FROM EDITORS

It’s my 5th year with IEM (since I’m in double degree program)! And it’s my 3rd year being an editor for IEM yearbook. I still remember how lost I was the first time I was doing it, and I’ve learned much from experiences. I’m still learning every year with a new team.

IEM is so different from any other major in NTU, not only in our unique curriculum, but also in the family-like atmosphere. IEM yearbook is like our family album, recording our precious memories.

Since I’m graduating soon, it’ll be my last time working on IEM yearbook. But I’ll always remember IEM and come back to visit everyone from time to time! And I really hope some of you would carry on with it and make it a never-ending memory!

- Li Ruixue

I’m graduating by the end of this academic year and I can’t believe how quickly 4 years can fly by as I learn to cherish all those experiences I have obtained over the years as well as the close bonding with friends as our small IEM cohort has become so closely bonded.

By being part of the IEM yearbook team, I feel honored to be able to record these nostalgic memories so hopefully my classmates of AY 2014/2015 can also reminisce on those happy memories of IEM through the splendid work the IEM yearbook team has assembled for this year. During these four years in IEM, my interests in programming, artistic drawing, journalism and filmmaking became greatly cultivated and it definitely helped me gain valuable experience as well as help give me a clearer idea on my future career prospects.

Being passionate about my own home, IEM family, I want to make contribution to it, that’s what drives me here. It’s a totally fresh experience for me to join IBM yearbook production team as a year 2 student. Year 2013-2014 was my first year entered university and it was IEM letting me feel the love from the family. So I decided to dedicate myself to IEM yearbook this year and I found myself knowing more about IEM now. It was really an enjoyable journey with IEM yearbook and I sincerely hope you can find yourself in love with her.

- Dong Mengxin

This is the first time for me to design the IEM yearbook. I have to say it is a great experience. It is a chance for me to learn new skills as well as to have a better understanding about IBM. As a relatively new major not only in Singapore, but also in the world, IBM has achieved so much in recent years. As a year-3 IBM student, I am really proud to hear my seniors excel in different areas. They have provided us a good model, it is our job to keep forward and try to surpass them to make IBM even more proud. During these years in IBM, I have met great friends, staffs and professors. It is really a fun major and I never doubt it is the right direction to go. Brothers and sisters, let’s work harder to build an excellent IBM family together!

- Li Xiang

To the graduating batch, I wish you all the best for your future endeavors and never forget how all these learning experiences in IEM have shaped the person you are today.

- Jonathan Ming Chun Yu
NTU Open House 2014 was an interesting day for both guests and current students alike. I was stationed in the Software Engineering Lab, together with a few of course mates from Information Engineering and Media (IEM). We guided guests from the Open House around the Software Engineering Lab, and showcased, in detail, about our works at Information Engineering and Media.

The works showcased can include projects from Final Year Projects (done in Final Year), Design Innovation Projects (done in Year 3) and from Interactive Design projects.

Guests were able to see, in detail, the processes from learning to implementing design concepts, where art meets technology.
IEM held a Moonlight Party on the 27th September.

Not only was it a Mid-Autumn party for students to chill out before their Recess Week, it was a time when the IEM family gathered to celebrate and network.

From First-Years to Alumni, from the Course Coordinators to Professors, each part of the IEM family were there to get to know each other better, and strengthen their understanding of what it means to be IEM.

From Lantern Riddles to musical performances, the students had great fun and great food at the Moonlight Party.

IEM’s Shirt-Design Competition was voted on by those who attended. All in all, it was a time for IEM to come together, strengthen their bonds and have a great time, in preparation for the journey, still ahead.

Professor Andy Khong, was there to gather feedback from the students. Academic matters, as well as general student-life, were discussed to understand the current problems that students are facing.

Several Alumni also took their time off from their schedules to be present at the party to share their experiences in school, as well as the path they have chosen after graduation.

But of course, there are fun and games to be had!
Liu Tong
ST Electronics
Sustainable Living Challenge

ACHIEVEMENTS & REWARDS
1) For those who’re not very familiar with this LKY gold medal, could you explain a bit what it’s about? What does achieving it signify?

