



# GRADUATION YEARBOOK 2010

SPMS GRADUATION YEARBOOK 2010

## School of Physical & Mathematical Sciences

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# Mission and Vision

## Our mission is twofold:

1. In teaching, to impart the habit and mode of thinking in science and mathematics using the most effective pedagogical methods;
2. In research, to contribute to the scholarship of discovery, integration, application and teaching.

**Our vision, and our tasks, is to build a renowned school with strong faculty, innovative curricula, promising students, strong links with industry and supportive alumni.**

The background is a vibrant red color. On the left side, there are several thick, white, curved lines that sweep across the frame. The rest of the background is filled with numerous thin, white, parallel lines that radiate from the top left towards the bottom right, creating a sense of motion and depth.

# MESSAGES

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## Message from the Chair

My heartiest congratulations to the SPMS Class of 2010!

For each of you, your graduation marks the end of a chapter in your life – one which started when you chose to join SPMS when it was still very young and had little track record. The School grew with you over the past few years. Just as you have grown and matured into confident young men and women, ready to enter the workforce, the School too has grown in stature and reputation. And it is particularly meaningful to note that both the School and you have played an important role in each other's growth. It is my hope that this special relationship will continue on and flourish further, even as you embark on a new chapter in your life.

With the good education you have received, together with your own passion, diligence and perseverance, I am confident that a rewarding and fulfilling career awaits you. As flag-bearers of the SPMS, your success will of course be something the School will be proud of and looks forward to.

Yet, as you begin this new exciting journey ahead, to pursue happiness and success, I exhort you not to forget your responsibility towards the society and compassion for others. By "paying it forward" for the blessings and privileges you have received, you will help to make a difference in someone else's life, make the world a better place, and in turn make your own life more purposeful and meaningful.

Once again, congratulations, and all the best!

**Professor Ling San**

Chair

School of Physical and Mathematical Sciences



## Message from the Head of Division

My heartiest congratulations to the Class of 2010. First of all let me congratulate each one of you for the effort you have put in for the past few years in order to reach this milestone. Graduation is a moment worth savoring not only for the wealth of academic knowledge and skills gained but also for the invaluable friendships made along the way and for the numerous experiences, challenges and hurdles which have made you a better person. Graduation is one of the few milestones in life where your own sense of achievement and joy is matched (and sometimes surpassed!) by the sense of pride felt by parents, teachers and loved ones. So with that same sense of pride as an educator, I wish all of you happiness and contentment in life and hope that bigger achievements in the future will make this one pale in comparison. I also hope that just like children return to their ancestral home, you too have the time to drop by SPMS in the future.

### **Professor Leung Pak Hing**

Head, Division of Chemistry and Biological Chemistry

## Message from the Head of Division

In the short span of five years, since the inception of our Division of Mathematical Sciences in 2005, we have built a reputation as an establishment of research and teaching excellence. This achievement belongs as much to the graduates from our pioneer batches, including this class of 2010, as to us. These graduates took the risk to pursue their education with a young, unknown, but ambitious Division. It is precisely this spirit of charting the unknown, going where no one has been before, discovering what has been hidden, that sets them apart. Our graduates have a high rate of employment. Those who decide to pursue graduate studies have been offered admission to some of the top universities in US and Europe.

We are proud of what our graduates have achieved. As Head of Division, one of my objectives is to continue to attract high quality students and develop their full potential. This will ensure that we continue and better the benchmark set by our students.

I am delighted to present to you the Class of 2010 from the Division of Mathematical Sciences, whose courage, curiosity, and tenacity has helped mold the culture of the Division.

**Associate Professor Chee Yeow Meng**

Head, Division of Mathematical Sciences



## Message from the Head of Division

To all our graduates,

There will be some fond memories of your time at SPMS and my sincere hope is that the learning experiences will stay with you and enable you to meet future challenges with confidence. I am confident that you will do well, with good and meaningful careers.

Through the fun and laughter, and the difficult moments, the PAP Nites and the lab reports, both inside and outside the classroom - the faculty and staff have enjoyed the times that we shared with you. We thank you all for spending your varsity years with us and for adding colour and spice to our work, and there will always be a warm welcome for you back here.

As always,

**Professor Alfred Huan**

Head, Division of Physics and Applied Physics

## Message from Student Leaders

### “*To Graduating Class of 2010*”

On behalf of the 5th Management Committee, congratulations to you, SPMS Class of 2010.

Graduation marks another crossroad in our lives. While some of you continue your journey in the halls of academia, I believe the majority will be entering the workforce to benefit the nation's economy.

I hope that these four years have nourished your character and maturity, and endowed you with relevant life skills and self-confidence. Should you stumble along your journey, you and your friends will be one another's pillar of strength, just as it has been for the past four years in SPMS.

No matter what tomorrow brings, be it the simplest path or a road wrought with twists and turns, tride forward with your chin up, bringing with you the knowledge and skills which you acquired within these 4 years of undergraduate life.

