3.3 Documents on Contribution to Education

3.3.1 Teaching philosophy

Effective teaching requires the understanding of how humans learn information. The core idea of my teaching philosophy draws inspiration from my previous teaching experience and two theories of learning: the information processing theory and the constructive learning theory.

![Information Processing Model](image)

Figure 1: information processing model (Atkinson & Shiffrin 1968)

The information processing theory describes the information processing model of our memory system. As shown in Figure 1, before any environmental stimuli can be converted into knowledge that can be permanently stored in our memory, a series of steps involving different memory components are needed. This model has several important implications. First, while sensory memory picks up everything it encounters in the environment, most of such information is filtered out and never enters the working memory. The only information that will be processed and potentially learned is what a person is paid attention to. Therefore, to enhance learning, it is important to capture students’ attention, direct their attention to the important concepts, and sustain their attention throughout the learning process without causing too much fatigue.

To catch students’ attention, the first step is to provide clear motivation for the material and skills they will learn in the course. This does not imply simply listing a few overall learning objectives. Those are often abstract and difficult for students to connect to at the time of study. My informal discussions with students reveal a common problem: students are often taught about a theory/formula without knowing when and where they will use it in practice. This reduces their motivation and also makes it less clear as to what aspects of the theory are most important. Therefore, before introducing a new concept, it is important to provide concrete examples on how that concept can be used in real world scenarios, ideally something that the student can connect to personally. I’ve noticed that this strategy is highly welcomed by students. It has been stated as one of my teaching strengths that I not “only teach theories but provide ample examples of how to apply them in a practical manner.”
Another essential aspect of catching students’ attention involves better presentation. This includes both formatting as well as delivery. My five years of teaching experience at NUS has taught me that the quality of lecture presentation has a significant effect on students’ learning. The traditional approach of preparing lecture slides with mostly words and abstract concepts proves difficult to capture and sustain student’s attention. Changing these slides into a more graphical form and removing excessive words can make the lecture much more engaging and better focused. Such preparation of course material, plus a loud and clear voice, appropriate use of intonation and body gestures, as well as walking the classroom, help me to keep students better engaged with the course material. My dedication to delivering clear presentations is appreciated by students: they have remarked on my “very good delivery of lecture” and “clear delivery of the topics.”

In addition to grabbing students’ attention, it is also important to direct their attention to the right information. This can be done by providing “anticipatory set” or the “hook” before introducing the lecture content. In the beginning of a lecture, I ask a set of questions or tell a story related to the main concepts of the course content to prepare students’ minds to anticipate the answers. I found such warm-up questions/stories help to engage students during the lecture and result in more active and relevant participation. Such questions/stories can also be prepared before introducing each important concept, not just before the lecture.

Once students’ attention is caught and sustained, consideration must be given to avoid fatigue. Research has shown that selective sustained attention, also known as focused attention, cannot be sustained for a long period of time. Dukette and Cornish (2009) state that most healthy teenagers and adults are unable to sustain attention on one thing for more than 40 minutes at a time, although they can choose repeatedly to re-focus on the same thing. To avoid overloading students’ attention and causing fatigue, I plan 5-10 minute breaks after every 40 minutes of in-class activities. I also diversify the type of activities so that different parts of the brain can take turns being activated.

In addition to attention, another important aspect of the information processing model is the limited capacity of our working memory. Miller (1954) first determined through a series of experiments that the capacity for working memory is 7±2 chunks. Cowan (2001) discovered through recent experiments that completely new information is actually limited to 4±1 pieces. Not only is the capacity of our working memory very limited but the information in the working memory can only remain there for a very short period of time (15-30 seconds). A learner must practice some form of maintenance rehearsal in order to store the information in working memory.

This limitation of our working memory implies that it is very important to set the most effective pace for the lecture content: too much information explained too quickly can easily overload the working memory and prevent effective learning while explanation things too slowly can bore students and lose their interest. One successful approach that balances the pace is progressive disclosure: at any given time, only one concept (typically one textual phrase or one graphic element) is highlighted on the slides. Hiding or deemphasizing the
other information not only helps to better direct attention but also avoids the risk of overloading the working memory.