These gold medals are awarded in recognition of academic excellence. The Lee Kuan Yew Gold Medal awards all began back in 1996 when we saw the first ten NTU recipients of the award, and thereafter, numerous NTU graduates who emerged top in their respective programmes have been bestowed the prestige of the Lee Kuan Yew Gold Medals.

Last year, the gold medals were awarded to 31 top NTU students who are first in general proficiency throughout their respective programmes of study and who have obtained First Class Honours.

2) What are your thoughts and feelings in having achieved such a prestigious medal?

I feel very lucky and honored to receive this award as my hard work in university is recognized. I would like to thank all my dear professors who shared their profound knowledge and valuable advice. I would also like to thank all my teammates, friends, course mates and project mates who gave me courage and made great contribution on our schoolwork. Besides, the medal is not only recognition but also an inspiration for my career and future study. I will continue the hardworking attitude and try to excel in my field.

3) Any words of advice or encouragement you would like to share with your IEM junior in regards to aiming for excellent academic results?

As a student, study is always the most important aspect in a university life. Instead of passively and quietly attending lectures and tutorials, students should also try to interact actively with their professors and tutors through the classes by achieving a more thorough understanding. Never afraid of asking questions towards your professors and tutors as in they are always willing to help. If possible, always try to do a quick preview before the actual lecture and tutorials. Try to do revision regularly instead of studying only before the exam. Try to summarize key points and own understanding on a notebook when doing revision which is quite helpful for future review. Finally yet importantly, it is also advisable to study in a group with course mates so that several questions can be discussed.

4) What is your greatest takeaway from your experience during your 4 years studies in IEM?

IEM really give me a chance to explore my potential in various fields such as art, media and engineering. I always wanted to pursue a degree, which we not only go thorough logical engineering modules but also utilize a grand sense of creativity. IEM is such a great major. Throughout the four-year study in IEM, my greatest takeaway is that I exposed in more teamwork because of the intensive project based modules. Besides, I also gain great self-learning ability and problem solving skills, which are very valuable qualities for my future career.
Our very own IEM Alumni Wang JingYuan (William) secured a platinum award for his project on Autonomous Battlefield Extraction Robot (Aber) in the Tech Factor Challenge organized by ST electronics (Training and Simulation Systems) this year. JingYuan shares with us a few words about his experiences during the course of the competition.

1) Tell us about this competition.
Tech Factor Challenge, organised by ST Electronics (Training and Simulation Systems), is a student technology competition which aims to promote innovation in engineering technology and cultivate talent among the next generation of engineers. Participants for this year are to design and develop robotic application ideas for military/security/civil defence use involving the robot making decisions and taking actions to complete a task, and build a related demonstrable robotic prototype.

The judging panel is formed by people who hold high positions in Ministry of Defence and ST Electronics. They judge based on the principle of Innovativeness and Creativity of Solution, Practicality & Commercial Viability, Technical Execution and Task Performance Ability of each robot. The Platinum Award is the highest award in Tech Factor Challenge. This award, championed by NTU, NUS, ST Electronic and Ministry of Defence, is an important accolade to engineering students in Singapore. NTU and ST Electronic are currently looking forwards for further collaborations on developing our robot.

2) Tell us more about your winning project.
Based on an article published on CNN, in US army, many soldiers die not because of being mortally wounded, but simply due to delayed treatment. But rescuing and extracting fallen soldiers often requires risking additional lives under gunfire. As a result, fallen soldiers have to wait until their rescue is reasonably safe - a wait they might not survive. Therefore delayed extraction and treatment is still a big problem for the military today.

We have developed a robot to rescue and transport injured soldiers to safe place without risking additional life. The unique pickup method can issue the safety of the soldiers during the rescue and transportation process. The implementation of virtual reality technique and aviator control allows the controllers to interact with the environment around the robot as if they are physically there. Our robot can be also used in civil defence and natural disaster environment.

3) What attracted you to this competition in the first place?
My objective of participating in this competition was to further develop my interest in the robotics field. I was very fortunate to be given the opportunities to network with senior management from ST Electronic and Ministry of Defence. It was a blessing that I found a great teammate and we came out on top.

