



UPPSALA
UNIVERSITET

Ref. No. 2022/35

2021 Annual Report

Department of Information Technology

Approved by the Department Board on 24 March 2022

Contents

1. Introduction	4
2. First- and second-cycle programmes	5
2.1 Follow-up to the 2021 action plan	5
2.2 Documentation for upcoming focus areas for first- and second-cycle educational evaluations	6
2.2.1 Accessible and appropriate study environment	6
3. Research	8
3.1 The PAP group	8
3.1.1 Cybersecurity	8
3.1.2 Referrals (<i>remisser</i>)	9
3.1.3 Nominations.....	9
3.1.4 Prioritisation of grant applications.....	9
3.1.5 Arenas	9
3.1.6 Collaboration and Engagement (<i>samverkan</i>).....	9
3.1.7 Research Strategy Day.....	10
3.1.8 BUL Career Development Programme.....	10
3.1.9 Public (wiki) research webpage of the IT department	10
3.1.10 Internal (MP) research page	10
3.1.11 Budget 2022.....	10
3.2 Statistics of 2021	12
4. Third-cycle education	14
4.1 FUS, FUA and FUAP groups	14
4.2 Main assignments during 2021	15
4.3 Goal Attainment of the 2021 Operational Plan	16
4.3.1 Monitoring the well-being of PhD students during the pandemic	16
4.3.2 Improving the recruitment process and introduction for new PhD students	16
4.3.3 Improving the range and funding of PhD courses	16
4.3.4 Conducting faculty evaluation of 7 of the remaining 11 third-cycle subject areas	17
4.4 Statistics for 2021	17
5. Collaboration	17
5.1 Schools & the public	18
5.1.1 SciFest 2021.....	18
5.1.2 Cryptoparty	18
5.1.3 Media visibility	18
5.1.4 PhD courses focused on collaboration.....	19

5.2 Private & public sectors	19
5.3 Education & lifelong learning	20
6 Work environment management	21
6.1 Work Environment Group & Crisis Preparedness Group	21
6.1.1 Composition of the 2021 Work Environment Group.....	21
6.1.2 2021 Work Environment Group meeting.....	21
6.1.3 Composition of the 2021 Crisis Preparedness Group	21
6.2 Activities over the year	21
7 Equal opportunities work	29
7.1 Description of equal opportunities work	30
7.1.1 Enhance capacity of the equal opportunities group to work as change agents 30	
7.1.2 Diversity aware education that creates a better learning environment for all 31	
7.1.3 Better PhD student education for all.....	31
7.1.4 Career development from an equal opportunities perspective	32
7.1.5 Supporting equal opportunities aware research	32
7.1.6 Support gender mainstreaming work at the Department.....	32
7.2 Equal opportunities budget allocated in 2021	33
7.3 Quantitative description of current situation	33
7.3.1 Employees working at least 20% at the IT Department as of 31 December 2021	33
7.3.2 Employees with full-time employment at the IT Department as of 31 December 2021	33
7.3.3 Number of employees on parental leave and temporary parental leave at some point from 1 January to 31 December 2021	33
7.3.4 Percentage of employees on parental leave and temporary parental leave out of total number of employees from 1 January to 31 December 2021	33
7.3.5 Number of employees with a sickness absence at some point from 1 January to 31 December 2021	34
7.3.6 Percentage of employees with a sickness absence out of total number of employees from 1 January to 31 December 2021.....	34
7.3.7 Active PhD students in 2021 for all or part of the year	34
7.3.8 Source of income for PhD students.....	35
7.3.9 Number of PhD degrees 1 January to 31 December 2021	35
7.3.10 Number of licentiate degrees from 1 January to 31 December 2021	35
7.3.11 Number of doctoral students with a sickness absence at some point from 1 January to 31 December 2021	35

7.3.12	Percentage of PhD students with a sickness absence out of the total number of PhD students from 1 January to 31 December 2021	35
7.3.13	Students enrolled in first-cycle and second-cycle levels throughout 2021	36
8	Communication work	36

1. Introduction

The Department of Information Technology provides education, conducts research and collaborates in computer science and information technology in a broad sense. The activities take place in five divisions: Computer Systems, Computing Science, Scientific Computing, Systems and Control, and Visual Information and Interaction. In addition to research, education and collaboration within the divisions, the department was tasked with hosting the Swedish National Infrastructure for Computing (SNIC), which coordinates national resources for high-performance computer systems and data storage distributed across local centres at six Swedish higher education institutions. In addition, the department hosts Uppsala's local SNIC centre, UPPMAX. Finally, the department hosts the EuroCC National Competence Centre Sweden (ENCCS), the Swedish node for high performance computing within EuroCC. SNIC, UPPMAX and ENCCS all have their own missions and annual reports, so their activities are not described in more detail here.

Over the year, our organisation has worked to incorporating all members of the Uppsala Computing Education Research Group (UPCERG) into the Visual Information and Interaction Division. Previously, members of the group belonged to different divisions. We believe this change, which was implemented on 1 January 2022, will increase opportunities for joint efforts and increase the visibility of our organisation.

Both 2021 and 2020 were marked by the coronavirus pandemic and its consequences for our organisation. Remote work and concern for illness continued to create a tedious psychosocial work environment, and the home workplace frequently created problems with the physical work environment. The department continued to working on finding solutions for both the psychosocial and physical environment. Read about our work approach in the work environment section.

Between 2017 and 2020, our undergraduate studies grew by 35%, which resulted in understaffing for several years, including 2021. Teacher recruitment takes time, and the coronavirus pandemic has further exacerbated this. In recent years, it has become increasingly difficult to recruit teachers for our advertised posts. It has also become apparent that faculty-funded research has not grown to the same extent as our funding agreement target. As a result, the posts we offer are not being perceived as sufficiently attractive. With the high demand for people with PhD degrees in our subject area, we need to be able to offer a greater proportion of research time as part of the posts we offer. The department has called this to the attention of Faculty Management on numerous occasions, and we hope this can soon be resolved.

A further concern about staff workload is the discussion that has taken place in 2021 and that is still ongoing at the faculty level regarding the peremptory decision to change all 7.5-credit courses to 5 or 10 credits, even though these courses started as late as the autumn semester of 2020. Such a change would mean a great deal of extra work for an already severely overextended staff.

The year was also characterised by planning and preparation for the move to Building 10 at Ångström. This required a lot of work, which further exacerbated the understaffing situation. Even so, we were looking forward to moving to fine new premises in January 2022.

Despite many difficulties, particularly caused by the coronavirus, the department has had many successes and conducted extensive work, which is described in the following sections of this annual report. The report is part of systematic efforts on objectives, strategies and follow-up of the IT Department.

2. First- and second-cycle programmes

2.1 Follow-up to the 2021 action plan

During 2021 Tobias Wrigstad served as the Head of Education. The department's education was led by a "director of studies team", with weekly meetings chaired by the Head of Education. Each division's teaching was led by a special director of studies. The directors of studies in the team at the beginning of the year were: Jarmo Rantakokko (responsible for courses in the Division of Scientific Computing); Mohamed Faouzi Atig (responsible for courses in the Division of Computer Systems); Tjark Weber (responsible for courses in the Division of Computing Science); Hans Rosth (responsible for courses in the Division of Systems and Control); and Filip Malmberg (responsible for courses in the Division of Visual Information and Interaction). In addition to the above, various directors of studies have different roles: Jarmo Rantakokko has special responsibility for educational development (such as educational course activities for teaching assistants and lunch seminars); Tjark Weber for quality in education (such as course reports and cases in the University Disciplinary Board); Mohamed Faouzi Atig for recruitment (prepares and proposes all employment cases in the executive body); and Filip Malmberg for staffing (allocation of teaching assistants and PhD students for courses) and degree projects. During the pandemic, the director of studies team has evolved into a larger and stronger working team. The team now also includes office personnel, study counsellors, schedulers and subject coordinators, who attend weekly meetings and involved in the day-to-day work.

Making a director of studies particularly responsible for degree projects was a concrete point in the 2021 Operational Plan and was implemented as stated above. Degree project matters are now a standing item at the meetings of the director of studies team, where problems in finding appropriate college examiners, in particular, have contributed to short lead times for starting degree projects. However, the number of degree projects in many

areas is not commensurate with the number of teachers in the field (or their reviewer assignments). For example, machine learning is a very popular degree project subject, far exceeding the number of reviewers. It has not been possible to fulfil the plan to introduce clearer degree project courses because of a lack of time. The department is trying to correct this by hiring a lecturer with a special focus on degree project review.

The department's first- and second-cycle organisation continues to change towards more centralisation and more formal procedures. During the transitional period between "the old system" (each division has its own responsibility and its own finances for "its" courses) and "the new system" (the educational assignment is managed centrally and no division "owns" a course), some bugs have arisen. In 2021, an in-depth investigation began into how to move towards centralisation.

As in 2020, the department's first- and second-cycle activities in 2021 were dominated by pandemic-related efforts and by dealing with staff shortages. Major difficulties in offering competitive research packages in connection with recruitment (due to skewed allocation between faculty funds for research and the rapidly growing educational assignment), combined with a heavy teaching load for all teachers makes it difficult for the department to hire highly ranked researchers. This leads to a great deal of additional work for directors of studies, both to create a functioning teaching situation for employed teachers and to continually resolve understaffing with temporary lecturer posts and the like.