After information is processed in the working memory, it needs to be effectively encoded in order to be stored in the long term memory. One of the important discoveries about encoding is the dual encoding theory (Paivio 1971), which states that encoding is more effective when two senses are involved. This implies that when teaching something new, it is better to use two different senses to present that information. This finding inspires me to be mindful in constructing lecture material. Whenever possible, I try to use both words and graphics to explain the same concept. I notice that this helps students to better understand the concept.

In addition to the information processing model, my teaching philosophy is also influenced by the constructive learning theory, which argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas. Constructive learning theory supports that learning occurs as learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information.

My own experience in teaching confirms this theory. In my first two years at NUS, my lectures were mainly presentation based, typically involving me talking in front of the class for the entire lecture. However, I gradually realized the limitation of this approach. Although the students seemed to pay attention on surface, I actually had no idea how much information they were really absorbing in one lecture. Furthermore, even when they did understand the concept taught in the class, it did not seem to be retained. When I questioned students in the next lecture (typically one week later), it seemed that most students had already forgotten what they had learned from the previous week.

This observation caused me to re-evaluate my teaching approach, and I eventually changed to a more active teaching style. In the following three years, I started to break lectures into chunks, each lasting about 40-45 minutes. Each chunk consisted of two to three 15- to 20-minute activities, typically starting with a mini-lecture, followed by an in-class exercise or discussion or both. Theories and knowledge and other relevant background information were introduced in the mini-lecture. The students then needed to apply the knowledge they learned in exercises, workshops, or discussions. The follow-up activities after the mini-lecture actively involved the students in a process of meaning and knowledge construction, helping them to rehearse what they learned in the mini-lecture so that the acquired knowledge could be encoded into long term memory more effectively.

The result of this change has been very positive. Students welcome this style of teaching. Although many other factors also contribute, I regard adopting an active teaching style as one of the main reasons for my significant improvement in teaching rating: from the lowest point (3.4) in fall 2011, which was way below departmental average (4.12), to 4.35, noticeably above the departmental average (4.22) in spring 2013. Since then my teaching rating has sustained at above 4.0. As the departmental average has also improved in the last few years, I consider “beating the average” a fairly remarkable achievement. This new active style of teaching seems to be able to transform classes that are more theoretical in nature (perhaps considered more “boring”) into an engaging experience. For example, after
applying this style of teaching to CS4249: Theories and Phenomenon of HCI, one student wrote in his/her feedback forms: "The teacher is able to make a lecture with boring contents into a fun lecture." Another wrote a course review and called it a “really interesting mod.”

In summary, I believe it is important to prepare and deliver lecture content in a brain-friendly way by taking advantage of our understanding of the information processing model. The key is to catch and sustain students’ attention while avoiding overworking their brains for a prolonged period, causing fatigue. When delivering information to students, the right emphasis and pace are extremely important. In this regard, it is advisable to use progressive disclosure and animations to explain concepts in steps. To avoid passive learning, in-class activities such as exercises, quizzes, workshops, and discussions can be added in addition to lecture presentations to facilitate active meaning and knowledge construction by the students. Finally, in terms of teaching, students are often our best teachers. Getting continuous feedback from them can really help in improving one’s teaching skills.

Just like any skill, the ability to teach also grows with practice. What is summarized in this document is only a snapshot of my reflection of what constitutes a good teacher. I will continue to improve this skill and innovate in pedagogical methods so that the best possible learning experiences can be delivered to the future students of NUS.

**References**


3.3.2 Teaching History

Teaching comes in many forms. I have learned and improved significantly in the past few years to become a competent teacher at classroom teaching as well as at direct supervision of both undergraduate and graduate students. As a result, I was able to attract many good students to work with me for projects and graduate program work. My FYP proposals typically attract multiple student applicants. My group also attracts many talents internationally, not only from nearby locations (such as China, India, Malaysia, Indonesia, Iran, etc.), but also across the continent from Germany, France, Holland, Sweden, New Zealand to apply as interns and research visits. Openings in my lab are competitive, often with many applicants competing for one position.

