TOP GRADUATE
NADIA SHAH
IS UP FOR A NEW
CHALLENGE

GIRL
POWER
BEATING THE
BOYS TO AN IT
SCHOLARSHIP

DOCTOR WITHOUT BORDERS
ALUMNUS HER ZHISHENG IS
GOING FROM DIPLOMA TO PHD

BUG OFF!
A FASTER WAY TO
DETECT SUPERBUGS

SINGAPORE ON
A WHEELCHAIR
HOW DISABLED-FRIENDLY ARE WE?

VA VA VROOM
THE F1 COMES TO CAMPUS

2009
GRADUATES SCORE
BIG IN TOP SCHOLARSHIPS
When Her Zhisheng was a Biotechnology student at Ngee Ann Polytechnic, he had doubts if he could ever get a PhD, even if he did toy with the ambition. At that time, it was almost unheard of to go from a diploma to a doctorate. Today, the 26-year-old, who is a researcher at A*Star Singapore Immunology Network, is a proud PhD candidate.

Anything is possible in the right learning environment, and at Ngee Ann Polytechnic, that’s what we strive to give our students. We are satisfied to see an encouraging number of graduates secure prestigious undergraduate scholarships from top organisations.

When it comes to learning, we push the boundaries. Whether it’s creating unique learning opportunities for our high-calibre students to San Francisco or partnering the industry to achieve new breakthroughs in research, as two of our Biomedical Science students did when they found a much faster way to detect superbugs, we always try to see how we can do things differently, and meaningfully.

The stories in this issue speak for themselves.

Editorial Note

When Her Zhisheng was a Biotechnology student at Ngee Ann Polytechnic, he had doubts if he could ever get a PhD, even if he did toy with the ambition. At that time, it was almost unheard of to go from a diploma to a doctorate. Today, the 26-year-old, who is a researcher at A*Star Singapore Immunology Network, is a proud PhD candidate.

Anything is possible in the right learning environment, and at Ngee Ann Polytechnic, that’s what we strive to give our students. We are satisfied to see an encouraging number of graduates secure prestigious undergraduate scholarships from top organisations.

When it comes to learning, we push the boundaries. Whether it’s creating unique learning opportunities for our high-calibre students to San Francisco or partnering the industry to achieve new breakthroughs in research, as two of our Biomedical Science students did when they found a much faster way to detect superbugs, we always try to see how we can do things differently, and meaningfully.

The stories in this issue speak for themselves.
JEANINE TAN

First-year Diploma in Information Technology student Goh Xue Li not only beat 147 applicants to be among the 20 recipients of the inaugural Infocomm Development Authority Integrated Scholarship – she was also the only female winner among the batch.

The scholarship, which is awarded to students with outstanding O level results, will fund her education from polytechnic to university. It will also provide support to her future career in the infocomm sector.

While Xue Li is well into her first semester at Ngee Ann Polytechnic, she is still in disbelief that she is the only female face among the winners.

"Actually, I still find that hard to believe. While I feel honoured and privileged, I also feel the pressure to work harder in order to prove myself," she said.

Her interest in the field was first piqued by a Japanese drama serial, which revolved around a young hacker who puts his computer skills to good use by helping the police unravel a terrorist plot.

Never mind if the hacker in the show was male; Xue Li was nonetheless inspired to try and make her own way in the male-dominated IT industry.

"I always make a stand when I’m convinced that my ideas are valid!"

Ask her what gave her an edge over the other applicants, and she is a little lost for words. But an indication of her mettle comes through when she discusses what qualities are needed to make it.

"A thick skin is important. It’s necessary when I have to counter the mindset that IT girls are not as savvy as the boys," she said with a laugh.

"I always make a stand when I’m convinced that my ideas are valid!"

The IT Girl

At only 17 years old, Goh Xue Li already has the honour of being the only female recipient of a prestigious infocomm scholarship

TEXT: JESSY CHUA

Ngee Ann students score big wins in two prestigious awards

TEXT: JEANINE TAN

Ngee Ann Polytechnic (NP) students bagged the most awards at the presentation of two prestigious national scholarships recently.