As a result, the department has not been able to address and resolve the overworked state of staff that accumulated over several years and exploded in 2020 and 2021. Staff have also had to deal with a threat of having to redo their two new Master's programmes with less ideal module sizes and with preparing for relocation with great uncertainty about what would be in place at the start of 2022.

2.2 Documentation for upcoming focus areas for first- and second-cycle educational evaluations

2.2.1 Accessible and appropriate study environment

In 2021 the study environment issue was marked by the pandemic with distance education, and no study period during the year was conducted in its entirety on campus. A discussion of Campus Polacksbacken's premises is not very relevant in view of the department's move to new premises in 2022. Briefly, we can note that most premises have the basic equipment to be expected for modern teaching, with some minor shortcomings. For example, there is a lack of electrical outlets for students with their own laptops. This problem will largely disappear with the move.

The department has had a stated policy of integrating students and staff – for example, by not excluding students from corridors and premises. Everyone appreciates this, and the practice will transfer to the new premises.

Special support and exemptions of various types are offered to students with special needs, such as disability. The faculty has a well-functioning organisation concerning this.

We monitor workload for courses each time they are offered, and courses perceived as making unnecessary demands not reflected in the credits are identified and scaled down (or problems can be resolved by moving preparatory components to previous courses).

2.2.2 Gender equality perspective and equal opportunities

In 2021 a few incidents were reported in which students perceived that they were abused or not treated equally, primarily in relation to other students. The extent of these types of unreported incidents is unknown. The department has recorded a video explaining what abusive treatment is, where to turn and what rights you have with respect to, for example, preserving your anonymity and not being listed in a register. A (voluntarily anonymous) page has also been established where abusive treatment can be reported. Students are also informed through lectures organised by the Equal Opportunities Group. The course provided to all teaching assistants on department courses also highlights the gender equality perspective, and the Equal Opportunities Group also plans to expand this with materials and lectures. The Equal Opportunities Group has also organised a seminar with Ulrike Schnaas (Division for Quality Enhancement, Academic Teaching and Learning) on gender aspects in PhD supervision and a lecture on diversity and discrimination as a feature of introductory courses for the Bachelor's and Master's level at the department. Recently, a collaborative project with the Uppsala Union of Engineering and Science Students (UTN) has also been initiated to design projects with student groups having a broad range of competencies, backgrounds, etc.

The department has an ACM-W Women's chapter, which has had varying degrees of activity over the years, depending on the variable involvement by PhD and undergraduate students. It has organised everything from programming meetings with a dozen attendees to international conferences focusing on equal opportunities. The department has supported participation in ACM-W both financially and organisationally.

A current problem for all departments is requirements for accessibility adaptation of web pages and teaching materials, where there are currently no dedicated resources (or skills) to conduct the work. One example is the requirement that recorded lectures be transcribed in a way that allows students with impaired hearing or vision to gain access to them. The work of transcribing a lecture is extremely demanding, and automatic services generally do a very poor job of this. Consequently, teachers need to choose between making their recorded lectures available or breaking the law. To avoid letting "perfect be the enemy of the good," we need a proper review of how this is to be managed at a higher level than the IT Department.

The department is grappling with a gender imbalance, with disproportionate representation of male employees from European countries. This underscores the importance of ensuring an understanding of how students from other backgrounds, gender identities, functional variations, ethnic affiliations, etc experience the education. The department's Equal Opportunities Group plays a major role here. It also has a strong position in the department, with representatives from all divisions and a large budget used to fund activities/initiatives intended to counter discrimination, exclusion and recruitment imbalance and to promote activities that contribute to greater equality and inclusion. Of

course, recruitment imbalance affects the possibility of achieving an even gender distribution in the staffing of courses. In addition, there is an awareness that the problem cannot be solved by burdening the minority (women) with more teaching.

In 2021, an activity organised for the entire department highlighted problems of sexism within academia. The programmes employ teaching assistants with special assignments to work on gender equality issues and in recent years equal opportunity issues. Several courses highlight different aspects of equal opportunity, but this typically depends on the teachers' interests and is not applied to course syllabuses.

3. Research

3.1 The PAP group

Composition of the PAP group of research-programme responsible professors (*programansvariga professorer*) in 2021:

- David Black-Schaffer, Computer Architecture and Communication Systems (*datorarkitektur och -kommunikation*)
- Mats Daniels, Computing Education Research (*datavetenskapens didaktik*)
- Pierre Flener, Computing Science (*datalogi*)
- Bengt Jonsson, Computer Systems (*datorteknik*)
- Gunilla Kreiss, Numerical Analysis (*numerisk analys*)
- Elisabeth Larsson, Computational Science (*tillämpad beräkningsvetenskap*)
- Alexander Medvedev, Automatic Control (*reglerteknik*)
- Thomas Schön, Artificial Intelligence (*artificiell intelligens*)
- Carolina Wählby, Image Analysis and Human-Computer Interaction (*bildanalys och människa-datorinteraktion*)

Carolina Wählby was Head of Research (*forskningsprefekt* = FP) until 30 June, and then Pierre Flener took over. David Black-Schaffer is also the representative of the IT department on the Advisory Committee for Research (*forskningsberedningen* = FB) of the TekNat faculty. The PAP group met 12 times during 2021 and took the following important decisions, most advocated in our Operational Plan (*verksamhetsplan* = VP) for 2021 and others ad hoc as opportunities arose:

3.1.1 Cybersecurity

Cybersecurity is our highest priority (now that both Artificial Intelligence and Computing Education Research have been formalised as research programmes). No stone was left unturned in applying for FB and TekNat funding for it, and we have committed significant parts of our own strategic funding of 2021, 2022, and beyond (see the budget decision at item 11 below).

The FP is in tight dialogue with the coordinators of the Cybersecurity arena, so that actors within the IT department and the rest of UU and industry are identified and (inter)national visibility is achieved.

When additional strategic funding came in from TekNat in spring 2021, the department decided to invest much of it in one postdoc per division on cybersecurity and/or sustainability: three of the five recruited postdocs have a cybersecurity theme.

3.1.2 Referrals (*remisser*)

The PAP group coordinated (contributions to) several replies of the IT department to TekNat or UU: research-data management at UU; MAX IV strategy; Vision and Goals (*Vision och mål*) of TekNat.

3.1.3 Nominations

The PAP group considers every incoming solicitation of nominations and occasionally submits a nomination: in 2021, the nomination of Pontus Ekberg for the Oscar Price (*Oscarspriset*) was successful.

3.1.4 Prioritisation of grant applications

The PAP group annually conducts several prioritisation processes for research funding: project applications to VR.se and FORMAS.se by researchers who are not permanently employed at the IT department; project applications to Knut och Alice Wallenberg Stiftelse (KAW); project applications for SSF Research Infrastructure Fellows (SSF RIF). Some pre-applications are endorsed for the next round (at TekNat or UU level) and are offered continued proofreading support. All pre-applications to the PAP group are provided with feedback.

In 2021, one of our three endorsed principal investigators (PIs) of the IT department for KAW was also endorsed first by TekNat and then UU, namely Thiemo Voigt. The same holds for two co-PIs of the IT department, namely Thomas Schön and Carolina Wählby. One of our two endorsed PIs for SSF RIF almost made the TekNat selection.

3.1.5 Arenas

Stock was taken of the activities and plans of the existing arenas. It turned out that the arenas *Applied Optimisation*, *BioMed IT*, and *Data Science* are shutting down, and that the barely active arenas *Automated Reasoning* and *Smart City* have an uncertain future because they are currently coordinated by non-tenure-track junior researchers. This leaves us at least with the active arenas *Cybersecurity* and *Machine Learning*.

3.1.6 Collaboration and Engagement (*samverkan*)

The PAP group coordinates research-funding issues with the Outreach Coordinator (Ida-Maria Sintorn) of the IT department and with the Security and Safety Division (*Säkerhetsavdelningen*) of UU.

3.1.7 Research Strategy Day

A half-day activity about reflecting on equal opportunities in research was held on 15 April 2021, with 95 registered participants via zoom.

3.1.8 BUL Career Development Programme

The BUL Career Development Programme at the IT department was inaugurated on 13 October 2021 with a hybrid meeting focusing on career development and BUL support, and an MP page was designed for it, with much input from the FP (see <https://mp.uu.se/c/perm/link?p=674873958>).

3.1.9 Public (wiki) research webpage of the IT department

The research of the IT department was categorised into 14 non-orthogonal areas, and the FP together with the Communications Officer will show a prototype of the new webpage in spring 2022 to the PAP group. (Current webpage: <https://www.it.uu.se/research>)

3.1.10 Internal (MP) research page

The Internal (MP) research page of the IT department: Expanded in autumn with a lot of new links (see <https://mp.uu.se/web/info/forska/forska-pa-it>) by the FP.

3.1.11 Budget 2022

Upon a bidding process, the following commitments were made in November, drawing from the strategic funding by TekNat (*fakultetsmedel*):

- a. An Adjunct Professor (*adjungerad professor*) in Cybersecurity is to be recruited from industry for 20% of full-time: 350k/year for two years.
- b. A PhD School in Cybersecurity is to be bootstrapped with 50% co-financing of the research time of its first two PhD students: 660k/year for 5 years.
- c. A contribution is made to the start-up research package of an Associate Professor (*universitetslektor* = UL) in Software Engineering, to be recruited by the Computing Science Division (*Datalogi*): 500k/year for two years.