I wish you all the best in your future endeavors. ”

Best Regards,

**Holly Wu Ke'er**

*SPMS Undergraduate Club President  
5th Management Committee*

### “*Congratulations on the successful completion of your education in NTU!*”

It has been a privilege to participate in the publication of this yearbook which, I hope in time to come, will bring back wonderful memories of your university life as you flip through its pages and look back on your NTU experience. As you embark on a new chapter of your life, may you bear in mind the Latin proverb: "Fortes fortuna aduivat" or "Fortune favours the bold" for it is with the attitude to go where others dare not, that one stands out. Go confidently in the pursuit of your dreams, and live life true to yourself as it is the key to your success and happiness. ”

**Leong Wen Yi Wendy**

*SPMS Graduate Club President  
1st Management Committee*



## Message from Faculty

“ Some of you attended the first lectures that I conducted in my life. It was in 2006 and now four years have passed already. I grew with you in this university and I want to thank you for your patience with me, for your valuable comments, for working hard on my classes. And good luck in your life!”

**Dr Fedor Duzhin**

“ Heartiest congratulations! I hope you have enjoyed these four years of learning at NTU. My best wishes for the new journey you are now embarking on.”

**Asst Prof Frederique Elise Oggier**





## Message from Faculty

“ My heartiest congratulations to the graduating Class of 2010! The past three to four years would have been a pretty straight path for most of you. Now, graduation will mean coming to several forks on the road, and choices to be made. It’s easy to say: Follow your dream! For some, that may be true.

Whatever it is, I wish you the best for the future. It’s OK to make mistakes and even to fall, but be ready to learn, to get up again, and move on.

**Prof Lee Soo Ying**

“ To the graduating class....Congratulations! I hope that your time in school and in Chemistry and Biological Chemistry has prepared you somewhat; this is the beginning of a new journey and the rest of your life. You have my best wishes.

**Assoc Prof Leong Weng Kee**





## Message from Faculty

“ I would like to take this opportunity to congratulate all of you on gaining your hard earned and well deserved degrees. All the best in your future endeavors and I hope to have the chance to meet you all again in the near future. Once again, heartfelt congratulations! ”

**Asst Prof Philip Chan**

“ Heartiest congratulations to you all, the 2010 graduation batch. Graduation is a time to celebrate your achievements and prepare for the future. Remember that graduation is not the end, it marks a new beginning. May your degree unlock the door to a world of infinite possibilities. ”

**Prof Shen Zexiang**





## Message from Faculty

“ If you ask me, what is the single most-important factor that defines the future of a person, I will say ‘It is the person’s inner drive, not the talent.’ Do you have a dream? What are you willing to sacrifice to pursue your dream? ”

**Asst Prof Steve Zhou**

“ Congratulations and good luck to the Graduating Class of 2010! It was nice to get to know a few of you in my Topology course last semester, and I wish you all the best for the future. ”

**Asst Prof David Henry Adams**

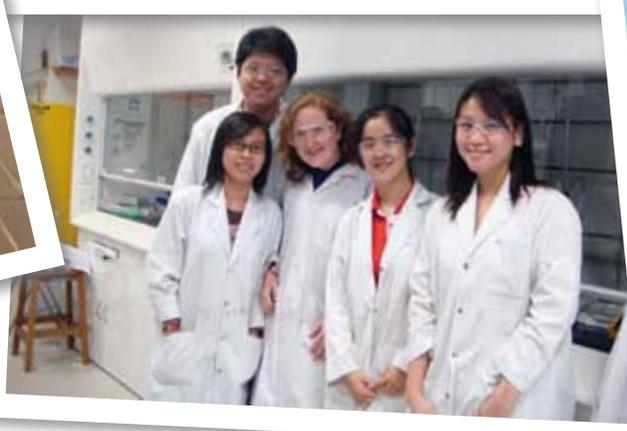
“ Congratulations for graduation from CBC! Through your study in CBC, I believe you have gotten a lot of unforgettable experiences, which should sometimes be pleasant but occasionally bitter. Please make full use of all these experiences to your next brand-new stage. We would be happy if you sometimes drop by to CBC and have a chat with us about how you are getting along. ”

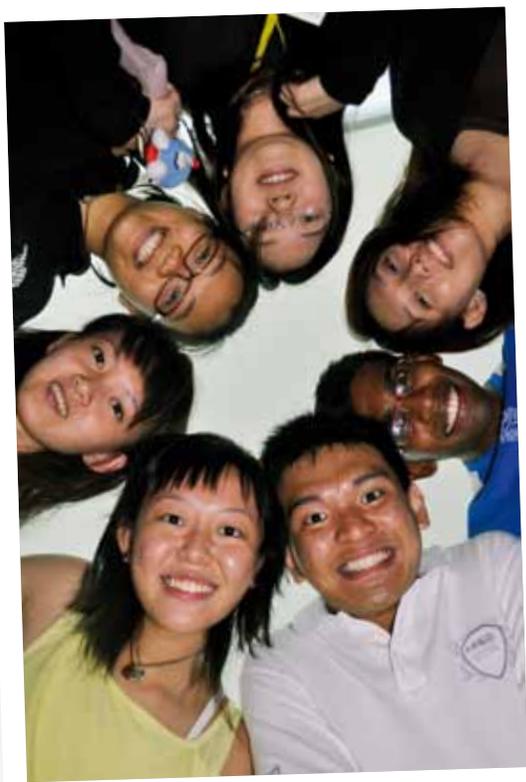
Congratulations again!

