　　■ Strongly disagree

I feel my [appointment type] provides me opportunities to teach courses that interest me

Display N/A
No

Choose Breakout
All responses
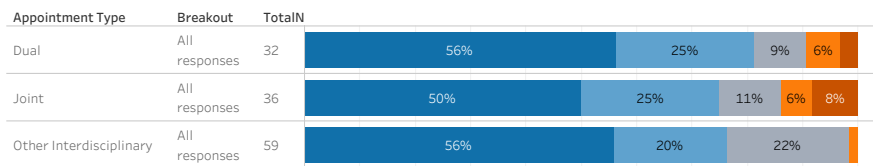
| Appointment Type | Breakout | TotalN | |
|---|---|---|---|
| Dual | All responses | 32 | 56% 25% 9% 6% |
| Joint | All responses | 36 | 50% 25% 11% 6% 8% |
| Other Interdisciplinary | All responses | 59 | 56% 20% 22% |

■ Strongly agree  ■ Somewhat agree  ■ Neither disagree nor agree  ■ Somewhat disagree  ■ Strongly disagree

## I feel valued for my teaching

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 35 | 63% | 20% | 9% | 9% | |
| Joint | All responses | 36 | 42% | 25% | 19% | 8% | 6% |
| Other Interdisciplinary | All responses | 61 | 49% | 23% | 18% | 7% | |

Display N/A
No

Choose Breakout
All responses

■ Strongly agree   ■ Somewhat agree   ■ Neither disagree nor agree   ■ Somewhat disagree   ■ Strongly disagree

# How often do you teach for each department?

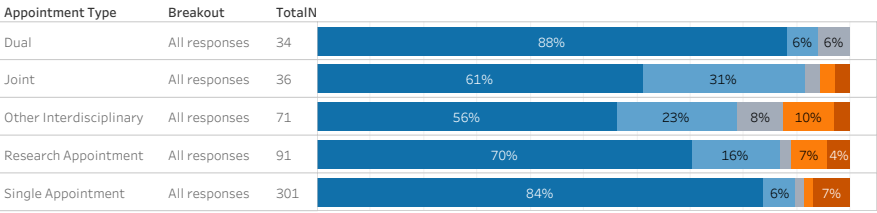| Appointme.. | Question Descrip.. | Breakout | Textual Answer | |
|---|---|---|---|---|
| Dual | Department 1 | All responses | Never | 18% |
| | | | One every fall | 44% |
| | | | One every spring | 26% |
| | | | Two every fall | 5% |
| | | | Two every spring | 8% |
| | Department 2 | All responses | Never | 26% |
| | | | One every fall | 15% |
| | | | One every spring | 44% |
| | | | Once every three years | 6% |
| | | | Two every fall | 6% |
| | | | Two every spring | 3% |
| Joint | Primary Department | All responses | Never | 3% |
| | | | Every other fall | 2% |
| | | | Every other spring | 2% |
| | | | Once every four years | 2% |
| | | | One every fall | 39% |
| | | | One every spring | 38% |
| | | | Two every fall | 5% |
| | | | Two every spring | 11% |
| | Additional department 1 | All responses | Never | 35% |
| | | | Every other fall | 6% |
| | | | Every other spring | 6% |
| | | | One every fall | 27% |
| | | | One every spring | 19% |
| | | | Once every three years | 6% |
| | Additional department 2 | All responses | Never | 71% |
| | | | Every other spring | 14% |
| | | | One every spring | 14% |
| Other Interdisciplinary | Primary Department | All responses | Never | 4% |
| | | | Every other fall | 3% |
| | | | Every other spring | 1% |
| | | | One every fall | 35% |
| | | | One every spring | 37% |
| | | | Two every fall | 10% |
| | | | Two every spring | 10% |