Running such commitments are (d) a contribution of 500k/year to the start-up research package of an UL in Cybersecurity, namely André Teixeira, until 2024 inclusive; and (e) a contribution of 270k/year to the start-up research package of an Assistant Professor (*biträdande UL* = BUL) in Social Robotics, with a focus on trustworthy human-robot interaction, namely Katie Winkle, until 2026 inclusive.

Furthermore, a common pot of 200k is made available for all arenas (under management by the FP) and a pot of 100k is made available for activities organised by the PhD students via its ITDR council.

The remaining strategic funding is distributed to the divisions (performance resources A, ATR, C) and the Equal Opportunities Group (performance resource B) according to the regulations of the IT department.

3.2 Statistics of 2021

Distribution of common funds (in thousands of SEK) for strategic activities:

5 postdocs: IT for a sustainable and secure society	SEK 822,000
Arena + UL: Cybersecurity	SEK 500,000
Other arenas: Applied Optimisation	SEK 20,000
BUL: Social Robotics	SEK 270,000
CrushCovid	SEK 250,000
Total in 2021	SEK 1,862,000

The total is higher than the SEK 1,595,000 distributed in 2020. This is entirely due to the unexpected additional funding by TekNat during 2021, the bulk of which was then invested into the 5 postdocs mentioned in the table above and the rest into 3 new PhD-level courses.

The remaining strategic funding was distributed to the divisions according to a performance-based and FFF-based key prescribed by regulations of the IT department (note that the funding for Computing Education Research went to DoCS):

Computer Systems (DoCS)	27.94%	SEK 1,685,000
Computing Science (CSD)	13.99%	SEK 844,000
Scientific Computing (TDB)	23.70%	SEK 1,429,000
Systems and Control (SysCon)	14.86%	SEK 896,000
Visual Information and Interaction (Vi2)	19.51%	SEK 1,176,000
Total in 2021	100.00%	SEK 6,030,000

The total is higher than the SEK 5,558,000 distributed in 2020, and the numbers for the various divisions went slightly up or down, largely due to different numbers of PhD defences in 2020 compared to 2019.

The following table summarises the research funding applications made during 2021:

	Amounts			Applications		
	Sought amounts (SEK thousands)	Granted amounts (SEK thousands)	Acceptance rate for amount	Submitted applications	Accepted applications	Acceptance rate for applications
VR	218,572	36,588	17%	34	7	21%
VR, IT co-apps	14,050	2,490		5	1	
Total of others	228,908	12,103	5%	50	9	18%
whereof EU	31,965	0		4	0	
whereof Formas	1,473	0		1	0	
whereof SSF	85,448	0		7	0	
whereof Vinnova	35,261	4,847		9	0	
Total 2021	461,530	51,180	11%	89	17	19%
Decision in 2022 *		89,592	(14%)		12	(22%)
Total 2020	224,440	51,874	23%	71	18	25%

* The acceptance rates in parentheses are for only the applications that were already notified by the funding agency.

The applications of 2021 in the following table await notification during 2022:

Funding agency	Sought amounts (SEK thousands)	Submitted applications
Forte	5,052	1
SSF	70,448	6
Vinnova	2,102	2
EU	10,175	2
Wallenberg KAW	1,815	1

Sum	89,592	12
------------	---------------	-----------

Average currency exchange rates from January to December 2021 (see <https://www.riksbank.se/sv/statistik/sok-rantor--valutakurser/valutakurser-till-deklarationen>):

EUR 1	10.1449
USD 1	8.5815

4. Third-cycle education

4.1 FUS, FUA and FUAP groups

Pierre Flener served as the third-cycle studies director until 30 June 2021 and Ingela Nyström began on 1 July 2021.

The third-cycle studies Administrator (FUA) was Elisabeth Lindqvist during 2021. Yasmin Sjöholm assisted her in special assignments.

PhD Programme Directors (FUAP) for our 11 third-cycle subjects:

- Maya Neytcheva (Scientific Computing)
- Ken Mattsson (Scientific Computing: Numerical Analysis)
- Parosh Abdulla and Pierre Flener (Computer Science)
- Pierre Flener (Computer Science: Database Technology)
- Mats Daniels (Computer Science: Didactics of Computer Science)
- Thiemo Voigt (Computer Science: Computer Communication)
- Wang Yi (Computer Science: Embedded Systems)
- Anders Arweström Jansson (Computer Science: Human-Computer Interactions)
- Ingela Nystrom (Computer-assisted Image Analysis)
- Alexander Medvedev (Electrical Engineering: Automatic Control)
- David J.T. Sumpter (Electrical Engineering: Signal Processing)

The roles of FUS, FUA and FUAP are described in reg. no. IT 2013/49 and include monitoring the annual update of individual study plans, serving as contacts, standardising department procedures, assisting PhD students and supervisors, maintaining websites and other assignments from the Head of Department.

The main information site is the IT Department's PhD Manual on the Staff Portal, which provides information for PhD students and supervisors, from recruitment and admissions to public defence of a PhD thesis and completion.

See <https://mp.uu.se/c/perm/link?p=20962820>.

4.2 Main assignments during 2021

FUA has been given new administrative assignments during the year, mainly also introducing Studium as a platform for third-cycle courses. Both Yasmin and Elisabeth active contributed to the faculty's work of producing instructions and guidelines for this. Managing PhD courses in Studium is not mandatory, but it offers many new opportunities in an environment familiar to most teachers. Some of our third-cycle courses were offered in Studium in 2021.

In addition to the ongoing assignments, one matter has predominated in 2021, namely the implementation of TekNat's evaluation of the remaining two specialisations in the third-cycle subject area Computer Science – the Didactics of Computer Science and Human-Computer Interaction – and our five other research subjects and their specialisations.

The other four subjects in Computer Science were evaluated in 2017 by the Swedish Higher Education Authority (UKÄ).

The evaluation process began with a self-evaluation by the department in autumn 2020. This was submitted to the Assessment Panel along with requested documentation to the faculty in February 2021. FUS began writing of the report with the assistance of FUA under the supervision of the Head of Department. Each FUAP and the PhD representative were responsible for submitting materials for different parts of the self-evaluation before work harmonising the material began. All staff, including PhD students at the department, were invited – and urged – to read and comment on the self-evaluation before it was finalised.

The Assessment Panel was scheduled for an on-site visit to our campus, but due to the coronavirus situation, this visit was instead conducted via Zoom on 28–29 April 2021. The programme for the on-site visit consisted of interviews and meetings with representatives from the department (including PhD students, supervisors and FUAP) and representatives from the faculty on different occasions. Internal discussions within the Assessment Panel supplemented the programme. Before completing the site visit, the FUS, the Head of Department and the Section Dean received a summary of the Assessment Panel's preliminary impressions and conclusions regarding the status and quality of third-cycle studies at the department.

The department received a preliminary report in June 2021 so it could comment on possible misunderstandings or factual errors. No major errors were identified, but the department did send some supplemental information to the Assessment Panel. The Assessment Panel subsequently wrote two final reports in the summer: a detailed opinion (24 pages) dealing with strengths and areas for development and recommendations for possible actions and a shorter summary (3 pages). The department received these two reports through the faculty in September 2021. This then became the basis for an evaluation report.

The report and possible measures were circulated within the department before the evaluation report was sent to the faculty in November.

4.3 Goal Attainment of the 2021 Operational Plan

4.3.1 Monitoring the well-being of PhD students during the pandemic

Extra staff interviews were offered at the department in connection with the coronavirus situation and work from home. All PhD students were asked to document in their individual study plan (ISP) at the annual revision in September if support or an extension was needed because of COVID-19. About a third of respondents provided information about negative impacts. Unfortunately, COVID-19 has heavily impacted the PhD studies of six of our students. Reasons that were stated include data collection problems (especially collection that would take place within healthcare) and assuming more teaching (in some cases linked to no other option for using this time). Some have also experienced direct COVID-19 problems (disease/death) among close relatives. We do not have detailed knowledge of these being postponed and did not experienced major delays in 2021.

4.3.2 Improving the recruitment process and introduction for new PhD students

The department has developed a process that was iterated among the FUAP Group, the Equal Opportunities Group and the management team of the department. The aim of the process is to ensure that we widely disseminate announcements of doctoral studentships and implement competence-based recruitment. The process is to be followed in the admission and employment of all PhD students. Before publishing an announcement, a search team creates a knowledge profile and criteria for assessing applicants for the doctoral studentship. This provides a solid basis for formulating the advertisement for the position, which also is to incorporate an equal-opportunities perspective. The search team then continues to be involved in a two-step interview and ranking of candidates. At the beginning of the appointment, the Human Resources generalist should be involved in the introduction of the PhD student to provide as good a start as possible.

4.3.3 Improving the range and funding of PhD courses

From time to time, PhD students indicate that the required course credits are too high; they find it difficult to find relevant courses for their doctoral studies and would rather devote themselves more to research. At the same time, the supervisors stress the importance of PhD students gaining both broad and in-depth knowledge in their subject area. The range of courses was improved by encouraging seniors to provide courses and PhD students to suggest desirable courses. Current course information is available at http://www.it.uu.se/education/phd_studies/phd_courses. Regarding funding the department's third-cycle courses, there is no common policy for departments. However, we attract funds for several faculty-funded courses each year.