I have successfully finished mentoring three Ph.D. students: Jun Wei, Rubaiat, and Haimo as the main supervisor. After graduation, Jun Wei first went to Lenovo as a research scientist, then joined the User Research and Design Center of Alibab, the biggest eCommerce company in China. Rubaiat defended his thesis in October last year. Even before his defense, Rubaiat has already worked as an intern and a research staff for the Autodesk Research, Canada. Autodesk research is a prestigious research lab in Human Computer Interaction. After graduation, Rubaiat received multiple offers from both academia and industry. He has decided to accept the offer from Autodesk research as a senior research scientist. Haimo, who defended his thesis in November, also has rich industrial experience. Haimo has interned at Google research, Mountain View in 2013, and Microsoft Research Asia in 2012. All my graduated PhD students have multiple publications at the ACM SIGCHI (Rank 1) and other related conferences.

I also co-supervised (with Prof. Nakatsu) another Ph.D. student, Kening Zhu, who is now an assistant professor at the school of creative media, City University Hong Kong. Kening and Jun Wei were former PhD students of Adrian Chok, who left NUS to join another University, and left both them without a supervisor within the last one and two years of their PhD program. Kening and Jun Wei, along with 8 other PhD students were transferred under Prof. Nakatsu, and Prof. Nakatsu seeks my help to supervise some of his students. Since then, Jun Wei and Kening started to work in my lab. We worked closely together until their graduation.

It was not an easy job to mentor transferred students in their late stage of the PhD program due to time constraints and legacy issues. One to two years are very short to familiar a PhD student with a discipline. In addition, they have already previously committed PhD topics that are too late to start over. Although both Jun Wei and Kening have done a lot of work in their PhD topics, neither of them are very familiar with the contribution and methodology in the HCI community. As a result, neither of them published at top HCI publication venues (such as CHI, UIST, or CSCW). Through day-to-day interaction and training, both of them learned quickly and were able to complete a major project that can serve as a central piece of their thesis during their last year of PhD under my supervision. Both projects are accepted as long papers for the ACM SIGCHI conference.

Kening Zhu, Shengdong Zhao: AutoGami: a low-cost rapid prototyping toolkit for automated movable paper craft. CHI 2013: 661-670
Jun Wei, Xiaojuan Ma, Shengdong Zhao: Food messaging: using edible medium for social messaging. CHI 2014: 2873-2882

3.3.2.1 Classroom Teaching

I have taught a good mix of courses at all levels of the spectrum (six 3000, six 4000, and two 5/6000s).

When examining my teaching rating in the past six years, one can roughly see a trend that is analogous to a check (√) symbol, with a good initial rating (4.17 for the first semester), followed by a gradual declines to around the borderline of 4.0 in the 2nd, 3rd, 4th, and 5th semesters (scores are 4.03, 3.77, 3.91, and 3.96, respectively), then declined to the bottom of 3.40 in the 6th semester. It started to bounce back in the 7th semester to 3.79 and 4.17 for the two classes I taught that semester, improving further to 4.35 in the 9th semester, 4.06 in the 10th semester, and 4.38 in the 11th semester.

Note that I didn’t include two classes in the 8th semester in the above analysis. The reason is that the two classes I taught that semester are both atypical. One is a gradual level class with only 12 students in which I received a perfect rating of 5/5. However, this class only has 12 students, which I considered as too small to be representative. Similarly, the 3.89 score I receive for a gradual level NGS class GS6883A is based on three co-lectures with Prof. Kevin McGee. As the time is so short, the students didn’t get a chance to really know me yet; I therefore believe the score also does not reflect my true teaching skills.

Another observation is that there seems to be a drop of rating from 4.35 in 9th semester to 4.06 in the 10th semester. However, this is largely due to the class I teaching in semester 10 is an entirely new course that’s highly theoretical in nature (CS4249 Phenomena and Theories of HCI). Given the nature of the course, I actually consider 4.06 a fairly positive rating.

Looking back, I found the fluctuation of my teaching rating reflects my personal development as a teacher, as I gradually gain deeper understanding of the intellectual abilities, personalities and cognitive learning styles of NUS students and improve my teaching skills.

I started my teaching in NUS with CS3248: Design of Interactive Media, which is similar to the course I taught in Toronto, CSC 318F: The Design of Interactive Computational Media. This allows me to re-use almost all the material I used in the University of Toronto. The result is very positive. I achieved 4.17/5, above the departmental average of 4.02/5.