## I feel valued for my research

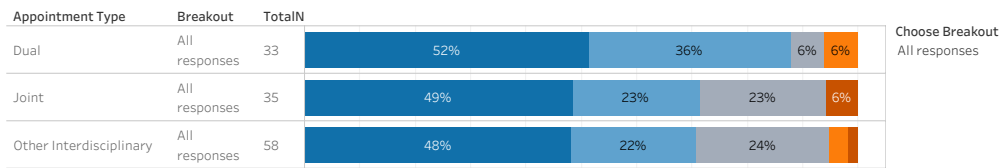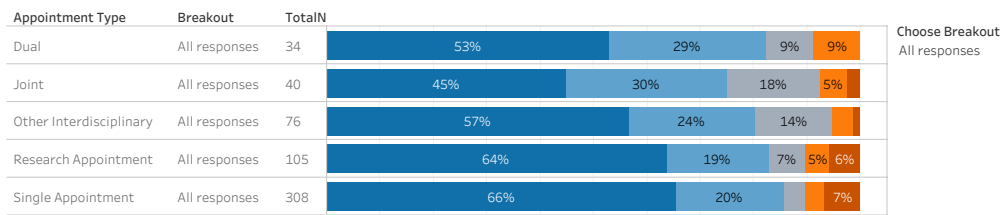| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 34 | 53% | 29% | 9% | 9% | |
| Joint | All responses | 40 | 45% | 30% | 18% | 5% | |
| Other Interdisciplinary | All responses | 76 | 57% | 24% | 14% | | |
| Research Appointment | All responses | 105 | 64% | 19% | 7% | 5% | 6% |
| Single Appointment | All responses | 308 | 66% | 20% | | | 7% |

■ Strongly agree　　■ Somewhat agree　　■ Neither disagree nor agree　　■ Somewhat disagree　　■ Strongly disagree

## I am satisfied with the intellectual/disciplinary inclusivity

Display N/A
No
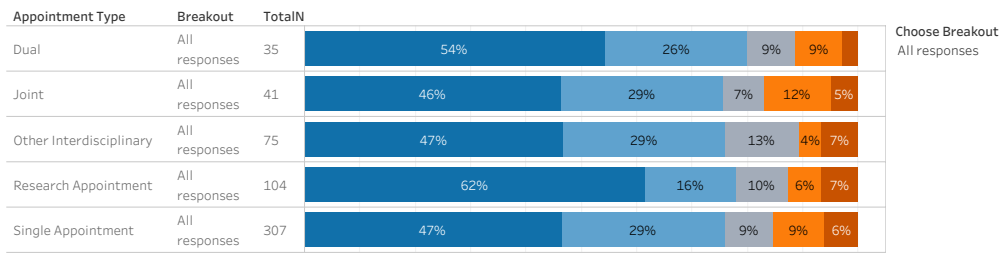
Choose Breakout
All responses

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 35 | 54% | 26% | 9% | 9% | |
| Joint | All responses | 41 | 46% | 29% | 7% | 12% | 5% |
| Other Interdisciplinary | All responses | 75 | 47% | 29% | 13% | 4% | 7% |
| Research Appointment | All responses | 104 | 62% | 16% | 10% | 6% | 7% |
| Single Appointment | All responses | 307 | 47% | 29% | 9% | 9% | 6% |

■ Strongly agree　　■ Somewhat agree　　■ Neither disagree nor agree　　■ Somewhat disagree　　■ Strongly disagree

# I feel like a member of the intellectual community

Display N/A
No

Choose Breakout
All responses

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 35 | 57% | 20% | 9% | 11% | |
| Joint | All responses | 41 | 51% | 20% | 12% | 12% | 5% |
| Other Interdisciplinary | All responses | 74 | 49% | 31% | 11% | 8% | |
| Research Appointment | All responses | 104 | 65% | 23% | | 6% | |
| Single Appointment | All responses | 306 | 58% | 22% | 7% | 6% | 7% |

■ Strongly agree　■ Somewhat agree　■ Neither disagree nor agree　■ Somewhat disagree　■ Strongly disagree

## I have a presence

Display N/A
No
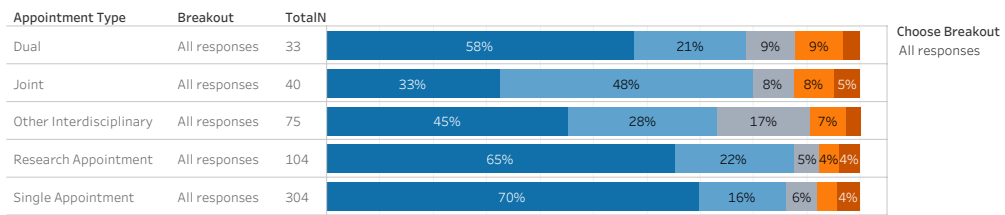
| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 33 | 58% | 21% | 9% | 9% | |
| Joint | All responses | 40 | 33% | 48% | 8% | 8% | 5% |
| Other Interdisciplinary | All responses | 75 | 45% | 28% | 17% | 7% | |
| Research Appointment | All responses | 104 | 65% | 22% | 5% | 4% | 4% |
| Single Appointment | All responses | 304 | 70% | 16% | 6% | 4% | |