4.3.4 Conducting faculty evaluation of 7 of the remaining 11 third-cycle subject areas

The evaluation process was completed. What remains at the start of 2022 is faculty approval of our evaluation report and determination of the action plan. We have already started to deal with some of the measures, such as introducing the recruitment process and increasing the range of PhD courses.

4.4 Statistics for 2021

The department had 126 PhD students who were active all or part of the year. It might be interesting to characterise the sources of income for these PhD students

- PhD position 109 (78 men, 31 women)
- Externally employed PhD students 10 (5 men, 5 women)
- Gainful employment 4 (3 men, 1 woman)
- No source of income 3 (2 men, 1 woman)
- Scholarships 0

In 2021, 19 (15 men, 4 women) doctorate degrees were awarded and 1 licentiate degrees (1 man). Number of newly admitted PhD students: 22 during the year. As in previous years, the completion rate remains at a good level (see table below).

Year	Completion (mean number of years)
2016	4.64
2017	4.21
2018	4.53
2019	4.24
2020	4.20
2021	4.13

5. Collaboration

Collaboration between the department and organisations outside of academia is enthusiastically conducted in a range of activities largely determined by our employees' own initiatives in a "bottom-up" manner. To map and coordinate the collaborative activities, the Department Board decided in 2019 to appoint a Collaboration Coordinator. Ida-Maria Sintorn assumed this position at the start of 2020.

In addition to compiling and coordinating activities, a significant part of the work consists of discussing collaboration in all new projects having commercial interests with the project manager. This involves discussing and raising awareness of any political, ethical and financial situations/problems that may arise as well as practical commitments specified in the contract regarding IP, data management, publication and use of logos, names, etc.

Examples of collaborative activities of the department in 2021 are presented with below, divided into three equal areas: collaboration with schools and the public; collaboration with the business community and society; and collaboration related to education and lifelong learning.

5.1 Schools & the public

During the year, interactions with schools and the public occurred in digital forms. Many of our employees also disseminate information about their research through social media and channels, such as web pages, Facebook, YouTube, blogs and Twitter.

5.1.1 SciFest 2021

The IT Department was represented with two activities at this digital event. One was “Playing a game with a virtual robot” from Uppsala Social Robotics Lab, where users played a collaborative game with the robot that suggested solutions. Observations and data collected during the event were later published at the international Conference on Interaction Design and Children in 2021¹. The second activity was “Find the cell – be a detective at the microscopic level” from Carolina Wählby’s research team. Participants received different assignments to map and analyse patterns of different cell types in a microscopic image of a mouse brain.

5.1.2 Cryptoparty

Regular open meetings where members of the public learn the basics of protection in digital space. The Uppsala node led by the IT Department’s Arve Gengelback arranged two online meetings towards the end of the year on “Differential privacy – when, why and how?” and “Offline Privacy in Sweden”, <https://www.cryptoparty.se/upsala/>

5.1.3 Media visibility

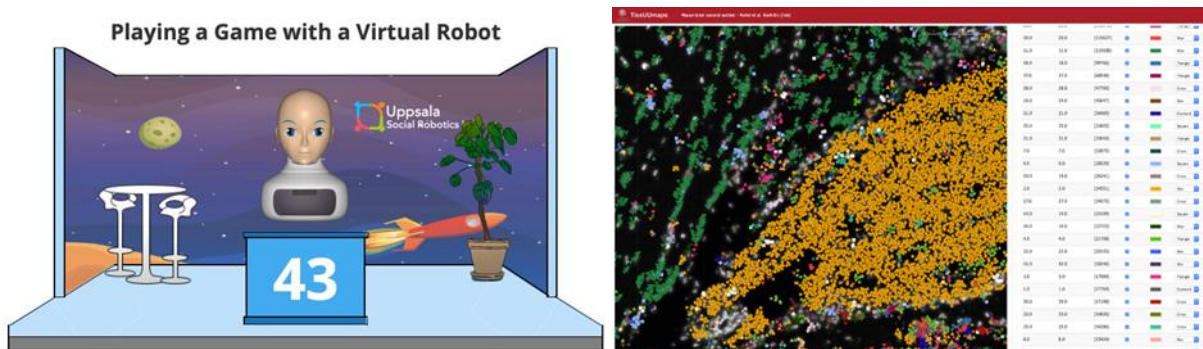
Employees of the department were seen in and participated in public discussions in several ways throughout the year. Mike Hazas and his research on the environmental impact of the (data-)stream attracted attention both in a video on CNN (“How video streaming impacts the Earth”) and in an article in Dagens Industri: Tekniksprängens smutsiga baksida – klimatet får storstryk (“The dirty downside of the technology leap –

¹ Calvo-Barajas, N., Perugia, G., & Castellano, G. (2021, June). 2021 June 2021 The Effects of Motivational Strategies and Goal Attainment on Children’s Trust in a Virtual Social Robot: A Pilot Study. In *Interaction Design and Children* (pp. 537–541).

climate takes a beating”). Carolina Wählby described the significance of computational power and the new Berzeilus supercomputer in research and development of new medicines in a report in Svenska Dagbladet on researchers’ new weapons for combating cancer and COVID-19. And David Sumpter made a podcast on vadvivet.se titled Så styr matematik din vardag (“How math controls your everyday life”). In addition, David Sumpter’s book 10 ekvationer som styr världen (“10 equations that govern the world”) was released. In connection with that, he was interviewed in TV4 and in Swedish Radio’s P3, and the book was also reviewed in Aftonbladet. Anders Arweström Jansson discussed factors and circumstances influencing decision-making in P1’s radio show on philosophy and also discussed the role of the human factor in disasters in another segment.

5.1.4 PhD courses focused on collaboration

During the autumn semester, two PhD courses focused on collaborating, interacting and making research visible to the public. In the course “Using maths and computer science to do social good”, PhD students choose problems related to public interest/benefit and then defined a project involving data collection and analysis and making these more visible. Some of the results can be found at <https://socialgood.it.uu.se/>. The course on popular science presentations aimed on writing focuses on learning and practicing ways to present one’s own and others’ research as popular science. Maria Gunther, Science Editor at *Dagens Nyheter*, held a guest lecture, and some of the PhD students’ descriptions will soon be published in local dailies and national trade publications.



Photos from the IT Department’s participation in SciFest 2021. Social Robotics digital booths where participants could play a game with a virtual robot and a TissueMap image of a mouse brain in which participants were tasked with mapping and analysing the occurrence of different gene expressions (different colours).

5.2 Private & public sectors

Collaboration with the private and public sectors is largely through research projects. In 2021, new research projects began with funding and/or participation from the private and public sectors with Microsoft Research, Ericsson Research, ARM Research, Huawei Sweden, Samples, Region Uppsala, Region Örebro, Nordic Fact Checkers (including Källkritikbyrån), the Swedish Transport Agency, Astrego, Region Dalarna and the Centre

for Clinical Research. Commissioned by the Swedish Working Environment Authority, Åsa Cajander, Bengt Sandblad and Magdalena Stadin conducted a review of the current state of knowledge about artificial intelligence, robotics and the work environment, which was published in early 2022.

In 2021, the department had eight active industrial joint PhD students together with Ericsson, Elekta and Luxembourg Institute of Science and Technology, and several with the RISE Research Institute of Sweden. Some of the department's staff also had part-time leaves of absence for assignments in the private sector, such as at Vironova AB, Q-Linea, TopGol and Astrogo AB. The department also has an adjunct teacher from Ericsson Research.

Department staff serve in working committees/reference groups/boards for such organisations as IVA, the National Board of Health and Welfare's aSSisT eHealth Council of Experts, and Region Uppsala's Scientific Council for COVID-19. Thomas Schön served as a juror for Tech Talent of the Year organised by Skandinaviska Enskilda Banken (SEB).

Department staff presented their research at companies. For example, Thiemo Voigt, Bengt Jonsson and Christian Rohner appeared at Cybernode's Swedish Cyber Security Collaboration Conference in 2021, and Thomas Schön talked about machine learning and artificial intelligence at SEB and Tobii.

5.3 Education & lifelong learning

Collaboration in education takes the form of courses aimed at the private and public sectors and private sector participation in our courses and programmes. In 2021, the course in automatic control aimed at the private sector was offered for waste treatment plant workers, consultants and suppliers on behalf of Swedish Water (Svenskt Vatten AB). Both the University and faculty have conducted projects throughout the year to explore opportunities and strategies with life-long learning courses and training. The Head of Department was included in the faculty project team, and several others have participated in meetings and workshops.

Many of the courses offered by the department have a strong connection to and involvement of the private sector and public institutions, either through the project course or project modules in courses or as guest lectures and with company presentations. For example, the University's strategic partners Region Uppsala and Hitachi were involved in the department's project courses Complex IT Systems in Large Organisations, projects in computer science and projects in embedded systems. Other companies that contributed projects include SenseAir in computer science and Vironova, Antaros Medical and ImInt in image analysis and machine learning. In several cases, project involvement has led to joint degree projects. Some examples of companies participating in our courses in the form of guest lectures include Ericsson, Intel, Coupa, Tacton, TopGolf, Termisk Systemteknik and ImInt. Additional examples of companies and private sector participants with whom the department had degree projects include Swace Digital,

Veoneer, DeLaval, the City of Stockholm, Knightec, Orexplore Technologies, Consid, AFRY, BM System, Oracle, Sally R, Handelsbanken, Algoryx and Syndata.

