



## About Us

NGS Scholars' Alliance is an official student group for NUS Graduate School for Integrative Sciences and Engineering.

Established in 2005 to serve as a platform for exchange amongst all NGS scholars, this student body will also facilitate the personal development and leadership training of our scholars. NGSSA is also the key to developing, creating and fostering NGS community and identity.

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# NGS Scholars' Alliance Editorial

NUS Graduate School for Integrative Sciences and Engineering (NGS)

## Foreword

As the new semester starts, everyone could sense the excitement in the air and feel the vibrant buzz of student life. For the passionate freshmen who may be uptight and uncertain about their PhD paths for the next four years or so, and for the seniors who are worried about their progress in research and studies, **here is a piece of valuable advice that our NGSSA Chairpersons have to offer :**



*"On behalf of the NGS Scholars' Alliance (NGSSA) , welcome to NGS. This is a place full of vibrant diversity, intellectual curiosity, and wonderful people. I encourage you to attend as many of the student-led activities as possible, and to challenge yourself to see what you too can add to our community. I hope you will make the most of your time at NGS. Feel free to reach out to any of the SA officers with questions, ideas, or feedback—we're here to help you. Congratulations on embarking on your PhD, and here's to an excellent experience at NGS!"*

**Lee Jie Liang Aloysius**  
Co-Chair NGSSA 2015/2016



*"Hi, Freshmen of NGS! I hope you had a thrilling start to the new semester. I've been through three eventful years with NGS, and would now like to share some useful tips with you. After googling "some advice for 1<sup>st</sup> year PhDs", and reading the first eight entries, I've arrived at the following "useful" things to say:*

- (i) Plan your curriculum in advance (utilize your S.U. option prudently to avoid financial embarrassment).*
- (ii) Organize your papers/readings/notes/logs from day 1 and sync them across all your icloud/dropbox/google drive accounts.*
- (iii) Have people whom you can commiserate with during intermittent periods of misery.*
- (iv) Lastly, which actually (is the only one that) came from the search results, you might not want to believe everything others say. Ironically, that probably includes, you know, what I just said. Good Luck!"*

**Tan Ming Zhen**  
Co-Chair NGSSA 2015/2016

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## Induction Day: Looking Back and Forward

By Ng Wei Tian, Alvin



Freshmen listening intently during Induction Day

*"It takes a village to raise a child, it takes a village to get a PhD as well..."*

29th July 2015, a year has passed since my own induction day. I can still vividly remember fidgeting in my seat, uncertain of what was going to happen in the day or in the coming four years of my PhD journey. The induction day marks a special time in the academic calendar when current students reflect on the past year and welcome incoming students into the NGS family. The day started with a welcome speech from the Executive Director of NGS, Professor Philip Keith Moore, who touched on what pursuing a PhD entails. Common concerns of PhD students were discussed, such as issues pertaining to academic matters or life as a PhD student. A series of talks addressed the concerns of students and slowly unveiled what was to come in the near future.

The pursuit of a PhD need not be done alone. Similar to the proverb of "it takes a village to raise a child", it takes a village to get a PhD as well. The metaphoric village in this sense refers to the NGS advisors, the administrative team, and our peers in NGS. The NGS Scholars' Alliance's (NGSSA) introduction showcased a lighter side of PhD life being part of a community that can provide help and advice on the various issues faced by a NGS student. Be it pertaining to deadlines or choosing a prospective supervisor, it is always comforting to talk to our seniors or peers for advice and to realize that we share the same challenges and anxieties that can be tackled together.

Ice breaking session came next. After a round of self-introduction, the diverse backgrounds of the students were apparent. Students of different nationalities, specializations and backgrounds enrolled in the NGS program. The diversity of the students in NGS is one of the biggest appeals of the program: to be able to attract a seemingly diverse group of people to form a cohesive community, and to build on the strength of individual student in NGS. The result is a melting pot of students, providing a variety of perspectives and solutions to research questions that would be otherwise hard to answer.





Over lunch, the new students were introduced to their senior buddies. Usually from another discipline, the senior buddies can provide unique perspectives on their juniors' research project and also provide the opportunity for the juniors to practice presenting their research to someone who is outside of their field. Having a senior who is researching on a topic outside one's field provides opportunities for questions on our research which are easily glossed over by ourselves. Other than learning about the seniors' research, the juniors could also learn about their background as well as their life as a PhD student. The stories of the seniors could help make the transition from an undergraduate student to a PhD candidate less intimidating and overwhelming for many new students.