Choose Breakout
All responses

■ Strongly agree    ■ Somewhat agree    ■ Neither disagree nor agree    ■ Somewhat disagree    ■ Strongly disagree

# I am satisfied with the physical space afforded to me
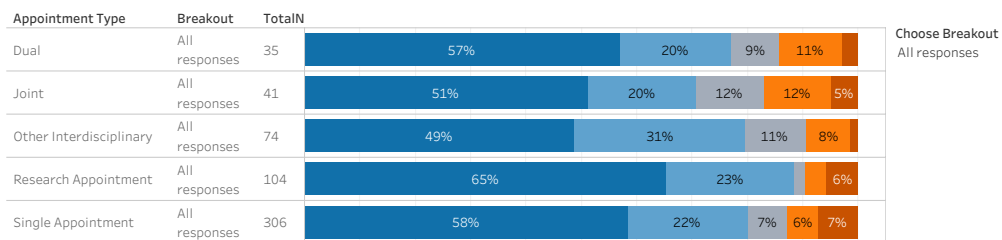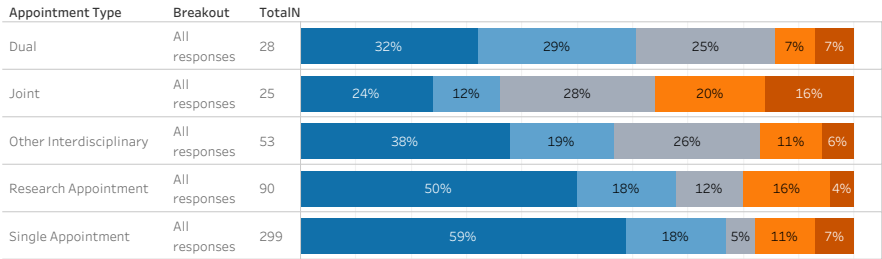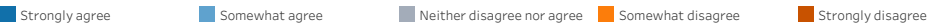
Choose Breakout
All responses

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 28 | 32% | 29% | 25% | 7% | 7% |
| Joint | All responses | 25 | 24% | 12% | 28% | 20% | 16% |
| Other Interdisciplinary | All responses | 53 | 38% | 19% | 26% | 11% | 6% |
| Research Appointment | All responses | 90 | 50% | 18% | 12% | 16% | 4% |
| Single Appointment | All responses | 299 | 59% | 18% | 5% | 11% | 7% |

■ Strongly agree   ■ Somewhat agree   ■ Neither disagree nor agree   ■ Somewhat disagree   ■ Strongly disagree
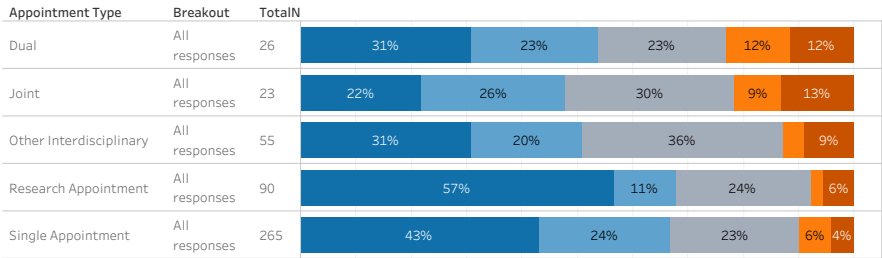
# I feel having [appointment type] has positively impacted my promotion and tenure experience

Display N/A
No

Choose Breakout
All responses

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 26 | 31% | 23% | 23% | 12% | 12% |
| Joint | All responses | 23 | 22% | 26% | 30% | 9% | 13% |
| Other Interdisciplinary | All responses | 55 | 31% | 20% | 36% | | 9% |
| Research Appointment | All responses | 90 | 57% | 11% | 24% | | 6% |
| Single Appointment | All responses | 265 | 43% | 24% | 23% | 6% 4% |

■ Strongly agree    ■ Somewhat agree    ■ Neither disagree nor agree    ■ Somewhat disagree    ■ Strongly disagree