However, at the hindsight, the good rating I achieved in the first two semesters was more coincidental instead of an indication of my teaching skills.

First, when I start to teach CS3248 in NUS, I was able to adapt a well-developed course from another university (CSC318F from the University of Toronto). The material I adopted has already gone through several iteration of revision from a number of instructors before I taught it.
Second, in the first semester, my research workload is comparably lighter as I don’t have any students yet. This allows me to focus purely on teaching.

However, challenges quickly arise in the following years as the situations change, which causes the drop of my teaching evaluation.

One major challenge comes from balancing the efforts between teaching and research. Since I am the first in the computer science department to focus on HCI, I need to build a research group from scratch, which took significant time and efforts.

Starting semester two, I started to have a team that consists of three PhD students and four undergraduate students on a number of research projects. This takes significant amount of time away from teaching.

In addition, after the first semester, I realized that the courses offered in our department on HCI were less structured. For example, there is a significant overlap between the content I use in CS3248 with another existing class in SoC: CS3240: Human Computer Interaction. Both classes actually use the same text book (Interaction Design). This was a significant problem as students took one class will find the material redundant when taking the other class.

As a result, I started to redesign the HCI courses I teach to remove the redundant information and update it with the latest findings and trends in HCI. This process takes significant amount of time over several semesters, and involved many trials and errors.

These challenges are the main causes in the drop of my teaching evaluations from semester 3 to semester 5, and hit a bottom in semester 6, as described earlier.

This raised an alarm and causes me to re-balance my efforts and divide them more effectively between teaching and research. I started to investigate into the problems of my teaching style and try to learn from other more experienced teachers such as Ben Leong, Damith, and Yuan Jie from my own department and from Kevin McGee, who is from communication and new media department. Through the discussion with my peers and my own reflection, I realized the problems, and started to adopt a more effective teaching style as described in the teaching philosophy statement.

At the meantime, I started to work with the curriculum program of the department to redesign the HCI curriculum. After comparing the curriculums offered by many educational institutions, we picked the recommended courses suggested by ACM Special Interest Group on Computer-Human Interaction Curriculum Development Group (http://old.sigchi.org/cdg/), which follows a clear logical connection: the two courses: interaction design, and phenomena and theories of HCI each emphasizes on either the practical skills for user interface design and theoretical understanding of HCI, respectively. The original HCI related classes are transformed into three classes: CS3240: Interaction Design focusing on teaching the design life cycle of computer interactive products; CS3249: User Interface Development, focusing on teaching the software tools and technologies for user interface development; and CS4249: Theories and Phenomena of HCI, focusing on more in-depth theories and analysis of human computer interaction.
Based on my revised teaching philosophy, I redesigned CS3240 from ground up to include the state-of-the-art findings about user interface design practices. More importantly, I changed the format of the lecture from pure lecturing to a mixture of mini-lectures, workshops, exercises, and in-class quizzes. This directly results in a significant improvement of my teaching evaluation to above the department average again. In 2011, I co-teach the course with Dr. Bimlesh when I passed most of the course material I developed to her. The material I developed is well welcomed by her students, and her teaching feedback for CS3240 has also improved significantly.

I then adopt this teaching style into another new and arguably more challenging course CS4249: Phenomena and Theories of HCI. Unlike its more hands-on predecessor (CS3240), CS4249, as its name implies, is much more theoretical and can easily be regarded as dry and boring to the students. However, I try to apply what I learned from CS3240 and transform it into an engaging experience. As a result, this class also receives good feedback even when taught by the first time (as described in the teaching philosophy section).

In summary, the 6 years of teaching experience I had in NUS gradually helped me to gain deeper understanding of the intellectual abilities, personalities and cognitive learning styles of NUS students and improve my teaching skills significantly. I now regard myself as a competent teacher.

In the below tables, I show my average feedback scores on Question 8 (“Overall, the teacher is effective”) and the percentage of “5”s (excellent) rating I received per semester. I also give the departmental average score for the same activity (where possible), so a fair comparison can be made.