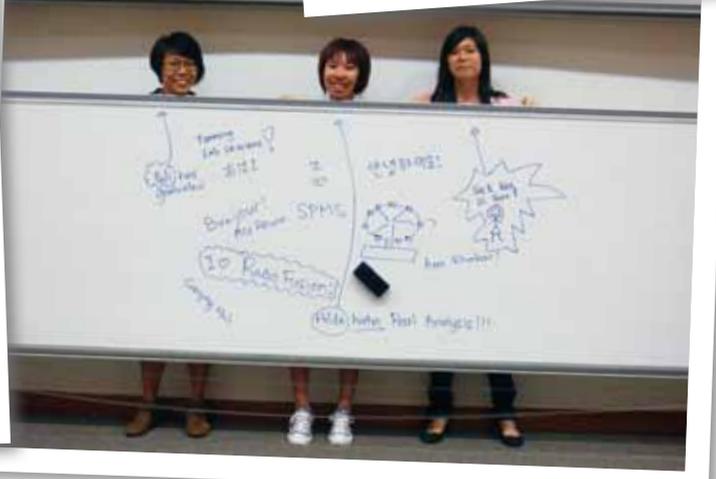
**Asst Prof Chiba Shunsuke**

# LIFE IN SPMS

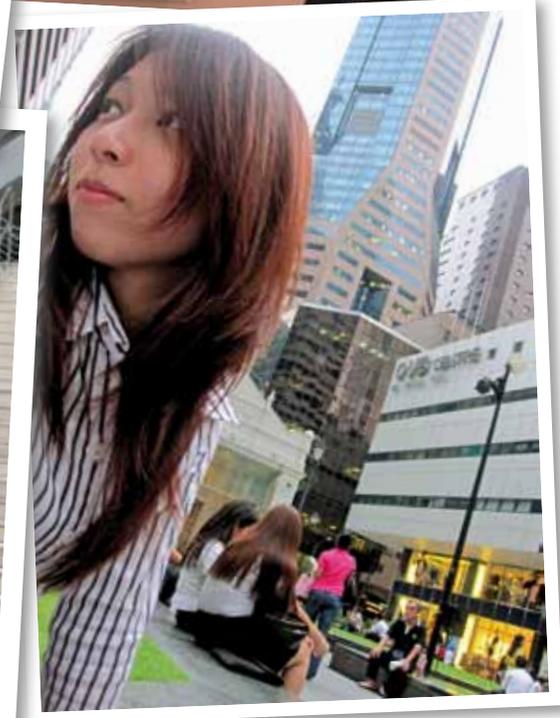
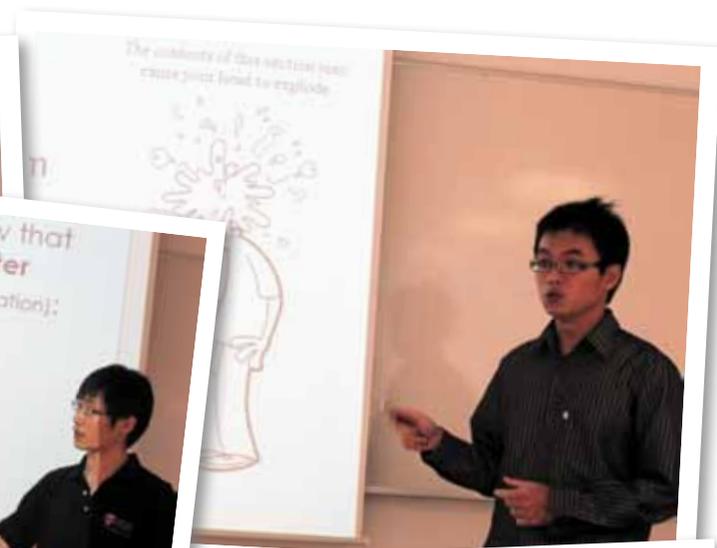
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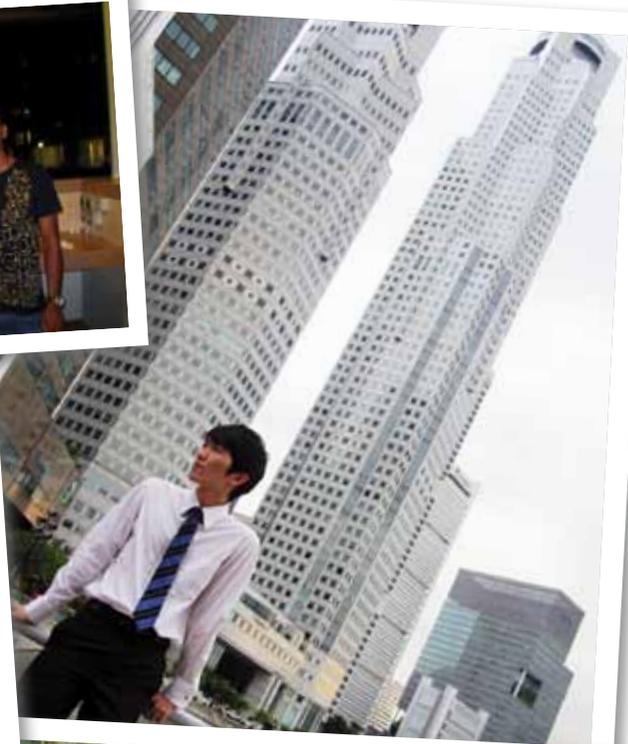
















## Student Testimonial

“ Acquire the knowledge from cradle to grave. These were the words of Prophet Muhammad, the last Islamic prophet. ”

With the help of Prof Alfred Huan, Assoc Prof Christos Panagopoulos, and the other faculty members of the Physics & Applied Physics Division, my horizon has been broadened, and my point of view has changed for the best. Here, I discovered Physics, its advances and current limitations. As a physicist I also have to contribute to Science in order to help mankind. I wish my juniors all the best, and recommend they take good advantage of their undergraduate years.