6 Work environment management

6.1 Work Environment Group & Crisis Preparedness Group

6.1.1 Composition of the 2021 Work Environment Group

- Head of Department Lina von Sydow
- Administrative Manager Elizabeth Neu Morén
- Human Resources Generalist Ulrika Andersson (also Fire Safety Representative)
- Human Resources Generalist Anna-Lena Forsberg
- Safety Representative Marina Nordholm (until 31 December 2021)
- Safety Representative Liselott Dominicus van den Bussche (until 31 December 2022)
- Student Representative Sofia Alfsson

6.1.2 2021 Work Environment Group meeting

- April 29 (Zoom), agenda:
 - Feedback on the faculty's Visions and Goals
 - The general state of the work situation.
 - New work environment survey corresponding to the one we conducted in autumn 2020
- 11 November (in-person meeting), agenda:
 - Follow-up on work environment after pandemic
 - 2022 Work Environment Operational Plan
 - Referral policy for work environment

In addition, correspondence has occurred by email.

6.1.3 Composition of the 2021 Crisis Preparedness Group

- Head of Department Lina von Sydow
- Human Resources Generalist Ulrika Andersson (also Fire Safety Representative)
- Safety Representative Liselott Dominicus van den Bussche (until 31 December 2022)
- Student Representative Isabelle Kembro

The Crisis Preparedness Group has not met during the year.

6.2 Activities over the year

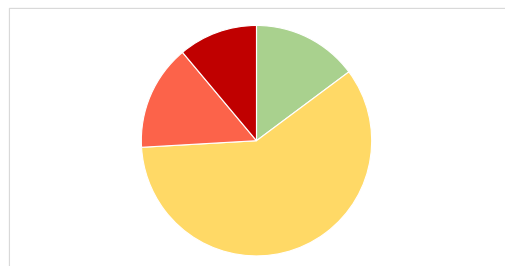
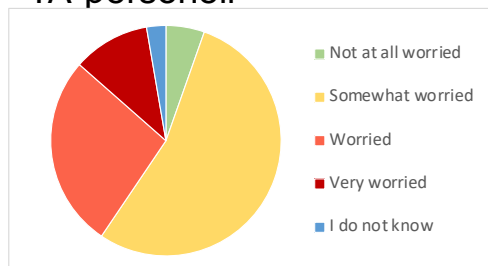
Much of 2021 was marked by the coronavirus pandemic and, above all, its effects on the work environment. Continuing remote working throughout much of the year for many has

been taxing on energy and mental health as a result of social isolation and a heavy workload associated with distance learning. In June we conducted an employee survey that was the same as the one in autumn 2020 to check on the state of staff. A total of 130 staff members responded to the survey. The results of four key questions are shown below from PowerPoint slides. The left circle in each image shows the results from the survey in the 2020 autumn semester and one on the right shows results from the same question in the survey conducted in June 2021.

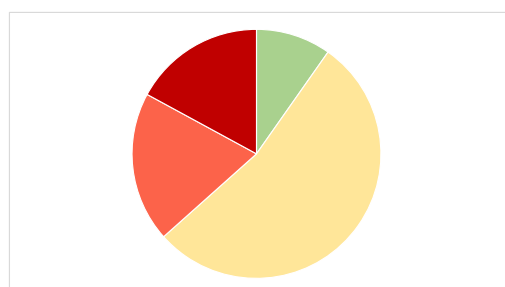
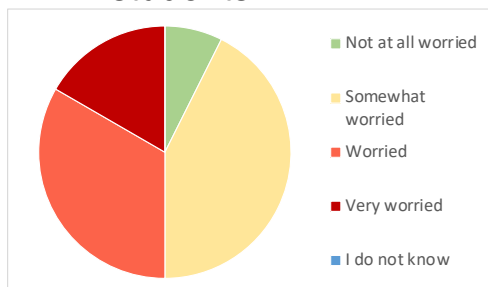


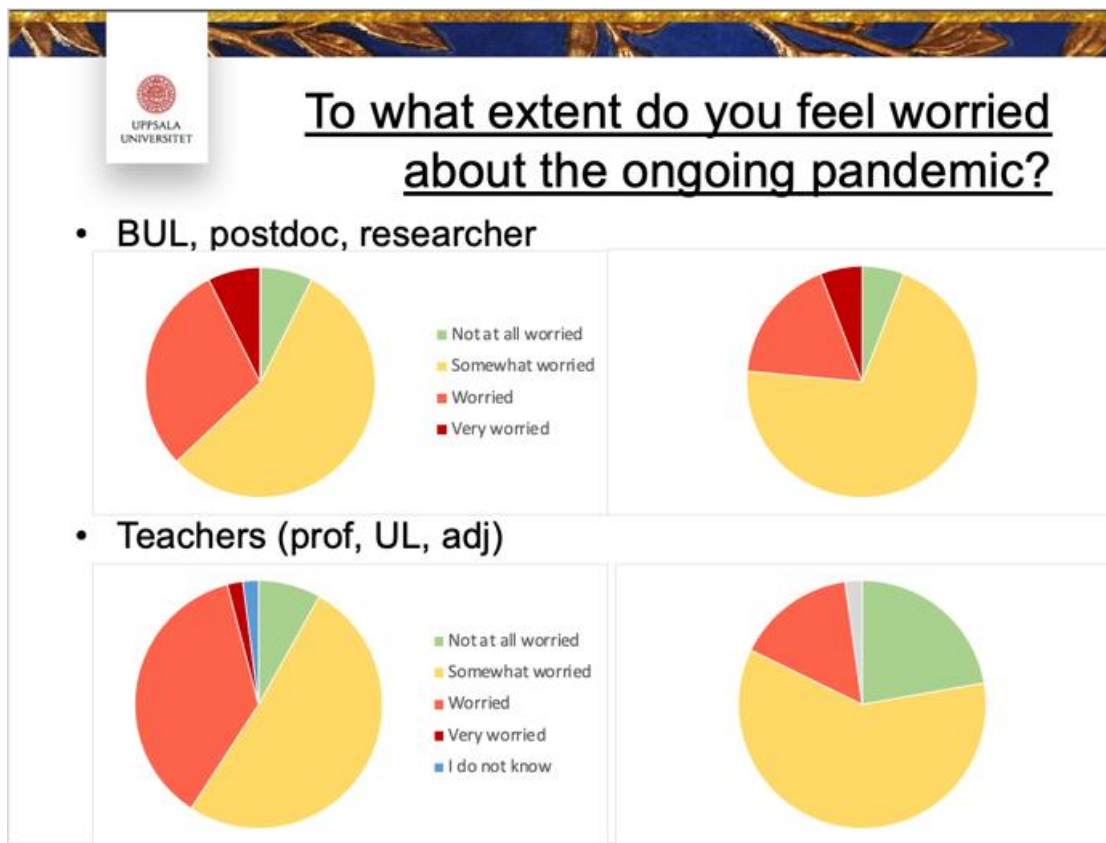
To what extent do you feel worried about the ongoing pandemic?