Modules Taught:
Design of Interactive Media (Lecture) CS3248 Sem II 2008/2009

Class size: 57 students

Feedback Respondents: 36 students

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<th>Metric</th>
<th>My score</th>
<th>Dept. average for 3xxx modules</th>
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<td>Average Q8</td>
<td>4.17</td>
<td>4.02</td>
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<td># of ‘5’ ratings for Q8</td>
<td>9 students (36%)</td>
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<td>Best Teacher Nominations</td>
<td>5 students</td>
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Design of Advanced User Interfaces CS4249 Sem I 2009/2010

Class size: 60 students

Feedback Respondents: 40 students
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<td>Average Q8</td>
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<td>4.02</td>
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<td># of ‘5’ ratings for Q8</td>
<td>14 students (35%)</td>
<td>21.53%</td>
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<tr>
<td>Best Teacher Nominations</td>
<td>7 students</td>
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Design of Interactive Media (Lecture)    CS3248   Sem II 2009/2010
Class size: 41 students
Feedback Respondents: 25 students

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<td>Average Q8</td>
<td>3.77</td>
<td>4.02</td>
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<td>35.32%</td>
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<td>3 students</td>
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Interactive Systems Project               CS4348   Sem I 2010/2011
Class size: 33 students
Feedback Respondents: 21 students

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Design of Interactive Systems (Lecture)    CS3248   Sem II 2010/2011
Class size: 40 students
Feedback Respondents: 23 students

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Interactive Systems Project I (Lecture) CS4201 Sem I 2011/2012
Class size: 39 students
Feedback Respondents: 25 students

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Design of Interactive Systems (Lecture) CS3248 Sem II 2011/2012
Class size: 46 students
Feedback Respondents: 23 students

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<td>Average Q8</td>
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<td>4.13</td>
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<td># of '5' ratings for Q8</td>
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Interactive Systems Project II CS4202 Sem II 2011/2012
Class size: 37 students
Feedback Respondents: 14 students

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### Advanced Topics in Human-Computer Interaction

**Course:** CS6206  
**Semester:** Sem I 2012/2013  
**Class size:** 12 students  
**Feedback Respondents:** 4 students

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### Interface Science and Engineering

**Course:** GS6883A  
**Semester:** Sem I 2012/2013  
**Class size:** 35 students  
**Feedback Respondents:** 9 students

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### Interaction Design (Lecture)

**Course:** CS3240  
**Semester:** Sem II 2012/2013  
**Class size:** 38 students  
**Feedback Respondents:** 17 students
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**Phenomena and Theories of CS4249**  
Sem I 2013/2014  
Human-Computer Interaction  
Class size: 51 students  
Feedback Respondents: 18 students

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**Interaction Design**  
CS3240  
Sem II 2013/2014  
Class size: 27 students  
Feedback Respondents: 16 students

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**Phenomena and Theories of CS4249**  
Sem I 2014/2015  
Human-Computer Interaction
Class size: 48 students

Feedback Respondents: 14 students

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Advanced Topics in CS6206  Sem II 2014/2015

Human-Computer Interaction

Class size: 13 students

Feedback Respondents: 3 students

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<tbody>
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<td>3.97</td>
</tr>
<tr>
<td>Average # of ‘5’ ratings for Q1,2,3</td>
<td>.3 students (10%)</td>
<td>25%</td>
</tr>
<tr>
<td>Best Teacher Nominations</td>
<td>3 students</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Response to Negative Feedback

When it comes to learn to teach, students are often the best teachers. While the feedback I receive from students have shown that my teaching is good in general (especially for recent years), students have pointed out a number of aspects that I can improve on.

Some of early issues such as “long lecture slides”, “prepare a bit too much for his slides”, “restructure the lectures (too boring)”, “Time management”, “assignments are too intensive for students to cope” have already been significantly improved as I honing on my presentation skills, and get to know more about the characteristics of local students.

Another negative comment regarding “some concepts were rather redundant” has also been solved after the revision of HCI curriculum to remove redundant material from courses.