Life as a PhD student is not all about fun and games. However, during the interactive games at induction day, we get an opportunity to understand and communicate with others. When asked to build the tallest tower with a limited amount of materials, both the juniors and seniors had to work together to solve problems as a team. Be it deciding on a design or applying engineering principles, teamwork prevailed and each group presented a tower only limited by the roof of the auditorium. What was achieved at the end of the day was not simply building a tower from scratch, but also the ability to work and communicate in a team, forming friendships with our seniors and peers, and to be introduced to a community where we belong from this day on.

To end the article, we talked to students from different stages of their PhD life—Hong Kai (Year 3), Winnie (Year 2), Chan Shu Ning, Feng Yenju and Jeryl (Year 1)—and asked them about their thoughts on the induction day this year. I would like to thank them for their input and the ideas for this article.

**Q: Describe your thoughts when you attended induction day this year (2015)**

**Jeryl (Year 1 Freshman):** "Induction day was a fun-filled and interactive session with adequate coverage of matters that students had in our minds. Everyone was friendly and approachable and the implementation of the buddy system had made the transition of incoming NGS students a much smoother one."

**Shu Ning (Year 1 NGS Freshman):** "I didn't know what to expect at the start of the induction day and realized that NGS is truly a mix of graduate students from different fields of research."

**Yenju (Year 1 NGS Freshman):** "I felt excited and got a lot of useful information. Besides that, I made some new friends."

**Winnie (Year 2 NGS Senior):** "It was a different feeling, being a senior instead of a freshman. It made me realised how quickly time had passed when attending induction day as a year 1 seems just not too long ago. The juniors were as worried and clueless as we were when we were freshmen, and I am glad that I could be of some help to them by answering their queries about administrative matters."

**Hong Kai (Year 3 NGS Senior):** "I am a senior in charge of the induction day this year. Time flies and I am feeling old. I also thought of what I have accomplished during these two years."

*"What was achieved at the end of the day was not simply building a tower from scratch, but also the ability to work and communicate in a team, forming relations with our seniors and peers, and to be introduced to a community where we belong from this day on."*



## Food Trail 2015: Making Good Friends by Sharing Good Food

By Tan Xiang Ren

31 July 2015 (Friday)

After the inaugural Induction Day, many of the new students were really excited and eager to meet their respective senior buddies and also to interact more with their fellow batch mates. Therefore, NGSSA decided to organize a bonding session shortly after the Induction day to facilitate interactions between the freshmen and the NGS seniors and to orientate them to Singapore culture and NGS. And so, "Food Trail 2015" kicked off the following Friday evening for the seniors and the new students. The event served as an opportunity to introduce the local food to the foreign students who are new to Singapore's food culture.

When first introduced last year, the "Food Heritage Trail 2014" was a great success and this year's event was no doubt a blast as well. A total of 35 students signed up for "Food Trail 2015" and they were divided into three groups comprising both freshmen and seniors. Similar to the previous year, the groups were assigned to travel to different places in Singapore to taste the local delicacies. However, there is a twist to this year's Food Trail to make it more fun and interactive. A mini competition was added whereby the group that tried the most number of dishes from the assigned location would win the competition. Photos would be taken as proof and uploaded onto the NGS Scholars' Facebook webpage to garner votes from fellow students.

*"a huge variety of food, ranging from Indian cuisine such as Roti John to local food such as Rojak, Popiah, BBQ chicken wings..."*



The groups travelled to Adam's Food Centre, Maxwell Food Centre and Redhill Food Centre. All three locations boast of famous Singapore local food. For instance, the food stall—Yan's Fried Bee Hoon at Redhill Food Centre is extremely popular and even our Prime Minister, Mr. Lee Hsien Loong, had to queue to get a taste of the food! The groups set off at around 6pm and all three groups managed to try a huge variety of food, ranging from Indian cuisine such as Roti John to local food such as Rojak, Popiah, BBQ chicken wings... and the list goes on. The food was definitely awesome but what was more important was that the students got to interact with each other and made new friends. Speaking from my own experience, I was the senior leading the third group of students and I am delighted to say that it was very interesting to hear from fellow NGS students coming from different parts of the world sharing their experiences and stories.