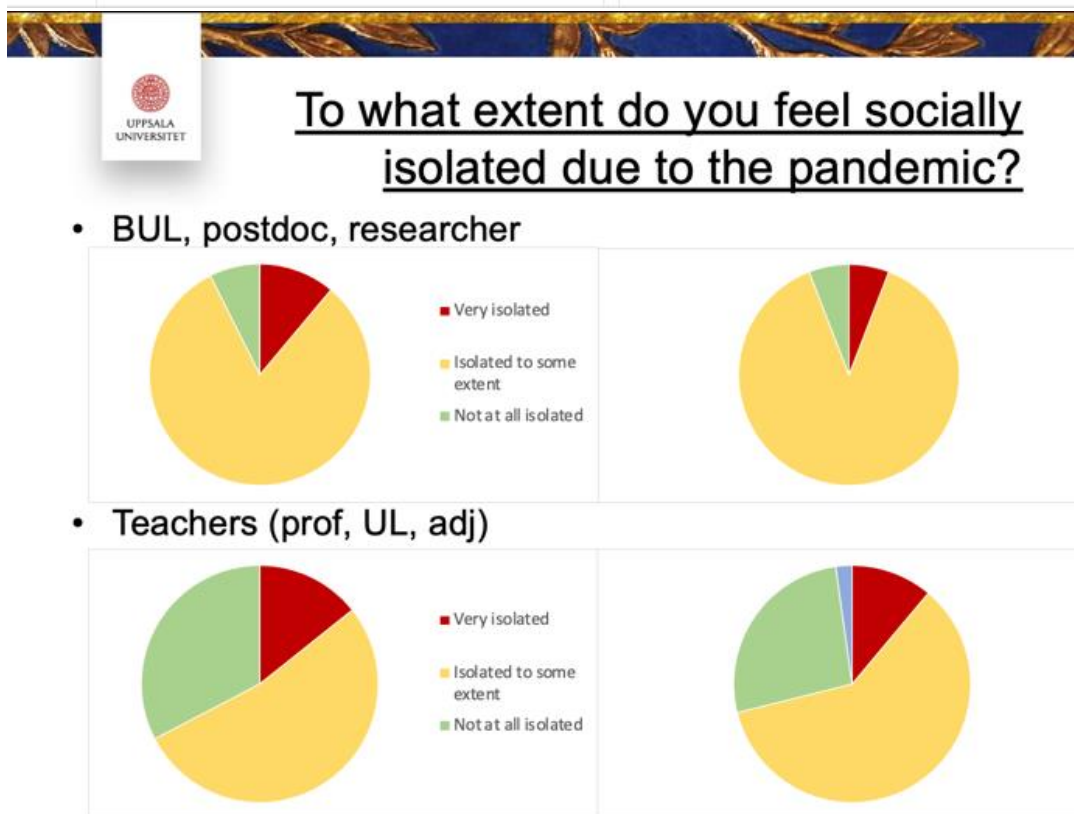
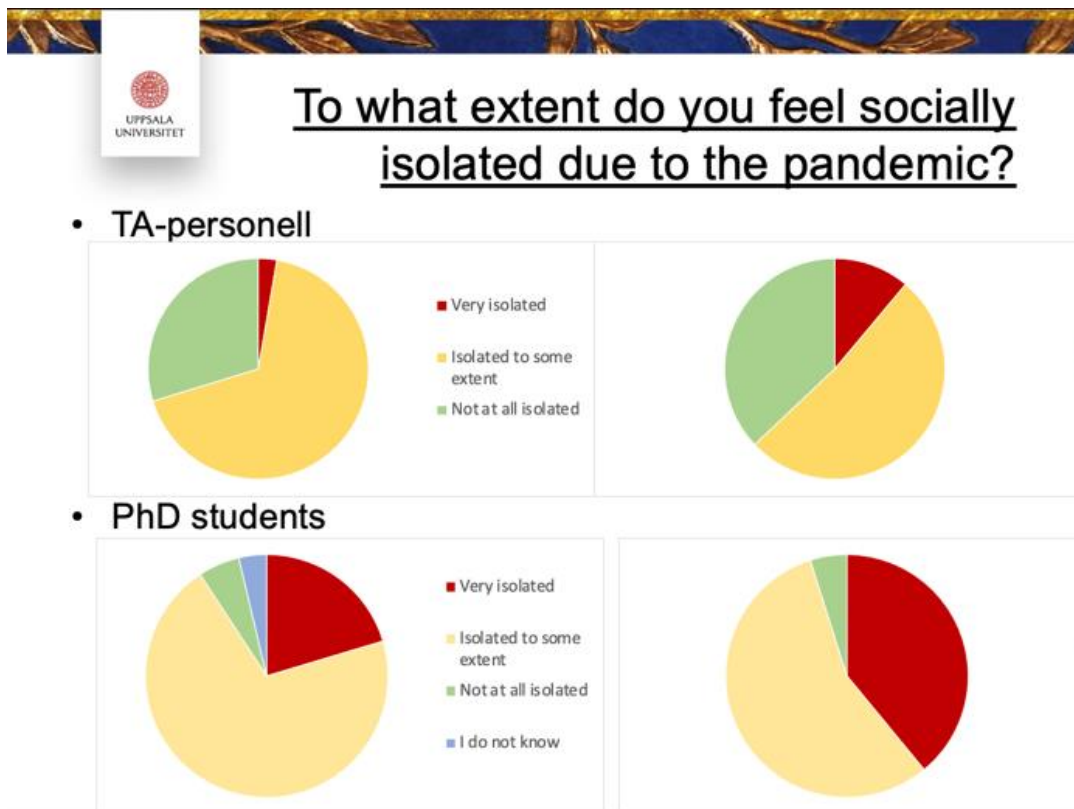
- TA-personell



- PhD students



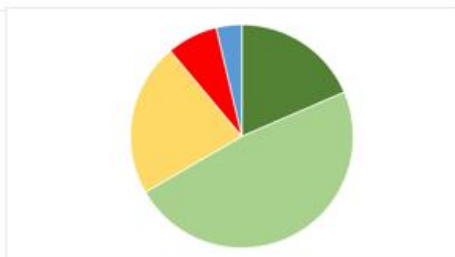
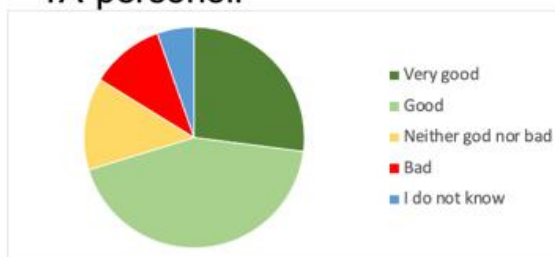




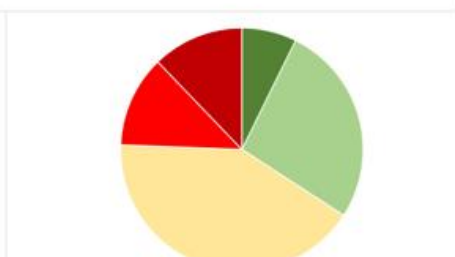
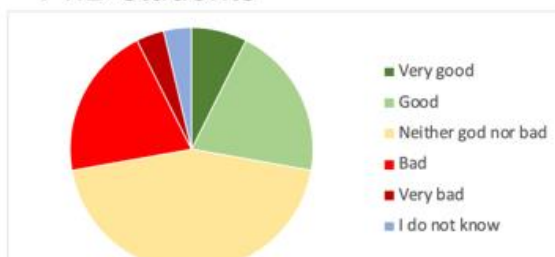
UPPSALA UNIVERSITET

How would you describe your mental health right now?

• **TA-personell**



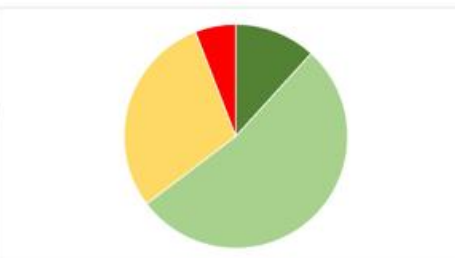
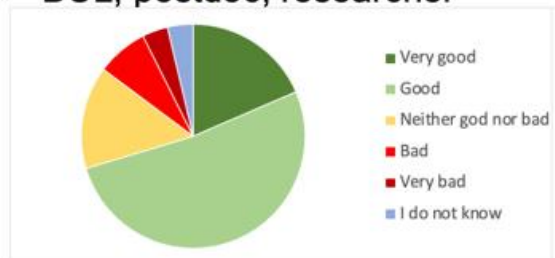
• **PhD students**



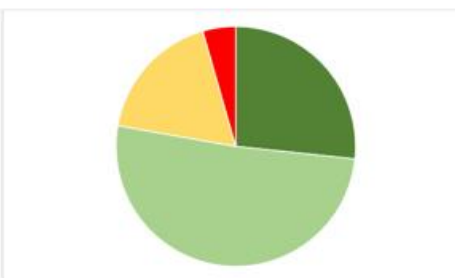
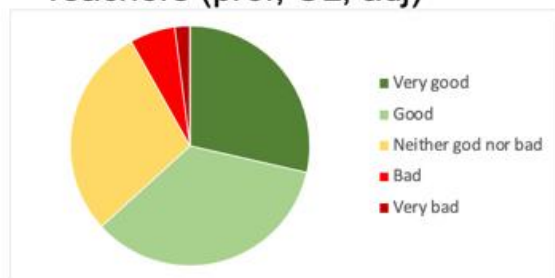
UPPSALA UNIVERSITET

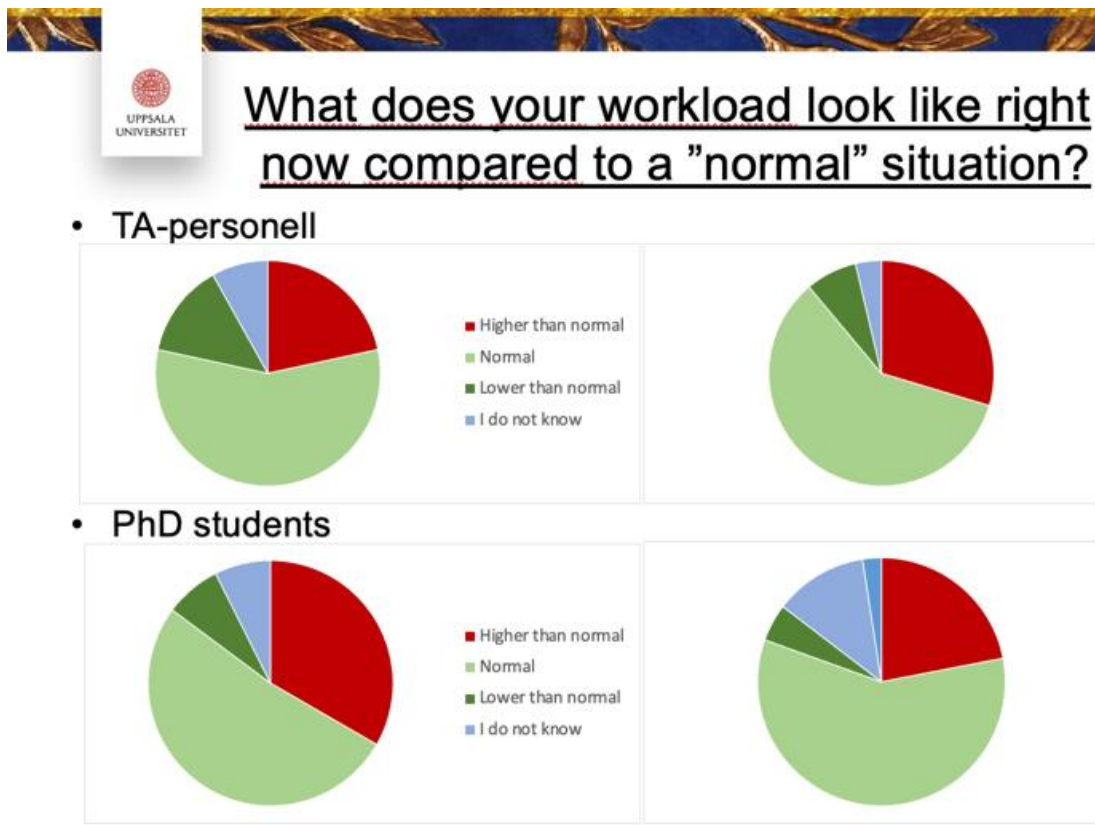
How would you describe your mental health right now?