**Azar Eyvazov** (*Physics*)

“ Four years of university life have passed by extremely quickly for some of us. I could still vaguely recall the sight of all of us streaming into the Lecture Theatre to kick start our first ever lecture in NTU. It is extremely interesting to muse upon how much we've grown since then, the changes in our lives, and the strong friendships we forged along the way. ”

And in a twinkle of an eye, my peers and I were on to the final year in Chemistry. Not for any moment did I regret pursuing my interest in Electrochemistry under the guidance of Asst Prof Richard Webster. His patience and extreme tolerance for an extremely curious me, was evident as he systematically answered all of my queries.

To that, I thank you, Asst Prof Webster.

Graduation marks the end of our shared journey through the many glass doors of SPMS. Some of us will pursue higher education, be it locally or otherwise. The others may embark on their careers. Whichever path we may choose to take, whatever obstacles lay ahead of us, I am confident that we will brave it all. After all, we have survived four gruelling years of university life and there is perhaps nothing else that comes close to deterring us from our ambitions. I wish all of us bon voyage!

**Charmaine Lau** (*Chemistry and Biological Chemistry*)



“ Coming together is a beginning. Keeping together is progress. Working together is success. Henry Ford, the American founder of the Ford Motor Company. ”

Working at the Health Science Authority of Singapore has not only reinforced my knowledge of Chemistry and polished my technical skills; it allowed me to meet new people and learn new knowledge.

During the attachment, not only do I get to interact with fellow colleagues, I had the opportunity to meet engineers, and had learnt a lot about the chemical industry through them. Having good relationships with my colleagues contributed to an enjoyable attachment experience in HSA.

**Yeo Yang Hong** (*Chemistry and Biological Chemistry*)



“ I was fortunate to be given the opportunity to be posted to SIM University (UniSIM) – Centre for Applied Research for my Industrial Attachment (IA). It was an eye-opener and had enriched me with relevant knowledge and skills that would aid me in my future endeavours. ”

I got to interact with the faculty staff and through the conversations we had broadened my horizons. These interactions exposed me to the different opportunities that will be available to me after my studies. Meeting these professionals was indeed an enriching experience.

**Wong Hui Min** (*Mathematical Sciences*)



“ The five months I interned at Lonza Biologics Tuas Pte Ltd granted me valuable insight of the biopharmaceutical industry. ”

As a validation intern, I learnt more about the technical aspects of the plants' operations, as well as the importance of safety awareness as an integral part of working in a plant.

The constant demands in working life demonstrated to me the critical need of having a good work-life balance. Company initiatives, such as Staff Family Day and excursions to venues such as Tiger Brewery, provided me with the opportunities to mingle with my colleagues on an informal basis, facilitating my working relationship with them.

I gained a greater understanding of the value of interpersonal relationships at play in a technical environment such as Lonza. The personal development that I had received would certainly stand me in greater stead increasing my work productivity.

I wish everyone all the best in your future endeavors.

**Ang Jing Jun, Cherry** (*Chemistry and Biological Chemistry*)

“ During my course of study, I was granted the prospect of a six months student exchange to the University of Warwick in the United Kingdom in my third year of study. This certainly did not come easy, given the limited places, on top of my prior stint in Norway under the Summer Exchange programme.

There, I applied for and obtained the opportunity to live with a couple for some weekends. My hosts, Keith and Catherine, both in their seventies, had been in Singapore in their early years. They yearned to see Singapore again, and fortunately I was able to help through my vivid descriptions and some photographs I had in computer. Under their hosting, I had the opportunity to visit the Peak District, as well as many other places of history and cultural interest.

I honed my laboratory skills and methodologies, under the guidance of my mentor, Eduardo, a young man of Brazilian nationality, and a patient and wonderful professor, Professor Martin Wills. They gave me excellent guidance, not just in academic knowledge, but knowledge of England and its culture as well. Throughout the four brilliant years in CBC and NTU, I appreciate that my tertiary education was enriched by these overseas experiences, which I find them momentous, satisfying and memorable.

I'm pleased to be an ambassador of NTU!

**Dorothy Ong** (*Chemistry and Biological Chemistry*)



## SPMS Elections 2010

Written by: Wong Poh Shen

Photos by: Wong Poh Shen, Lu Xi

### SPMS Election Rally

The SPMS Election Rally was held on the 25th August this year at SPMS LT4, where students came down to listen to the plans and aspirations of the 52 hopeful candidates gunning for the 15 available positions in the 5th Management Committee.

### Polling Day on Union Day

Polling Day came two days later on Union Day, where the classes were cancelled and students came down in throngs to cast their decisive votes. It was a hive of activity at the voting booth as the many candidates made their last attempts to maximize their chances, touting flyers and assurances to tug at the heartstrings of those voters who seemed to have yet to decide on their votes. Promises of better exam welfare goodie bags, past year solutions, and more social activities echoed round the confined spaces of the school lobby as voters came and went after casting their balloting slips into sealed boxes under close supervision of the Election Officers.

As soon as the booth closed its doors to voters at 5pm, the Election Committee, headed by Returning Officer Ms. Lyn Chow, counted the votes behind closed doors. The good news was disseminated to the candidates and the school student body at half past midnight.