## I feel my [appointment type] is primarily bureaucratic in nature

Display N/A
No

Choose Breakout
All responses

| Appointment Type | Breakout | TotalN | Strongly agree | Somewhat agree | Neither disagree nor agree | Somewhat disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|
| Dual | All responses | 33 | 6% | 6% | 9% | 15% | 64% |
| Joint | All responses | 39 | 13% | 5% | 8% | 26% | 49% |
| Other Interdisciplinary | All responses | 71 | 7% | 8% | 21% | 20% | 44% |
| Research Appointment | All responses | 104 | 8% | 11% | 14% | 17% | 50% |

■ Strongly agree    ■ Somewhat agree    ■ Neither disagree nor agree    ■ Somewhat disagree    ■ Strongly disagree

I feel my department membership would be enhanced by a new joint or dual appointment in another academic department or research unit

| Appointment Type | Breakout | TotalN | | | | | |
|---|---|---|---|---|---|---|---|
| Research Appointment | All responses | 90 | 20% | 14% | 33% | 16% | 17% |
| Single Appointment | All responses | 305 | 24% | 20% | 32% | 12% | 11% |

■ Strongly agree    ■ Somewhat agree    ■ Neither disagree nor agree    ■ Somewhat disagree    ■ Strongly disagree

What type or form of affiliation would you be most interested in having with the College of Computing, if any?

Breakout

All responses

| | |
|---|---|
| None | Other |
| Joint appointment | 100% College of Computing    Dual |

Key:    6% [                                                    ] 40%
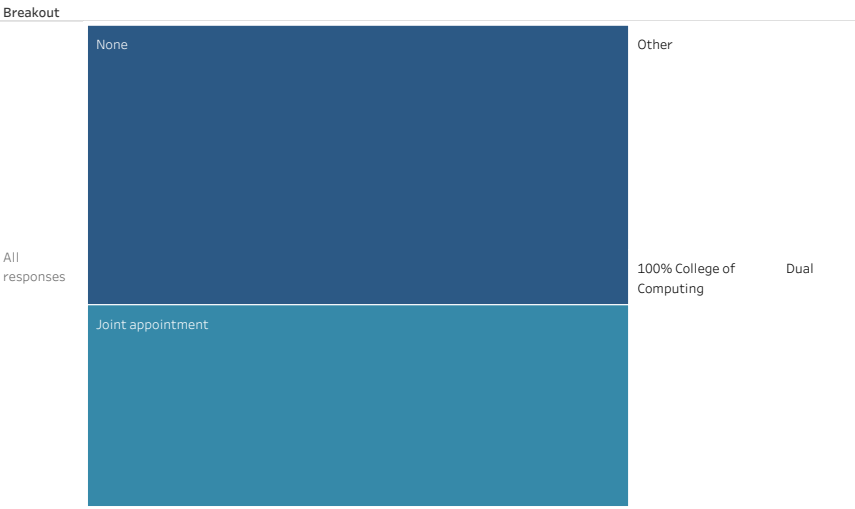
What type of split would you most prefer between your current unit and the College of Computing?
(among respondents who would like an appointment in SCoC)

Breakout

| All responses | An asymmetrical split with greater responsibility to my current unit (e.g., 70/30 or 60/40) | No responsibility (0%) or courtesy appointment in the CoC | | |
| | | An even 50/50 split between my current unit and the CoC | An asymmetrical split with greater responsibility to the CoC (e.g., 70/30 or 60/40) | |

**FACULTY APPOINTMENTS WORKING GROUP MEMBERS**

Eran Ben-Joseph (Co-Chair)
Head and Professor of Landscape Architecture and Urban Planning, Department of Urban Studies and Planning

William Freeman (Co-Chair)
Thomas and Gerd Perkins Professor of Computer Science and Engineering, Department of Electrical Engineering and Computer Science

Ramona Allen
Assistant Dean for Human Resources, School of Architecture and Planning

Sangeeta Bhatia
John and Dorothy Wilson Professor of Biochemistry and Electrical Engineering, Department of Electrical Engineering and Computer Science; Core Faculty, Institute for Medical Engineering and Science

Michael Carbin
Jamieson Career Development Assistant Professor of Electrical Engineering and Computer Science, Department of Electrical Engineering and Computer Science

Isaac Chuang
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