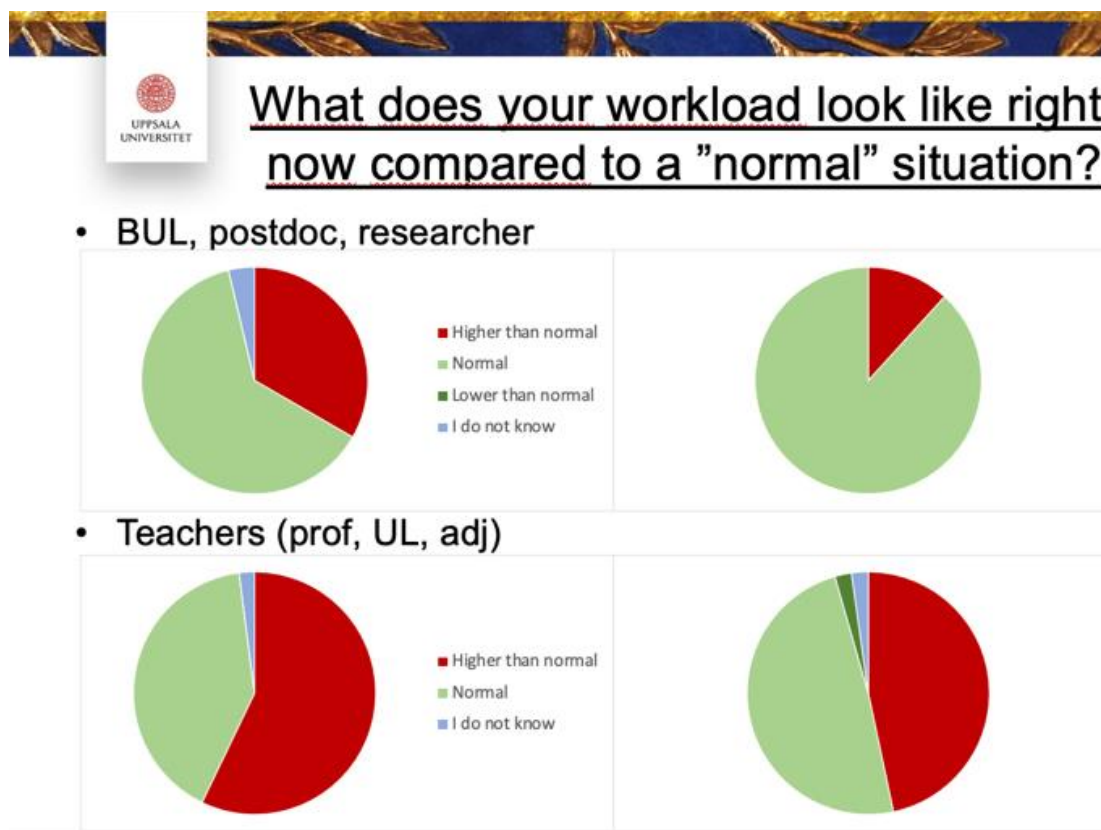
• **BUL, postdoc, researcher**



• **Teachers (prof, UL, adj)**







The charts above indicate that general concern appears to have declined between the two surveys. In contrast, social isolation has increased, above all in PhD students but also to some extent among teaching assistants. Mental health is roughly the same on both occasions, but it is worth noting that the proportion stating that mental health is "Very poor" has increased among PhD students. Finally, the workload appears to have decreased for teachers and PhD students while it has increased for teaching assistants.

The initiatives we implemented in 2021 in response to the difficult situation caused by the pandemic were:

- Payment of overtime during the first period of the spring semester (subsequently a full year of remote work was carried out) and/or some reallocation of different activities to compensate for the increased time spent teaching.
- Additional purchases of mobile phones, tablets and headsets were made to facilitate remote working.
- Lecture purchased from PBM on the theme "I didn't sign up for a marathon – how to cope with the ongoing pandemic until the end".
- Stress management course for PhD students with Previa.
- Departmental joint seminar series Lär känna din institution ("Get to know your department") with division presentations.
- Joint exercise activities via Hitta ut and Wellstep.
- Joint activities over Zoom, such as quizzes, presentations of projects that received funding and virtual escape room.

The following activities in our regular efforts with the work environment were also conducted.

- Performance appraisals for seniors in late spring.
- The senior group meetings for PhD students in late spring and ISP revision processes in late summer/autumn. (For PhD students, the performance appraisals are divided into two parts. Some take place in connection with the ISP revision process and others in conjunction with the senior group's follow-up meeting for the PhD student.)
- The mentoring programme proceeded as usual, although remotely.
- All new employees who do not speak Swedish were encouraged to participate in Swedish language instruction.
- New material was developed to ensure a good introduction for all new employees. A review of the introduction for new employees is part of measures enacted following the work environment survey in spring 2019.
- Extensive work was done to evaluate 7 of our 11 third-cycle programmes. The following are issues will continue working on as part of the action plan we sent to the Faculty Board:
 - New procedures for recruiting PhD students (approved and begun)
 - Review of scope and range of third-cycle courses
 - Improved planning options for departmental duties
 - Supervisor development through, for example, supervisor groups and discussion forums
- Subsidised wellness and wellness hours apply as usual, but massages and fruit baskets were eliminated/restricted to some degree.
- Leadership training was reviewed for the members of the executive group of the department, the head of research, the director of third-cycle studies and members of the director of studies group. All of these had some leadership training at the end of December 2021.

Because of the pandemic and a high-pressure work situation, we have not been able to implement the items below.

- First aid training.
- Evacuation exercises.
- Organised training sessions for leaders/managers concerning the organisational and social work environment.
- Review of current regarding supervisor training for PhD supervisors and degree project supervisors as of 30 December 2021. To be the principal supervisor of a PhD student, supervisors need to have completed supervisory training. Moreover, the goal is for at least 90% of all PhD supervisors to have completed training.

7 Equal opportunities work

This document includes a description of last year's equal opportunities work, as well as a quantitative description of the current situation at the department.

7.1 Description of equal opportunities work

The Head of Department has carried out the activities for which they were responsible according to the plan, such as the salary revision, the monitoring of gender issues in the management team, ensuring that there are representatives of both sexes in most decision-making and preparatory bodies.

The Head of Research has actively participated in the equal opportunities group as representative of her Division, and actively worked with gender mainstreaming at the department.

The Equal Opportunities Group worked well according to the continuous work described in the Operational Plan for equal opportunities for 2021. The items in the action plan for 2021 were addressed, with a few exceptions and with several additions of things we did, as described in the sections below.

The Equal Opportunities officer has coordinated the work by the equal opportunities group described below, and initiated new activities to support gender mainstreaming at the Department, funded by Teknat and Uppsala University in collaboration with the Head of Department, Vice Head of Department and Head of Research. The funded activities involve using gender equality indicators to monitor the gender distribution of research resources and funding at the Department of Information Technology and how they can be used in a long-term perspective to improve gender mainstreaming work at the Department.

7.1.1 Enhance capacity of the equal opportunities group to work as change agents

We have organised a retreat of the equal opportunities group in October 2021 at Hubben, where we drafted the verksamhetsplan for equal opportunities for 2022.

We have organized equal opportunities fikas throughout the year, including a meeting with all MSc and BSc program coordinators at our Department to discuss the inclusion of a lecture on equal opportunities in all introductory courses, a meeting where the group had a follow up discussion on the Department's strategy day on research with a focus on equal opportunities, as well as seminars with speakers, including Åsa Cajander, who shared her experiences as advisor to the vice chancellor on equal opportunities; Steffi Knorn, Assistant Professor at the Department of Engineering Sciences, who gave a seminar on the topic of gender imbalance in engineering and attempting to change it by outreach; Karin Schönning, Professor at the Department of Physics and Astronomy, who talked about gender aspects in PhD education; and Abeba Birhane, PhD candidate at the School of Computer Science at University College Dublin and visiting researcher funded by the equal opportunities group, who talked about fairness in algorithmic systems.