Other negative comments regarding the assignments: including “assignment timings are too tight”, “technical challenges (use of Roomba)” “assignment should be better designed”, “define more clearly the expected deliverables” are often the consequences of the assignment being introduced for the first time. Due to lack of preparation time and
extensive tests, the assignment may not be well prepared when first introduced. This problem is often significantly improved in subsequent years. However, teaching a module for the first time is not an excuse for low quality assignments. Significant amount of time has been spent on improving clarity and learning value of assignments for each class I am teaching, regardless whether it is my first time or not. By working closely with the students and better preparation, I can reduce and remove negative comments regarding assignments in the future.

Excerpted Comments (From Best Teacher Nominations):

Teaching style
- He makes the class very interesting.
- Engaging teaching style.
- Innovative teaching skills
- His method of teaching will teach us the skill needed for us to survive the industry.
- His lecture is nothing like what I have attended. Interactive lecture for Interactive Design module.
- Personally, I like his teaching style. He has an excellent ability of teaching and communicating. He is very responsible for students. His module enhances my interest in this HCI domain.

Teaching attitude
- He is very friendly and approachable. He is also very passionate in his field and will inspire students to excel. He also provides quality feedback on the students’ performance and progress. His classes are fun and interesting
- He has energy and passion. He tries his best to help students improve their thinking. He also provides kinds of material to the students.
- He has been a great source of encouragement and inspiration. He never judges, always help students out and gives advice/assistance to the best of his capability. I really admire him for putting in such great effort and going the extra mile for the students.
- Dr. Zhao has been more than just a professor. He has been a great mentor in this module and outside of this module too. He is very approachable and readily available for consultation.

Content and presentation
- He tried to include new and interesting things in his slides, which makes the class interesting. Complex concepts are well explained. He is also quite approachable for consultation.
- Present clearly, very good teaching skills, course very interesting and entertaining at the same time.

Finally, a highly encouraging comment:
- Prof. Zhao is a very good teacher. He made the class interesting and engaging. He is very confident and capable of explaining the concept clearly. He is also very considerate and very sensitive about students’ need and feedback. It is a pity that I am graduating this semester and couldn’t attend his other classes.
3.3.2.2 **Student Supervision**

As an integral part of my teaching, I supervise both graduate and undergraduate students, mentoring them on a wide spectrum of research topics in HCI and related topics. I have served as a mentor to 10 Ph.D. students, 4 of which have already finished and have gone on to find outstanding jobs that further their research career. Among my colleagues, I have supervised an above average number of students at both undergraduate and graduate levels.

Currently, I have graduated 42 (shown below) FYPs/UROPs. In addition to that, I have mentored 25 interns. Many of them have continued to become a PhD students in other prestigious institutions in the US and Europe. This number is close to the maximum allowable number of undergraduate student supervision allowed by my department.

Running a larger group also has some unique teaching opportunities. I run a weekly research group meeting with my students, where they get a chance to interact and discuss with each other about their research. I have also conducted summer research camps about various skills of research, including how to conduct research in general by reading and discussing the book "Craft of Research", how to write literature reviews, how to conduct controlled experiments, and how to plan and write a research paper. Each summer, we also typically run a paper reading session to finish all the published papers of that particular year in two key conferences in our field, CHI and UIST. This paper reading and presentation sessions are done with both graduate and undergraduate students.

Students also get a chance to peer teach in my group. PhD students serve as mentors and another pair of eyes and ears for the undergraduate students, and hold their own independent meetings with the undergraduate students.

I share most of my activities with the students so that they know what is going on at my end (what proposals and grants I’m working on, the status of my tenure application, what I’m teaching), because I want to treat them as a peer and fellow stakeholder and also because I’m training my students to eventually serve in my role as an assistant professor. As they see all the aspects that I’m involved in, and how I can manage it, they have a better understanding of their role in the academy and have can make a better informed decision of their job.