### The following candidates were elected into position:

Club President	Holly Wu Ke'er
Vice President (Academic)	Li Yu Ting
Vice President (Social)	Hoo Chia Mien
Honorary General Secretary	Tammy Lim
Financial Controller	Edwin Kwek
Academic & Welfare Director	Yue Mu
Business Manager	Calvin Tham
Logistic Director	Guo Xianlun
Publications Director	Wong Poh Shen
Publicity Director	Lu Xi
Social Director	Lee Jun Yi
Sports Director	Genesius Ng
CBC Rep	Sally
MAS Rep	Eng Wee Min
PAP Rep	Wang Shengtao

Congratulations to the successful elects!

### Annual General Meeting

The 4th Management Committee held its Annual General Meeting on 1st Sep 2009. Considered one of the more significant events, it marks the day when the 4th Management Committee, helmed by Ms Ho Ying Ying, hands over the reins of leadership to the incoming President, Ms Holly Wu Ke'er and the 5th Management Committee.

The meeting commenced with Ms Holly Wu and Mr Yu Dong Chen, the outgoing Honorary General Secretary and Financial Controller, going through the minutes of the previous AGM and the Financial Report 2008/09. As the meeting came to an end, the next Election Committee was also elected. Charged with the responsibility, they will uphold the integrity of the School Elections in the Academic Year 10/11.

On behalf of the school body, we would like to express our thanks to the 4th Management for their efforts. To the incoming 5th Management, may we lead the SPMS to new heights!







## SPMS Week 2010

*Written By: Wayne Isaac Tan Uy*

*Photos By: Publications Team*

The second week of February has been euphoric – students can't wait to exchange "I love you"s and "Gong Xi Fa Cai"s. Student organizations have been setting up stalls near Canteen A and B to sell roses, chocolates and CNY cookies. The Halls of Residence have been decked with angbaos, paper cranes, and hand-made lanterns. But, SPMS students have another reason to celebrate; it's SPMS week!

"As the size of the school's population is growing, the 5th management committee felt that it is a good time to start our first SPMS week," said Lee Jun Yi, Social Director of the SPMS Club. The two-day event was held in front of the Lee Kong Chian LT from 8th to 9th February 8-9. The concourse across 8 Flags was brimming with carnival games while the link way to Canteen B was replete with bazaar-styled shops and booths.

Jun Yi added that "SPMS club organized SPMS week with the hopes to improve the school's identity as well as the spirit of community." Highlights of this year's programme included Talen-Time and Starstruck, designated as avenues for students to showcase their talents in singing and pageantry, and entertain their fellow school- mates.

Athletes from the teams that made it to the Top 3 positions during the recent Inter-School Games were also recognised by being awarded their ISG medals.

After the two-day event, Holly Wu, SPMS Club President, believes that SPMS week portrayed a vibrant school life. "We created an opportunity for the various divisions...to support their fellow make friends within the different divisions."



Written By:  
Wayne Isaac Tan Uy

Photos By:  
SPMS Publication  
Team



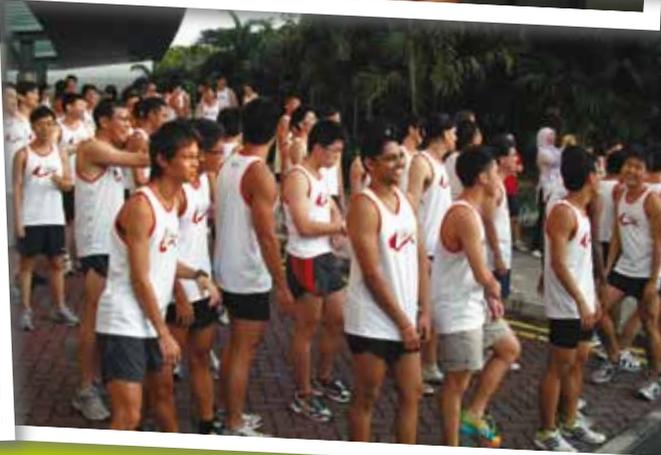
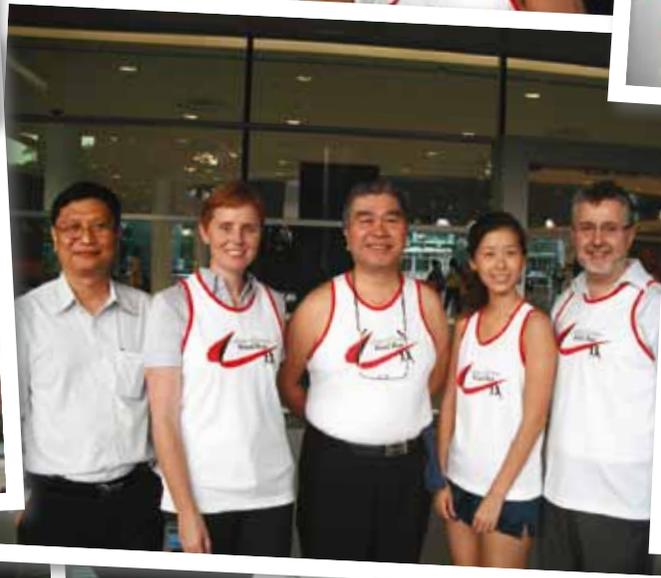
# College of Science Road Run 2010



While it seems that two weeks till the final exams has burdened everyone with academic pressure, some people of the academe still succumbed to a 'healthy break'. A hundred and fifty students and faculty members blazed around the NTU campus in a 5.6 km road run last March 30, 2010. The College of Science Run, jointly organized by SPMS and SBS Club, flagged off at 6:30 pm outside the SBS lobby and concluded with a Prize Presentation at the SPMS lobby an hour after.