We included a description of the types of projects that we fund in our four annual calls for proposals for equal opportunities projects and work on the group's webpage, and updated the call to include funding for salaries for all project types, except for the visiting researcher call.

In collaboration with Head of Education Tobias Wrigstad, we have set up routines on how to report harassment and sexual harassment and have produced a video on this topic that was shown to all students in the introductory courses of our BSc and MSc programs.

We have designed poster templates that we can use to advertise the work of the group.

7.1.2 Diversity aware education that creates a better learning environment for all

We have set up a process for delivery of a lecture on equal opportunities in all BSc and MSc introductory courses at the IT Department, based on discussions at a meeting with all MSc and BSc program coordinators at the Department. The lecture is delivered in the fall by Martin Holmberg and covers several topics, including social exclusion / inclusion, suppression techniques and countermeasures, unconscious bias, with focus on gender, ethnicity and religion, but also e.g. socio-economic background, intersectionality, e.g. how do different grounds of discrimination (and other circumstances) interact, and cultural and linguistic factors, when different cultures with different values and attitudes meet.

We have discussed with Teknat's equal opportunities group about the possibility to work towards issuing a recommendation to include a lecture on diversity awareness in all Faculty MSc/BSc introductory courses, and the suggestion was found valuable.

7.1.3 Better PhD student education for all

We have investigated to what extent gender aspects are discussed in PhD supervision courses at Teknat.

Peter Reinholdsson is the head teacher of the supervisor training course given within Teknat and reported that the course addresses the topics of diversity, gender and equal opportunities, and uses the FESTA project's toolkit for reflection and discussion on gender awareness in PhD supervision and recruitment. Papers from Ulrike Schnaas, Anna Danielsson and Gina Whisker are also discussed in the course. Other topics relevant to gender and diversity are covered in optional courses for supervisors, such as the "Literature seminar on gender and diversity, equal opportunities in supervision".

We also discussed with Nina Almgren and Karin Stenjö additional options about expanding equal opportunities training for supervisors.

We have reviewed PhD students' recruitment processes at the Department in the context of the FUAPs group.

Finally, we have investigated the possibility to add one lecture on equal opportunities aspects in Uppsala University's PhD introductory course. We have spoken with the teacher in charge of the "Research introduction for PhD students" course, Mattis Klintonberg, who was positive about including such lecture. Discussions continued with Nina Almgren and Karin Stenjö on how to implement this and find a suitable speaker.

7.1.4 Career development from an equal opportunities perspective

We have discussed plans to suggest the new Head of Research and the PAP group to organise a retreat to write applications for promotions and invite a speaker to talk about equal opportunities aspects of relevance to promotion.

7.1.5 Supporting equal opportunities aware research

We have co-organised a Department research strategy day with a focus on equal opportunities. Due to the covid-19 restrictions, we planned for a 2-hour online event on Zoom and did not discuss how to support integration of equal opportunities perspectives in research activities at the IT Department, as previously planned. There is a plan to organise another strategy day on equal opportunities in the near future where we can revisit the topic. See next section for a summary of the strategy day that took place in 2021.

7.1.6 Support gender mainstreaming work at the Department

We have co-organised a Department research strategy day with a focus on equal opportunities. Prior to the meeting, we asked participants to watch the documentary “Picture a scientist”, which we purchased access to through the equal opportunities funding. Discussion on themes addressed in the documentary took place during the meeting, including sexual harassment, unconscious bias and discrimination based on gender. We also prepared and delivered a presentation on gender aspects in career progression in higher education and reviewed gender disaggregated statistics at the IT Department at all career levels from PhD to full professor level in the last 11 years.

We followed up on the discussions during the strategy day with an action plan which included the development of (1) routines to inform on harassment and sexual harassment and on how to report it, (2) a document with instructions for search groups at the Department including recommendations on the need to identify candidates from different genders and discuss gender aspects in the recruitment, and (3) a plan to work on gender aspects in PhD education to discuss in the FUAP group.

We have also carried out the first part of a project on gender equality indicators funded by Teknat to support gender mainstreaming work at the Department, which will continue in 2022.

We have provided input from an equal opportunities perspective to Teknat’s document on vision and strategies.

We have discussed with the Teknat’s equal opportunities group the need for a checklist for advertisements/templates of advertisements with an equal opportunities perspective, and initiated a discussion on whether there may gender aspects to consider in the requirement to learn to teach in Swedish which is currently included in the templates for advertisement of academic positions.

Finally, we have initiated a discussion on how we could increase representation of women at different career stages, for example by identifying research areas well represented in terms of gender.

7.2 Equal opportunities budget allocated in 2021

The Equal Opportunities Officer performs duties at 10% of full-time employment. This time was funded by the equal opportunities budget at the Department.

Funding awarded to equal opportunities projects in 2021: SEK 340,331

7.3 Quantitative description of current situation

7.3.1 Employees working at least 20% at the IT Department as of 31 December 2021

Total number of employees	Women	% women out of 310	Men	% men out of 310
310 people	86	28%	224	72%

7.3.2 Employees with full-time employment at the IT Department as of 31 December 2021

Full-time employees	Women	% women out of 277	Men	% men out of 277
277 people	79	29%	198	71%

7.3.3 Number of employees on parental leave and temporary parental leave at some point from 1 January to 31 December 2021

Parental leave	Women	% women out of 50	Men	% men out of 50
50 people	16	32%	34	68%

7.3.4 Percentage of employees on parental leave and temporary parental leave out of total number of employees from 1 January to 31 December 2021

Parental leave	Women	% of 310	Men	% of 310
50 out of 310 employees = 16%	16	5%	34	11%

7.3.5 Number of employees with a sickness absence at some point from 1 January to 31 December 2021

Sick absence	Women	% women out of 61	Men	% men out of 61
61 people	28	46%	33	54%

7.3.6 Percentage of employees with a sickness absence out of total number of employees from 1 January to 31 December 2021

Sick absence	Women	% of 310	Men	% of 310
61 out of 310 employees = 20%	28	9%	33	11%

7.3.7 Active PhD students in 2021 for all or part of the year

Active PhD students	Women	% women out of 126	Men	% men out of 126
126 people	38	28%	88	72%

7.3.8 Source of income for PhD students

Source of income	Women %	Men %
PhD post (full-time) 109 people	28%	72%
Externally employed PhD student 10 people	50%	50%
Gainful employment linked to university (external+MC) 4 people	25%	75%
No source of income 3 people	33%	67%
Scholarships 0 people	-	
Doctoral grants 0	-	-

7.3.9 Number of PhD degrees 1 January to 31 December 2021

Doctoral degree	Women	% women out of 19	Men	% men out of 19
19 people	4	21%	15	79%

7.3.10 Number of licentiate degrees from 1 January to 31 December 2021

Licentiate degree	Women	% women out of 1	Men	% men out of 1
1 person	0	0%	1	100%

7.3.11 Number of doctoral students with a sickness absence at some point from 1 January to 31 December 2021

Sick absence	Women	% women out of 26	Men	% men out of 26
26 people	12	46%	14	54%

7.3.12 Percentage of PhD students with a sickness absence out of the total number of PhD students from 1 January to 31 December 2021

Sick absence	Women	% women out of 126	Men	% men out of 126
26 people out of 126 PhD students	12	10%	14	11%

with a PhD post = 21%				
--------------------------	--	--	--	--

7.3.13 Students enrolled in first-cycle and second-cycle levels throughout 2021

No. of students	Women	% women out of 5,260	Men	% men out of 5,260
5,260 people	1761	33%	3,499	67%

8 Communication work

At the beginning of the year, information efforts focused on environmental work while continuing to look for an alternative platform for internal communications. Tobias Wrigstad and others decided on the Slack platform and began drawing up procedures for using it. At the same time, the very first digital Sci-Fest event took place, and we then created a platform on our website with information about our booths and how to find them. In connection with this Sci-Fest, an archive was created for images and information about old and future Sci-Fest contributions.

In spring, we also focused on internal communications and, more specifically, staff meetings, to provide presentations from all the divisions in the department. Hour-long “Get to know your department” videos presented information about division staff and their research.

Since the summer of 2021, we have used monthly staff meetings to ask divisions to share important and interesting information about their work. The results were good, but there is still much we can do to enable more people to contribute.

In 2021 internal communication focused on improvements to the Staff Portal, and this continues to be a focus for 2022. The improvements include the new focus on “Our IT”, a focal point for all important internal information. We created procedures for how to use documents, who is responsible for what in the Staff Portal and it.uu.se, and in “Targets and Strategies of Internal Communication”.

Communication also was included in efforts to update descriptions of our Master’s level programmes during spring 2021. This involved all programme coordinators.

External communications in 2021 were characterised by publishing news and posts on social media and the website. This includes ongoing efforts to create research profiles for the website, something that was ongoing since the autumn 2021. These will be published in 2022. In 2021, we identified a lack of original news articles created by the department for the department. Work to fill this void continues in 2022. The main challenge is finding a procedure that works well and does not impose excessive demands on researchers. As part of this effort, a new series of articles will be published in the spring of 2022 that emphasise research in sustainability and cybersecurity in IT.

The 2020 annual report stated that the department would begin using Twitter as a communications channel in 2021. That was put on hold in the absence of clear evidence that another channel on social media is needed. This can, however, be changed quickly if a need is identified.