4) How has your knowledge in IEM benefitted you during the course of this competition?
As an IEM student majoring in infoomm engineering, I do not have much knowledge about the robotics field. But I realised that I have a strong interest in this robotic competition when I first saw the topic. I picked up the relevant knowledge along the way and made it thru the competition. The previous IEM training in product design value added to the manufacturing and packaging of my robot. The various project opportunities offered by IEM have trained me to think innovatively. IEM had created openings for me to develop myself in many different aspects and prepared me well to face the different challenges.

5) Your biggest takeaway from this experience?
My biggest takeaway from this competition was that interest could be the best teacher that keep me motivated and continued to be a pro-active learner, which led to what I am now to this success. We may not have the skill set required to fulfill certain task in the expected manner. But don’t worry and just follow your heart, you will be surprised by what and how much your interest could lead you to.
Sustainable Living Challenge

1) Can you tell us more about what this contest is all about?

The Sustainable Living Challenge which was held at the global company Unilever is an avenue for young Engineers to leverage their knowledge and expertise to offer innovative solutions in building sustainable business practices.

This competition required us to set ourselves an audacious vision in hopefully doubling the sales with our potential idea while simultaneously halving the environment footprint. In essence, the de-coupling of Growth and Environmental Impact requires discontinuous thinking and innovative business practices which is a definite must if you wanted to win the competition.

This competition was open to all undergraduates at NUS/NTU pursuing any Engineering course.

2) Can you elaborate more on your winning idea?

Our idea of substituting a wooden stick of the ice cream bar with an edible stick made of sugar-free hard candy allowed us to modify the shape of the ice cream while keeping the volume of the ice cream unchanged. This was done in order to minimize the waste associated with ice cream bar. By doing so, it increases transportation efficiency and allows the reduction deforestation and the usage of plastic packaging.

3) Your final thoughts and feelings during the course of the competition?

It is definitely an eye opening experience for both of us. We have learnt a lot from the other contestants. This contest has enabled us to think outside the box as well as polished our presentation skills at the same time.

To prepare for this contest, we spent days and nights brainstorming and refining our ideas during our free time and we are glad that every effort spent has eventually paid out. We are grateful of the skills learnt from IEM courses for presenting our idea in a logical manner together with stunning visuals.
EXCHANGE

ZHONG SAILIN
HE MEIJIE
XU KE
YANG ZHAN
LI RUIXUE
JENESYS 2.0
1. Which school/country did you go to?
EPFL/Switzerland

2. Why do you choose this school/country?
EPFL ranks high in engineering universities and I learned French for one year and hoped to go to a French speaking country. EPFL is located in the French speaking part of Switzerland.

3. Any memorable moments you could share with us during your exchange period?
When I traveled to Scotland, I had trouble finding a supermarket. At that time, a hospitable local man drove me and my friend to the supermarket and insisted to wait for us and sent us back. Another thing is I joined “New Europe” when I was travelling. DSC_2070 is the tour guide in Czech. He is a local gay and very enthusiasm. I got a lot of vivid stories about Czech from him.

4. Any suggestions to juniors to choose exchange school and country?
Consider the language related to the country that you plan to go. Some of the local people may not be able to communicate with you in English. Check the courses in English in advance as well.
1. Which school/country did you go to?
I went for exchange to the Université de Technologie de Troyes in France.

2. Why do you choose this school/country?
First it’s because I wanted to have a chance to travel around Europe to learn about their cultures; second I have learned French as UE for 2 semesters, it’s more easy for me to France and it also can help me practice French; third, matching courses in this school is easy and it also has many English classes so that the language problem can be avoided.

3. Any memorable moments you could share with us during your exchange period?
We came to the school to take one-month intensive language course before the semester began, during that time, all the international exchange students got together to study and play around. Once the international office organized us to a lake to experience sailing and boating; it’s my first time to do windsurfing. 3-4 people controlled one sailboard, it’s a fresh and exciting experience. As for the boating, 5 people took one boat racing to the destination; all of us played some games on the lake and the most memorable moment was the moment that I went overboard during the game; too terrified because I completely don’t know how to swim!!!