The run is the first time the student clubs of the School of Biological Sciences and the School of Physical and Mathematical Sciences have collaborated, and was spearheaded by the Sports Subcommittees of both clubs. "The College of Science is still very young, we need to work hard," emphasized Prof. Mark Featherstone, Interim Dean of the College of Science, in his opening remarks. Also present during the run were Prof Ling San, the Chair of SPMS, and Prof Alex Law, Acting Chair of SBS.

The road run endeavored to promote a healthy lifestyle through exercise and to inculcate the "College of Science" spirit. Given the positive feedback and good turnout for the event, the organizing committee anticipates hosting this event on an annual basis.

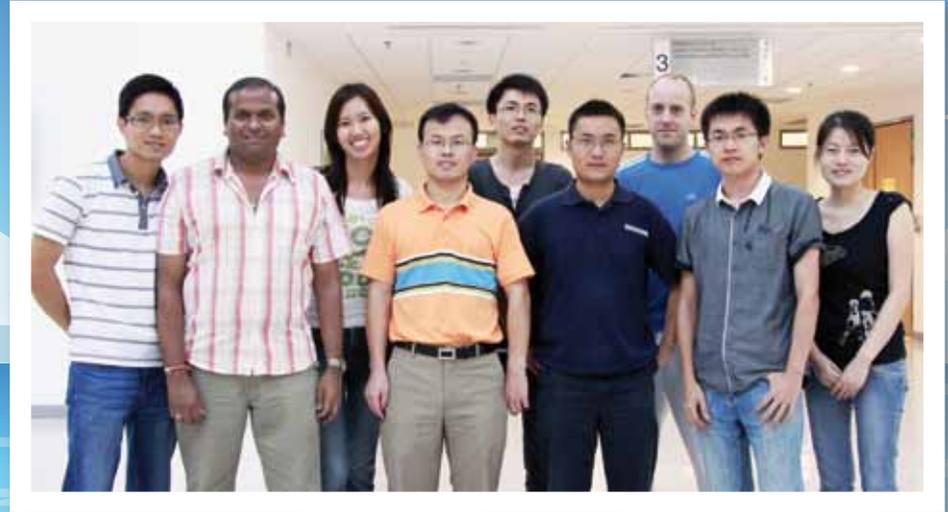


## Graduate Club Activities

The School of Physical and Mathematical Sciences (SPMS) of Nanyang Technological University (NTU) has about 300 graduate students across 3 divisions: Chemistry & Biological Chemistry, Mathematical Sciences, and Physics & Applied Physics. Barely a year old, the SPMS Graduate Club was founded to supplement the academic aspects and to provide graduate students with a platform to interact with each other outside a lab setting. With enthusiastic committee members coming from various divisions and nationalities, the SPMS Graduate Club Committee has been organizing events that serve as an avenue for inter-division and multi-racial interaction of graduate students so as to promote interaction and social bonding. In addition, these activities create a more conducive research and study environment by providing an opportunity for students to relax.

The SPMS Graduate Club organized free movie screenings held in LT 1 on weekday nights, which showcased movies that were polled to be the most popular by the graduate students. Each movie session would attract large crowds, and we were greatly encouraged when our first movie screening drew a crowd of over 100 people- far beyond our expectations!

To mark the mid-term break, a BBQ outing at East Coast Park was organized on March 4th. Despite the rain that started shortly after the arrival of participants, our spirits were not dampened and we started playing games in the rain shelters. Fortunately, after some time, the rain stopped and various groups of people played games like soccer, frisbee and volleyball. It was a good opportunity for everyone to meet new friends as well as get some exercise. After the fun filled activities, the BBQ pits were fired up, and everyone tucked into a sumptuous meal. All in all, this outing was a resounding success and the bus ride back to NTU marked the end to a wonderful day, as we enjoyed the captivating night scenery of the Marina Bay area.



*From left: Dau Son Hoang (Project Manager, MAS), Gorityala Bala Kishan (Secretary, CBC), Leong Wen Yi Wendy (President, CBC), Yin Peng (Division Representative, CBC), Hu Hailong (Division Representative, PAP), Chan Kin Sung (Vice President, PAP), Daniel Springer (Division Representative, PAP), Zhao Bin (Publicity Manager, PAP), Ma Xiangmei (Treasurer, MAS)*



*Outing to East Coast Park: There is nothing like an afternoon of fun filled activities on the beach*

Since March, Weekly soccer sessions have been held at one of the soccer fields near NTU. Living by the mantra of “healthy body, healthy mind”, this group of soccer fanatics will take time off despite their hectic schedules to sweat it out on the field. Those who are keen are welcome to join them every Saturday evening!



*Having a fantastic time BBQ-ing!*



*Once strangers now team mates!*

We would like to extend our heartfelt thanks to our club Chairman, **Professor Shen Zexiang**, and Club advisors, **Miss Tang Meng Ching** and **Miss Christina Tee**, for their utmost support and guidance.