Four out of 10 recipients of the Lee Kuan Yew Scholarship to Encourage Upgrading (LKY-STEP) for polytechnic graduates who are entering university come from NP.

Meanwhile, nine out of the 15 recipients of the LKY-STEP award for ITE graduates who have progressed to a polytechnic are NP students. Four of these nine recipients will be awarded the inaugural Sultan Haji Omar Ali Saifuddien (SHOAS) Book Prize, which is worth $500.

As for the inaugural HOME Team Merit Award, which is awarded by the Ministry of Home Affairs (MHA), six out of the eight scholarship recipients were NP students. The scholarship was launched this year to groom young talent to join the MHA.
Have Wheelchair, Will Travel?

Singapore can tap into the booming accessible tourism market by making infrastructure more disabled-friendly, as a group of Tourism & Resort Management students find out

TEXT: JEANINE TAN

I f you think getting around Singapore is easy, you haven’t tried to do so in a wheelchair yet.

Just ask Joanne Huang, a Tourism & Resort Management student who graduated this year. With the help of Angeline Chua and four other teammates, she attempted to travel around Singapore in a wheelchair for a day last year in the name of field research.

Their final year project was on the topic “Accessible Tourism in Singapore”, and their aim was to find out first-hand just how accessible Singapore is for the wheelchair-bound tourist.

The group started their journey at Choa Chu Kang, and covered hotspots in Singapore such as Citilink, Bugis Junction, Vivocity and Sentosa. As part of their experiment, they also took public transport to complete their journey.

The team was invited to present their findings at the International Conference for Accessible Tourism 2009, which was held in April at the Singapore Management University. About 100 participants from more than 10 countries took part in the conference.

Their verdict? Singapore has certainly made improvements, but we’re not quite there yet.

Take, for example, the MRT. The gap between train and platform at MRT stations varies from station to station. When the gap is particularly wide, for example, at City Hall MRT station, it became difficult to wheel Joanne onto the train without the risk of the smaller caster wheels of the wheelchair getting lodged in the gap.

“It was definitely an eye-opening experience. You see a place through new eyes when you’re getting around it in a wheelchair,” said Angeline. “Even as the ‘caregiver’ who was pushing the wheelchair, it was very tedious at times because of these obstacles.”

At a food court in a popular shopping mall, the layout was split-level, making buying food next to impossible, and the tables were not designed to accommodate a diner in a wheelchair either.

These findings have significance for the accessible tourism industry, which has huge growth potential. Accessible tourism not only covers the disabled tourist, but the increasingly affluent elderly, who can afford to travel but may have limited mobility. According to a Straits Times article this year, the silver market across Asia Pacific is worth an estimated US$1 trillion.

But other than an improvement to infrastructure, Angeline added that she also hopes the attitude of the public can change.

“When we received help, it was always voluntary and we never had to ask for it,” she said. “But unfortunately, more common on that day was people who just gawked at us.” np
A Walk on the Dark Side

Gangsters and glue-sniffers were all in a day’s work for Don Aravind Rajah, who shot his graduate film in gritty Henderson Road

TEXT: JESSY CHUA

A spiring filmmaker Don Aravind Rajah did not expect to cross paths with gangsters, glue-sniffers and a nondescript elderly woman who urinates at void decks while filming on location.

But the grim one-room rental flat cluster at Henderson Road, where he encountered such alternative characters, was exactly what the 26-year-old needed to lend authenticity to his graduate short film “Sakkarangal” (“Wheels” in Tamil).

“The film is about an unlikely friendship that blossoms between a young Indian boy and an elderly Chinese woman. They aren't well-to-do, so to build a strong narrative, we needed a location that could bring out the characters,” said Don, who graduated from the Film, Sound & Video (FSV) course in May last year.

“Since the gangsters weren’t disrupting our filming, we went ahead in using the location,” he added with a chuckle.

“Sakkarangal”, which took six months to complete, was fully sponsored by the School of Film and Media Studies (FMS) and the Singapore Film Commission. It was inspired by a true story that he chanced upon while surfing the National Volunteer & Philanthropy Centre website.