4. Any suggestions to juniors to choose exchange school and country?
I think that choosing a country you know very well is really important. Language sometimes can be crucial while going abroad; in most places, English is ok but if you go to country like France and Germany, maybe it’s better to learn some French and German forehead. Also try to choose the school which is easy to match courses.
I am Xu Ke from IEM Year 3 and have just finished my exchange study in Universidad Carlos III de Madrid.

There are several photos I would like to share, giving a glance at how my exchange life looks like.
Being an exchange student in Lund University is the best decision I have ever made. Sweden is a country loves nature, peace, equality, and liberty, and Lund is a university town full of teenagers in southmost Sweden, and it is historical, energetic, and also creative. Lund is famous for its one of the best universities in the world and one of the oldest cathedrals. You can also exchange the opinions in the classroom and also feel the history when taking a bike through the town. Swedish loves party a lot, and you can enjoy parties about movies, music, sports, games, Sittnings (traditional dinner), or just for fun! Carnivals, nations (student organisation), gyms, ESN (traveling club) will make your life much more than only study.

Food is too expensive? You will find private or public kitchen to cook by yourself; Transportation is too expensive? You can buy a cheap secondhand bike as locals do; Living alone is too boring? Corridor party invitations will bring you more friends.

If you face too much pressure now and want to get work-life balance back, Lund University is definitely the best place for you! It will help you focus on life itself and learn how to live as happy as Swedish!
1. Which school/country did you go to?
Akita International University, Japan.

2. Why do you choose this school/country?
I’ve been interested in Japanese culture and have been studying Japanese for some time. I wished to take this chance to improve my Japanese and experience Japan.

3. Any memorable moments you could share with us during your exchange period?
There are so many of them that I don’t know where to start! Our university is actually quite far from the city, and public transportation stops quite early at night and taxis are expensive. So at the end of the semester after my Japanese friends and I went out for farewell party (we had nice dinners and go to karaoke), we walked back to school from the train station for a couple of times. It was one-hour walk in the countryside, across the rice fields and sometimes through the forest (with bears!), and it was so peaceful and totally new experience for someone grown up in cities, like me. We were singing songs and talked about all kinds of things. It was a bit cloudy then so we couldn’t see many stars, but the sky and fields are still so beauty that I want to cry thinking of the scenery and my friends.

4. Any suggestions to juniors to choose exchange school and country?
Of course it’ll be good if you have strong interests in that country. Also it’s highly recommended you learn the language, even if only a little bit, because it’ll make the experience totally different. You’ll find the country much easier to travel around and the people much easier to get along with. And you’ll have a much deeper understanding of the country and the culture.

During the Sakura (cherry blossom) season in the park in the city nearby

Met a Japanese friend during my trip to Hanamaki, and he was so nice to show me around, not only in the city but also took me to museums/parks outside of the city. The photo is taken in front of a drawing that is only visible at night (a scene from 銀河鉄道の夜, one of my favorite Japanese writer in my childhood, and Hanamaki is actually his hometown)

Watched traditional dances during a local festival. Even though the Sakura flowers are already falling and that day was very windy, but the performers still put up amazing performances.

LI RUIXUE
While seemingly like a game of charades, this was not an occurrence in Singapore. Rather, 4 IEM students were part of an entourage on a cultural exchange trip to Japan. Alongside students from National University of Singapore (NUS) and Singapore University of Technology and Design (SUTD), a group of 25 students with an NTU professor from the College of Computing spent an enjoyable and fulfilling week under the JENESYS 2.0 program.

As a relatively young programme under the School of EEE, one might expect that such precious opportunities would not be accorded to IEM. The JENESYS 2.0 program, however, invited participants whom field of studies were related to Digital Media, to experience and learn from Japan’s leading technology and industry.