**Graduate Research Students (Currently Supervising): 6**

1. Meng Xiaojun Ph.D. (Year 2)
   PhD proposal title: Towards Unified Toolkits for eXtreme Usability in Agile Development
2. Chen Chen Ph.D. (Year 2)
   PhD proposal title: Crowdsourcing Patterns and Requester Toolkit
3. Li Yawen Ph.D. (Year 3)
   PhD proposal title: Gamification Techniques on Online Deliberation Platforms
4. Foong Pin Sym Ph.D. (Year 4)
   PhD proposal title: Designing Intergenerational Technology for the Elderly
5. Chua Soon Hau Ph.D. (Year 2)
PhD proposal title: Facilitating Peer Learning in Massive Open Online Course

6. Azh Maryam Ph.D. (Year 2) co-supervised w/ AP Ng Hwee Tou,
   PhD proposal title: Towards a Framework for Mixed Reality User Interface Design
   and Interaction: Studies on the Visuotactile Blend

Graduate Research Students Supervised (Alumni): 10

1. Zhu Kening Ph.D.
   Submitted Thesis: co-supervised w/ Prof. Nakatsu, *The Taxonomy, the Technologies,
   and the Toolkit for Technology-enhanced Paper Craft*
   Current work: Assistant Professor at City College Hong Kong

2. Wei Jun Ph.D.
   Submitted Thesis: co-supervised w/ Prof. Chua Tat-Seng, *Food Media: Food and Technology as a Medium for Social Communication*
   Current work: User Experience Researcher at Alibaba

3. Kazi Habib Rubaiat Ph.D. (just graduated)
   Submitted Thesis: *Designing Digital Art and Communication Tools Inspired by Traditional Craft* (won multiple awards for best video and best talks)
   Current work: Senior Research Scientist at Autodesk Research

4. Zhang Haimo Ph.D. (just graduated)
   Submitted thesis: *Exploiting Binocular Luster Effects for Human-Computer Interaction Applications*
   Current work: Still in the job market

5. Zhou Shaoping Master (graduated)
   Submitted thesis: co-supervised w/ Prof. Nakatsu, *ActiveCite: an Interactive System for Automatic Citation Suggestion*
   Current work: Programmer Analyst at CSC Hong Kong Pte. Ltd.

6. Yang Xin Master (graduated)
   Submitted thesis: co-supervised w/ Prof. Chua Tat-Seng, *Robots in my Contact List: Using Social Media Platforms for Human-Robot Interaction in Domestic Environment*
   Current work: Senior Software Engineer at eBay Paypal Pte. Ltd.

7. Qian Kun Master (graduated)
   Submitted thesis: *Extending Input Range through Clutching: Analysis, Design, Evaluation and Case Study*
   Current work: Senior Software Engineer at Android Lead, Migme, Singapore

8. Yi Bo Master (graduated)
   Submitted thesis: *Exploring Eyes-Free User Motivation and Predicting Mental Workload in Mobile HCI*
   Current work: Software Engineer at Microsoft

9. Kuang Xiaole Master
   Submitted thesis: co-supervised w/ Prof. Nakatsu, *A Multilevel Analysis of Commercial Software Online Help Forums*
   Current work: Software Developer at Garena Online

10. Zhang Zhongyuan Master
    Submitted thesis: co-supervised w/ Prof. Chua Tat-Seng, *A WYSIWYG Add-on Development Environment for Third Party Software Applications*
Current work: *Senior Software Engineer, Garena Online Pte. Ltd.*

List of Interns:
1. Agarwal Arpit - UG
2. Matthies Denys Joerg Christian - PG
3. Goh Si Hui, Michelle - UG
4. Hammad Muhammad - PG
5. Kan Tai-Wei - PG
6. Madhugiri Niti - PG
7. Monserrat Toni-Jan Keith Palma - PG
8. Sahil Goyal - PG
9. Sharifzadehgolpayegani Sahand - UG
10. Tay Seow Suan Anna - UG
11. Roumen Thijs Jan - PG
12. Xu Shengdong - PG
13. Zhao Mengyao - UG
14. Ghosh Sarthak - UG
15. Rasool Maghareh - PG
16. Ma Xiaoning - PG
17. Roudaki Amin - PG
18. Mohammad Adibuzzaman Mohammad Hanif - PG
19. Parinas Andrea Nehl Villaruel - PG
20. Jessalyn Alvina - PG
21. Wessels Arnout Erik - PG
22. Atima Tharatipyakul - PG
23. Marta Gonzalez Carcedo - PG
24. Huang Yongfeng - PG
25. Mehta Dhaumya Vihang – PG