In the film, an old bicycle brings the two disparate characters together, showing how friendship can go beyond the barriers of race and age.

Together with seven other short films by FSV alumni, “Sakkarangal” was shown at Kino, a screening organised by FMS that was attended by members of the film industry. Kino was held at Golden Village Grand on May 6.

“Sakkarangal” tells the story of an unlikely friendship between a young Indian boy and an elderly Chinese woman.

Special Mentions

• SingTel and Ngee Ann are working together to develop new modules for the Diploma in Electronic & Computer Engineering. Students will get access to the facilities at SingTel’s multi-million dollar Broadcast Innovation Centre and the Bukit Timah satellite earth station for practical classes and R&D projects. They can also do their internship at SingTel.

• For collecting 1321 units of blood last year, the Red Cross Humanitarian Network – Ngee Ann Polytechnic Chapter received a Gold Award from Minister for Health, Mr Khaw Boon Wan, on World Blood Donor Day on June 13.

• The School of InfoComm Technology (ICT) emerged champions in the Poly/ITE category of the National Infocomm Competition this year. This is the third consecutive win over three years for ICT. More than 50 students from ICT participated in the competition, which aims to attract and nurture young talent in the field of infocomm technology.

• The Mechanical Engineering division saw one student project winning the Merit award and three student projects winning Commendation awards at the Tan Kah Kee Young Inventors’ Awards this year. The Dynamic Anti-Spasticity Hand Device and the Low-cost Head Control Mouse won a Merit award and Commendation award respectively in the Senior Student category. The Versatile Shopping Trolley and Mobile Lumbar Traction Unit won Commendation awards in the Open category.

*Sakkarangal* tells the story of an unlikely friendship between a young Indian boy and an elderly Chinese woman.
Nadia Shah d/o Gulam Sarwar Shah

Course: Mass Communication  
Awards: Ngee Ann Kongsi Gold Medal and Lien Ying Chow Gold Medal

For Nadia Shah, the route to becoming Ngee Ann Polytechnic’s top graduate began in the most unlikely of ways.

As a 16-year-old, she decided to join Ngee Ann because she noticed nachos were on sale at the lifestyle library, and she was impressed that a school could be so in tune with what teenagers wanted.

And in the Mass Communication course, she discovered her passion for journalism.

“The power of sharing a story with others is something I really enjoy,” she said.

What sets Nadia apart from her peers is her drive. Her wallet got emptier during her internship at Elle magazine, but she learnt plenty about the industry. Then, as part of her third-year internship, she was attached to The Straits Times’ Urban magazine, where she picked up nifty networking skills.

Next, Nadia’s got her eye set on the USA. She plans to study film production at the University of Southern California in Los Angeles.

“It’s going to be a whole new experience, which is going to be scary, but I know I’ll grow as a person. I want to challenge myself,” she said.
Richard Kong
Course: Electronic & Computer Engineering
Awards: Lee Kuan Yew Award and Tay Eng Soon Gold Medal

Richard Kong is the Man with a Plan – without fail, he sets a goal every year. And the agenda when he first applied to the Electronic & Computer Engineering course was to become a Lee Kuan Yew award winner. “Before I became a student at Ngee Ann, I was at the administration building, and I saw a board with the names of the Lee Kuan Yew award winners. I told myself I’m going to win that award one day.”

At that time, he already had two achievements under his belt – he was named the top Normal (Academic) stream student in secondary school and at ITE, he became a Tay Eng Soon gold medallist. “Now, winning the Lee Kuan Yew award has given me encouragement.” he said.

Daniel Low
Course: Marine & Offshore Technology
Awards: Lee Kuan Yew Award

Daniel Low is fond of proclaiming, “You guys should try it!” The quirky habit aside, it’s because he’s done so many interesting things. He’s backpacked across Southeast Asia, volunteered with underprivileged kids and kayaked around Singapore as a member of NCC (Sea). Daniel is a top student who doesn’t just hit the books to get the grades. It’s the same idea that spurred him to enroll in the Marine & Offshore Technology course – it wasn’t just about getting a piece of paper, but pursuing a passion.