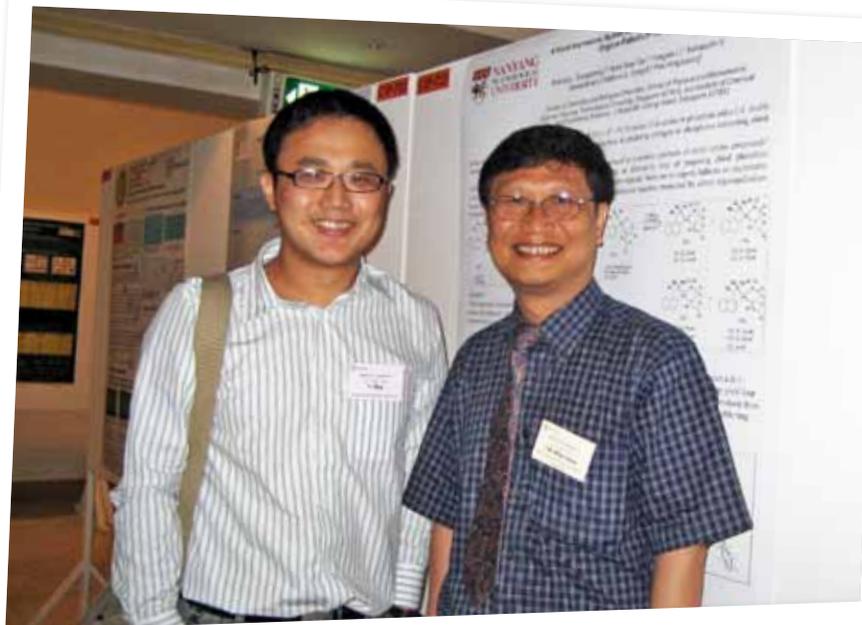
“ Dear Prof Leung Pak Hing,

”

The endless help from you ensured the smooth completion of my PhD program. The time that I have spent in your research group will be my treasured memories... wherever I may be after my graduation.

**Ding Yi**

*PhD, Chemistry and Biological Chemistry*



“ Dear Asst Prof Roderick Bates,

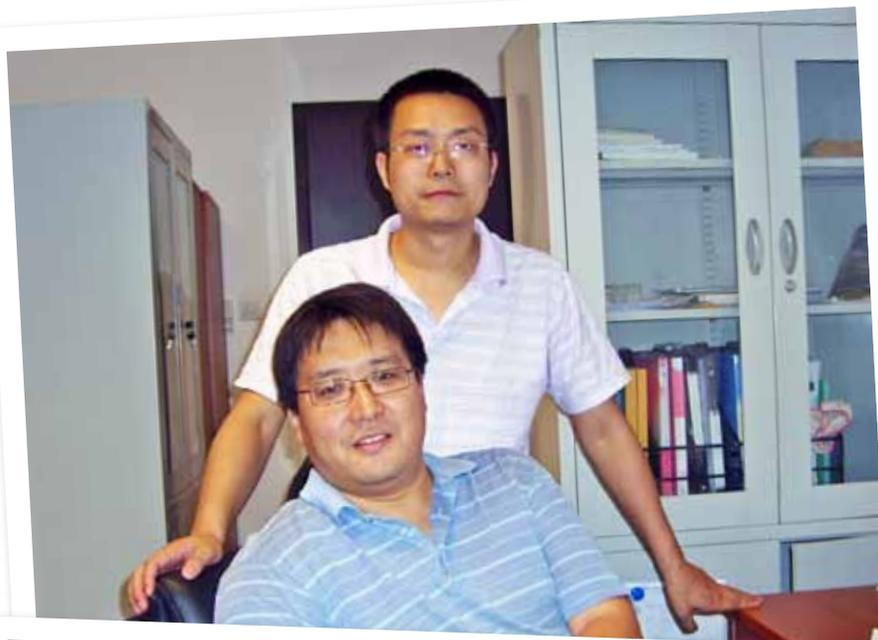
”

Thank you very much for being my PhD supervisor, friend and philosopher. I would always be grateful for your constant support and encouragement!!

**Kalpana Palani**

*PhD, Chemistry and Biological Chemistry*





“ Dear Asst Prof Wu Guohua,

”

Thank you for your continuous willingness to be engaged in many heuristic and invaluable discussions, your tolerance in my frequent consultations, your friendship and for providing me an extremely pleasant environment for doing research work. Your perpetual encouragement, motivation and taste for good research will always be an inspiration to me.

**Liu Jiang**

*PhD, Mathematical Sciences*



“ Dear Assoc Prof Zhong Guofu,

”

Thank you for giving me the opportunity to be your first PhD student in NTU and introducing me to the fascinating and challenging field of organocatalysis. I am deeply thankful for your continuous guidance and encouragement, and most importantly, our countless fruitful discussions, which have improved my ability to think critically.

**Tan Bin**

*PhD, Chemistry and Biological Chemistry*

“ Dear Prof Loh Teck Peng,

”

Thank you very much for bringing me into the intriguing world of organic chemistry!

**Xiao Jian**

*PhD, Chemistry and Biological Chemistry*



“ Dear Prof Leung Pak Hing,

”

Thank you so much for your invaluable encouragement, patient guidance and style of supervision throughout the course of my study all these years!