List of FYP Undergraduate students
1. Don Sim Jianqiang
   - 2009/2010
2. Yap Keng Chuan
   - 2009/2010
3. Chung Wing Kei
   - 2009/2010
4. Pua Jun Hong
   - 2009/2010
5. Lee Chee Yuan
   - 2009/2010
6. Lim Yu Kai
   - 2009/2010
7. Nguyen Dinh Duy
   - 2010/2011
8. Tan Kel Vin
   - 2010/2011
9. Khoo Jing Ting
   - 2010/2011
10  Ha Thuy Ngoc            2010/2011
11  Fan Roufang            2010/2011
12  Eng Wan Song           2010/2011
13  Ho Yit Chun            2010/2011
14  Chan Hui Yi Kristal    2010/2011
15  Wong Suet Teng Melissa 2011/2012
16  Chrisnawan Prasjo      2011/2012
17  Soon Yan Leng          2011/2012
18  Seng Lien              2011/2012
19  Lee Jia Xin, Jayden    2011/2012
20  Low Hui Shan Charmaine 2011/2012
21  Lan Ziquan             2011/2012
22  Vuong Ngoc Hien        2011/2012
23  Pu Yiming              2011/2012
24  Chen Tianni Rebecca    2011/2012
25  Chong Yao Long         2012/2013
26  Mohammad Zulhilmi Bin Icksan 2012/2013
27  Leong Kin Yong         2012/2013
28  Leng Li Chuan Brian    2012/2013
29  Nguyen Son Tra         2012/2013
30  Lee Ern Yi John        2012/2013
31  Tan Teong Jin          2012/2013
32  Zhou Biyan             2012/2013
33  Teo Kai Ren            2013/2014
34  Tan Siok Huang Sarah   2014/2015
35  Yuan Shuai             2014/2015
36  Lee Jianwei            2014/2015
List of UROP Undergraduate students
1  Juliana Ung Bee Chin  2010/2011
2  Chua Kien Chuan  2010/2011
3  Nguyen Minh Trung  2010/2011
4  Pu Yiming  2010/2011
5  Lan Ziquan  2010/2011

3.3.2.3 Participation in Theses and Oral Examination Committees:
NGS Thesis Committee Member
1  Lan Ziquan  2013/2014
2  Chow Jun Yan  2012/2013
3  Siew Chi Yung  2014/2015
4  Ilija Ilievski  2014/2015

SOC Thesis Committee Member
1  Timothy Robert Merritt  Doctor of Philosophy (NGS)  Internal & Oral Panel Member
2  Wang Xuan  Doctor of Philosophy (NGS)  Internal & Oral Panel Member
3  Joshua Wong Wei-Ern  Master of Arts (RSH-FASS)  Internal Examiner
4  Luu Anh Tuan  Master of Science (RSH-SoC)  Internal Examiner
5  Yi Yu  Master of Science (RSH-SoC)  Internal Examiner
6  Stevie Giovanni  Master of Science (RSH-SoC)  Internal Examiner
7  Guo Fangfang  Master of Science (RSH-SoC)  Internal Examiner
8  Lu Huanhuan  Master of Science (RSH-SoC)  Internal Examiner
9  Zhang Lingyan  Master of Science (RSH-SoC)  Internal Examiner
10  Bambad Bahrani  Master of Science (RSH-SoC)  Internal Examiner
11  Lan Ziquan  Doctor of Philosophy (NGS)  Thesis Committee Member
<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Degree and Institution</th>
<th>Committee Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Chow Jun Yan</td>
<td>Doctor of Philosophy (NGS)</td>
<td>Thesis Committee Member</td>
</tr>
<tr>
<td>13</td>
<td>Siew Chi Yung</td>
<td>Doctor of Philosophy (NGS)</td>
<td>Thesis Committee Member</td>
</tr>
<tr>
<td>14</td>
<td>Ilija Ilievski</td>
<td>Doctor of Philosophy (NGS)</td>
<td>Thesis Committee Member</td>
</tr>
<tr>
<td>15</td>
<td>Sanju Menon P</td>
<td>Doctor of Philosophy (FASS)</td>
<td>Thesis Committee Member</td>
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</tbody>
</table>