Overall, "Food Trail 2015" was a fun-filled event and the uploaded photos showed how much the students enjoyed themselves. At the end of the day, the outcome of the mini competition did not matter as much as the new students find themselves fitting comfortably into NGS community with the new found friendships. Last but not least, NGSSA and the participants of the event would like to take this opportunity to thank NGS for their continued support of these activities without which the event would not have been successful.



## The Scholars' Talk on...PQE!

**PhD Qualifying Examination (PQE) is looming round the corner for the current Year 2 NGS students as they approach the 18<sup>th</sup> month upon matriculation, the minimum candidature before attempting PQE. If you are worried about where to start and what will happen, fear not! Our Editorial team speaks to Ho Kuan-Hung, a Year 3 NGS student, about his research and PQE and seek his advice for preparing PQE.**

### Which department and research institute are you currently attached to?

I am attached to the Department of Materials Science and Engineering in NUS and the Institute of Materials Research and Engineering (IMRE) of A\*STAR.

### What is your area of research and what are some of the things you are doing?

My research field is related to supercapacitors which are usually used in applications requiring many rapid charge/discharge cycles, rather than long-term compact energy storage. I fabricated the cathodes of these supercapacitors using metal oxides/hydroxides together with carbon to derive desirable morphologies of the active materials. Next, I used the SEM, TEM, XPS, Raman spectra, BET, XRD, electrochemical workstation and other tools to identify the materials I had produced and analyze their performance as cathodes in supercapacitors.

### How has the three years in NGS been?

So far so good, *haha*, even though I was a bit frightened by the other NGS fellows during induction day. I still remembered that when Prof. Ding asked us whether we had decided our supervisors, almost everyone raised their hands to show that they have decided. That was really shocking to me, because I had just finished my military service for two weeks and arrived in Singapore for only three days. I was totally clueless about my research direction and which PI should I approach at that time. But everything gradually became better after the semester started. It was good to take the NGS modules to broaden my horizons and also to sharpen my presentation and critical review skills. Recently, I started joining the NGSSA which was an awesome experience for me since I got to know more of my NGS fellows and gain greater sense of belonging to NGS.



*"It was good to take the NGS modules to broaden my horizons and also sharpen my presentation and critical review skills."*



“..complete at least one project and try to plot out the overall blueprint for your PhD thesis, and get some promising preliminary results based on your blueprint...”

**I heard that you had cleared your qualifying examinations (QE) a few months ago. What were the things you needed to note while preparing for the examination?**

I started to plan for my QE after my trip to the MRS Spring Conference in San Francisco. During the preparation for my QE, I first notified my main supervisor that I wanted to take my QE by the end of June, and started to draft my QE report. At the same time, I wrote an e-mail to all my TAC members to schedule for a suitable date and venue for the QE. Once the date and venue were fixed, I had to finish my report as soon as possible, because it is better to e-mail the softcopy of your report to the TAC members in advance. The last thing was to print out the hardcopies of the report for D-day.

**I will need to clear my QE in a few months' time as well. Do you have any tips for me?**

Based on my experience, you need to complete at least one project and try to plot out the overall blueprint for your PhD thesis, and get some promising preliminary results based on your blueprint. If you want to clear your QE during June to August, which is the semester break period, remember to let your TAC members know as early as possible, otherwise, they might be on leave or be overseas. And I know that writing QE report is boring and tiring, try to motivate yourself to clear it. Take myself as an example; since I am a big fan of Stefanie Sun and she was going to have a concert last year, that concert became the big reason for me to pass my QE by the end of June. Additionally, before giving your QE presentation, it is better to rehearse within your group so that your colleagues as well as your supervisor can give some advice for you to revise your PowerPoint slides and to improve your presentation skills.

## NGS Scholars' Alliance Editorial

Ng Wei Tian, Alvin || Tan Xiang Ren || Choo Qing Wei, Winnie

### Words from the Editorial:

*As fellow PhD students battling with research and coursework daily, we understand the struggle. Through this issue, we hope that we could let you guys/girls know you are not alone and there are many ways to seek advice or to talk about it. Work hard, but balance it out with a healthy lifestyle. Sufficient sleep and recreation is important too! All the best everyone!*



### Look out for these upcoming NGS events!

Oct/Nov 2015

**Halloween  
Night**

Dec 2015

**Christmas  
Party**

Feb 2016

**NGS Symposium  
2016—RiSE**