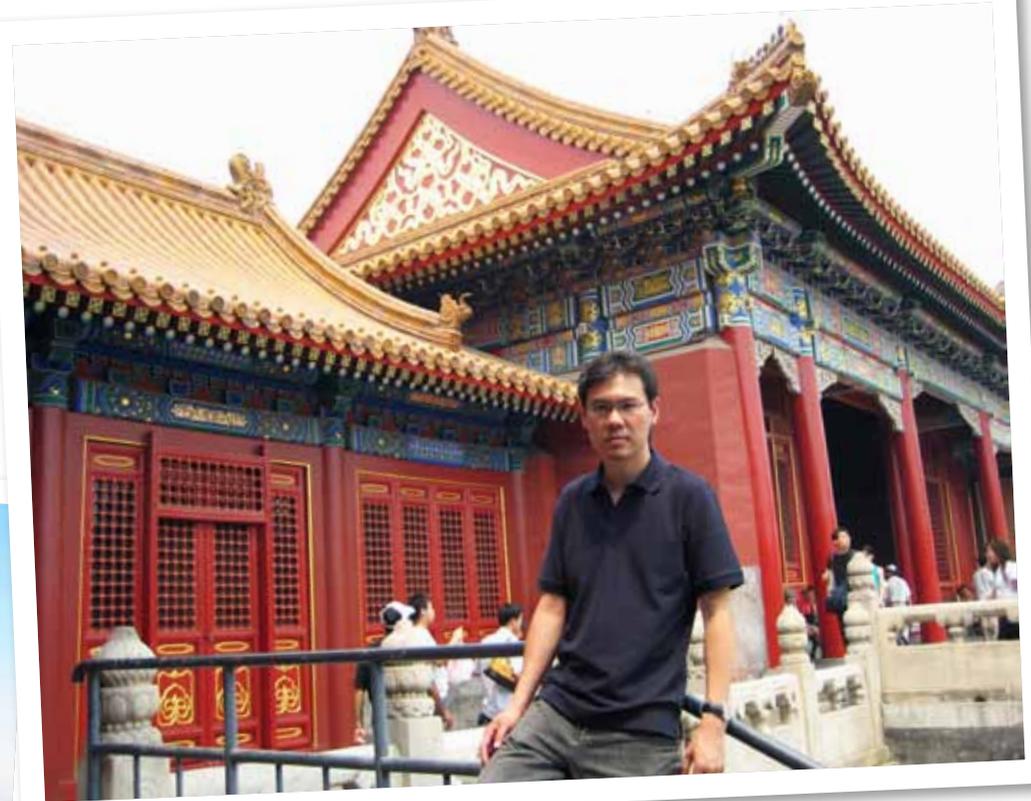
**Zhang Yi**

*PhD, Chemistry and Biological Chemistry*



“ Thank you for being such a great student. I indeed learnt a lot working together with you! ”

**Asst Prof Chew Lock Yue**



“ Dear Asst Prof Chew Lock Yue, ”

Thank you very much for your guidance. You enabled me to reach the pinnacle of my studies.

**Chung Ning Ning,**  
*PhD, Physics and Applied Physics*









# Credits (Team Behind Yearbook 2010)

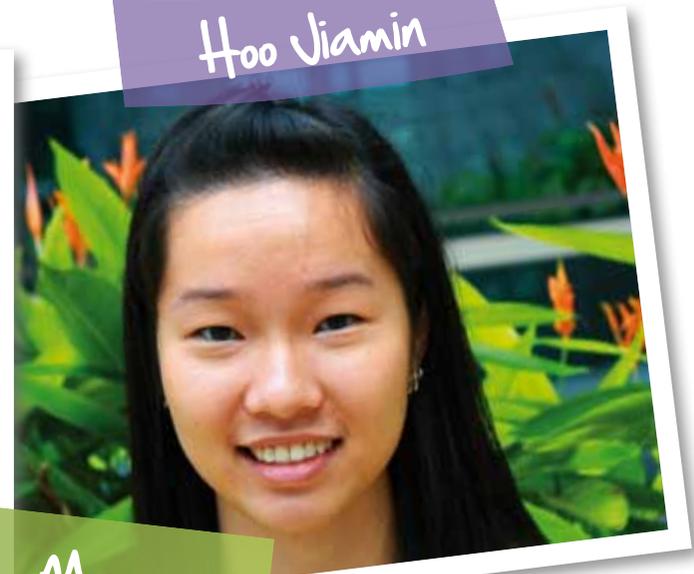
Holly Wu



Wendy Leong



Hoo Jiamin



Wong Poh Shen



Max



# SPMS Survey Form

**Return to:**  
**School of Physical and Mathematical Sciences**  
**Nanyang Technological University**  
**21 Nanyang Link SPMS-04-01**  
**Singapore 637371**  
**Attention: Ms Gwee Rong Rong**

## Survey of SPMS Class of 2010

Name: \_\_\_\_\_  
NRIC Number: \_\_\_\_\_  
Personal Email (if any): \_\_\_\_\_  
Contact Number: \_\_\_\_\_

Please mark with a "X" where appropriate.

A. Have you found a job?      ( ) YES                      ( ) NO

If Yes,

- i. Name of Company :
- ii. Position:
- iii. Date that you started/starting your job :
- iv. Salary Range:  
( ) SGD2000 & below                      ( ) SGD2001 to SGD2500  
( ) SGD2501 to SGD3000                ( ) SGD3001 to SGD3500  
( ) SGD3501 to SGD4000                ( ) Above SGD4000

If No,

Please indicate reason:

- ( ) Furthering studies, Name of institution: \_\_\_\_\_  
( ) Not actively looking for a job  
( ) Having difficulty in finding a job  
( ) Others, please specify:

Thank you for your time.

All information provided will be kept PRIVATE & CONFIDENTIAL.