We only had a week or less left if we take away the traveling time, we learnt a lot. Even as we presented our findings to Japan International Cooperation Centre (JICE) who organized the trip, we realized that what we have learnt thus far, there is still much more to be taken in. In conclusion, JENESYS 2.0 had definitely fulfilled its purpose in stirring interest of Japan, regarding its culture, characteristics of its people or advanced technology in us.
Group Member: NG YEN PENG, WENDY
ONG WEI QUAN, DESMOND
YU YAO, ZHONG HUIWEN (Leader)

Supervisors: Asst Prof Andy Khong Wai Hoong

Project Title: Android App for E-learning in Digital Signal Processing

Equipment Required: Android Handphones

Summary: Develop an android app for use during E-learning in the Digital Signal Processing module. The app provides students with the tools to visualize signal operations, sampling and convolution. Students will be able to interact with the demonstration by drawing their own waveform or using real world signals from voice data to pictures.

Group Member: ASTRID WONG SIEW ME, KWOK MING SHENG (Leader)
LEONG KAH SOON LESTER, SEE YIHUI
ZHANG NAN

Supervisors: A/P Chan Kap Luk

Project Title: Clickerless Clicker System

Summary: To develop a mobile app for both Android and iOS, as well as a web app, that may be used to replace the current clicker system in NTU.
Group Member: CHEN SIJIA, KOH WEI HAO (Leader) 
MELVIN WONG JIAN WEN, PHUA WEI JUN 
SHEN YIWEI, WEI RAN

Supervisors: A/P Chua Hock Chuan,A/P Tan Yap Peng

Project Title: Peer Evaluation Webpage

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Group Member: CHEW HSIU CH, NATALIA SABRINA ARIFIN TJENG 
NG JIAN WEI, TANNY YAP JIAN NAN 
TEO YING YING, EDLYN EMILIE KUEH 
WONG HEJUN (Leader) 

Supervisors: A/P Chua Hock Chuan,A/P Tan Yap Peng

Project Title: Online Quiz System
Group Member: DANG BICH NGOC (Leader), DANG THI HOANG YEN
NGUYEN THU TRANG, TAN JOO HONG
WIDIANTO WIRAWAN SALIM

Supervisors: A/P Chan Kap Luk

Project Title: Online Assessment Security & Authentication Platform

Summary: A platform that provides security and authentication to students intending to take online assessment using their own PC. Feature includes username/password authentication, face verification authentication, screen lock, etc.

Group Member: CHAN SHENG REN CEPHEUS, CHENG HAO SHENG
HU LEIMIN, KOH KA YING
KOH YUANXIN CELESTE, SHAO QING
TEO WEN JIE (Leader), YIN SIYU
YU LE, YU MING CHUN JONATHAN

Supervisors: Junsong Yuan, Jingjing Meng

Project Title: Mobile GPS navigation application in a local context

Summary: The project's aim is to create an GPS navigation application applicable to specifically Singapore, mainly integrating a voice recognition engine which is able to recognise Singapore road names more accurately than current general mobile voice recognition, together with other navigation functions.
Group Member: CHUA SONG YANG, ELIZA THAM LI XIN
MARGARETNA, NAH YU EN
TANG YAO WEN FABIAN, THAM CHOON FAI
WONG DING JIE (Leader), ZHOU YUYUN

Supervisors: A/P Pina Marziliano

Project Title: “Bike It” - A safe, tourist navigation concept.

Summary: To provide a safe, travelling experience by navigating travellers along the paths less travelled, bringing up histories and points of interests for explorers to indulge in. The proof of concept will first be developed on the Android platform, providing a personal app to travellers, coupling with bone conduction earphones to emphasise the concept of safety while exploring. Further development will head towards stand-alone devices for niche markets and specific purposes.

Group Member: CHEW SI QI, ENG TENG SIN
HANNA CHRISTINA,IFFRI HUSAIRI BIN ISMAIL
KOH WEN YI, MUHAMMAD GHALIB BIN MOHAMED
TAN SHU QING LAUREN, TONG JING NING (Leader)
MUHAMMAD SHAFIQ BIN SHITH

Supervisors: Asst Prof Andy Khong Wai Hoong

Project Title: Digital Signage

Summary: Setting up a Digital Signage, providing a unique user experience through interactive interface design.
Group Member: ABRAHAM KANG SENG LIANG, CHAN WAI SAN (Leader)  
KAY SI YING, NUR HAFIZAH BINTE RAMLAN  
TAN JIN XIAN, WANG XINLING  
WONG KAY AIK, XIE YUTIAN,  
XU MENCYAO

Supervisors: Asst Prof Andy Khong Wai Hoong

Project Title: Educational Leap Motion-based Application

Summary: This is an application which uses collaborative learning as a basis of interaction with the computer. With the visually appealing components in this application, it can interest more students to gain knowledge in an interactive approach, rather than just textbooks. Students will also be able to learn from each other through this platform.

Group Member: CHEUNG KWAN CHIU, CHIA LI JING  
CHIEW HUI YING CHLOE (Leader), JIANG SHUO  
JOSEPHINE NG YING TIAN, NGUYEN MINH THUONG  
PHAM TAM LINH, TAN HAO FENG  
TAN JIA HAO, ZHUO HUIYU

Supervisors: Prof Andy Khong Wai Hoong, Maung Kyaw Zaw Lin

Project Title: Whiteboard Application

Equipment Required: Whiteboard, camera, glass panel

Summary: The project is about producing an application that able to save the things written on the whiteboard by capturing the keystrokes. Eventually upload the PDF file up to the Edventure & emails.
To celebrate 50 years of TV broadcasting in Singapore, Visionaries have
produced a short film “Together”. The short film will show the social changes
between the different generations of Singaporeans watching TV, following
the history of television. The film opens with local Kampong scenes which
represent the first generation when TV first debuted in Singapore. It follows
with the middle generation sharing the same nostalgic memories of TV viewing.
Finally the current generation expresses their wish for a semblance of the past.

The purpose of making this film is to convey that TV viewing together should
not be a thing of the past. Gatherings in front of the television should not only
be during special occasions, but a normal family affair.

BoyzTV production presents “What's So Funny?”, we explore the power of
situational comedies (in the context of Phua Chu Kang pte ltd.) as well as
explore more of the issues associated with Mediacorp as well as its future.
How has the evolution of technology and the modern busy lifestyle affected the way we view television? We look into the daily television experience of a normal housewife, and share how television may one day be a dying business. When's the last time you watch television with your family?

A CS2006 project video in conjunction with the 50th year of TV broadcast in Singapore.

We were very honoured to have been given the chance to work with and interview Ms. Lin Mei Jiao.
Those Years with Television: A Memory

The elders, who were born before 1960’s, witnessed the history of both Singapore and Singapore television. From the first black and white television box to full color digital television nowadays, there’s a lot of change and continuities throughout the years. The elders are the best ones to bring memories that are almost forgotten to the younger generation.

How My Family Meets Television

Television arrived in Singapore on 15th February, 1963, with one hour per week of programming on Channel 5. There were about 2,400 television sets around the country that time. All the neighbors would gather together to watch the only television set in the kampong, as written by Mr. Lam Chun See on his nostalgia blog “Good Morning Yesterday”. The facts reveal that television in the past is not only an entertainment platform, but also a bond among family members that extend even towards the whole community to promote their relationship.
IEM CONVOCATION 2014

WARMEST CONGRATULATION TO THE CLASS OF 2014
IEM has given me myriads of learning opportunities while I was having fun at school and forging strong bonds with my course mates. The all-roundedness of this programme has landed me a promising career with NTUC Income as a graduate trainee. I’m so proud to be an IEM graduate and the best is yet to be!

- Wang Yiying

IEM indicated a new career path for me. And thanks for everything that IEM taught which make me stand out and found the job I have passion to. Tech and Art never conflict each other.

- Zhao Bing
  (Creative Designer)

IEM’s diversified courses in different disciplines have driven my curiosity on knowledge and enhanced my adaptability towards changing environment, which are valuable in terms of career development.

- Lin Dekun
  (Technology management associate, Citibank N.A.)

I was lucky to make the right decision of joining IEM the big family. Thank you my dear friends, for sharing and bearing with me during the years of university study!

- Dong Xuesong
  (Technology Consultant, Hewlett Packard)