In Secondary Three, he kayaked past Sembawang Shipyard and was awed by the huge vessels he saw. “I told myself on that day, one day I’m going to design a ship,” he said. Seems like he’s well on his way!

Ang Jin Hui
Course: Information Technology
Awards: Lee Kuan Yew Award

For Ang Jin Hui, scoring 10 marks out of 100 wasn’t unusual in primary school. Things only started to look up when he joined the Students Council in Bukit Panjang Government High School, where many of his peers had the goal of getting into university.

“I realised that education is important and I decided to take charge of my life,” said the Information Technology graduate, who was also a Student Ambassador at Ngee Ann.

In 2004, he won the Lee Kuan Yew award for being the top N level student in Singapore. Five years later, he topped himself by winning the Lee Kuan Yew award again. “It’s always been up to us to make the change,” he said. “Some of us are just late bloomers.”

Joyce Au Yong
Xiao Wei
Diploma in Accounting
Institute of Certified Public Accountants of Singapore
Gold Medal & Prize

Lee Hui Yi
Diploma in Banking & Financial Services
POSB Gold Medal & Prize
Association of Banks in Singapore Prize • Citibank Prize

Perlyn Tan Pei Yun
Diploma in Business Information Technology
IDA Gold Medal & Prize • xEdge Consultancy Prize

Stanley Chin Yin Yee
Diploma in Business Studies
Lee Wee Nam Gold Medal & Prize • Asia Pacific Breweries Singapore Prize • Reck (Singapore) Prize • Saffron Hill Prize • Singapore Institute of Management Prize

Chua Lai Yong
Diploma in Tourism & Resort Management
STB Gold Medal & Prize • Abacus Travel Systems Prize • Richard Lee Memorial Prize

Haseenah Bte Md Yusuff
Diploma in Civil & Environmental Engineering
Shell Gold Medal & Prize (BE) • IES/IAEE Prize • The G N Sukumaran Memorial Prize

Koh Denghao
Diploma in Facilities Management
Management for Business
The Building and Construction Authority Gold Medal & Prize • Enkron International Prize

Daryl Wee Yi Xiang
Diploma in Real Estate Business
REDAS Gold Medal & Prize • Enkron International Prize • Lee Property Prize • Singapore Institute of Building Prize

Chit Su Yi Mon
Diploma in Biomedical Engineering
ST Electronics Gold Medal & Prize • Dymaxmed Prize

Richard Kong
Jia Qing
Diploma in Electronic & Computer Engineering
Creative Technology Gold Medal & Prize • IES Award • Citibank Prize • P&O Phoenix Contact Prize

Sim Kim Hong
Diploma in Network Systems & Security
IDA Gold Medal & Prize • NCS Prize

Zin Mon Pyone
Diploma in Electrical Engineering
Singapore Gold Medal & Prize • Omron Prize • Singapore Technologies Electronics Prize

Tan Weijie
Diploma in Engineering Informatics
IDA Gold Medal & Prize • Liusa Instruments Prize

Cheng Pak Wing
Diploma in Logistics Management
Caterpillar Logistics Gold Medal & Prize • Singapore Institute of Purchasing & Materials Management Prize

Vo Thi My Phuong
Diploma in Quality Management & Engineering
Dr A V Feigenbaum Gold Medal & ST Microelectronics Prize • Baxter Healthcare Prize • Singapore Quality Institute Prize

Ryan Wong Xin Jian
Diploma in Aerospace Technology
European Aeronautic Defence & Space Gold Medal & Prize • European Aeronautic Defence & Space Prize • The Institute of Materials (East Asia) Prize

Ng Ming Zher
Diploma in Mechanical Engineering
Lim Teck Guan Gold Medal & Prize • IES Award • ASHRRAE Singapore Chapter Prize

Daniel Low
Guangwen
Diploma in Marine & Offshore Technology
Keppe Offshore & Marine Gold Medal & Prize • Association of Singapore Marine Industries • Society of Naval Architects & Marine Engineers, Singapore Prize

Chua Chee Ming
Diploma in Mechatronic Engineering
Motorola Gold Medal & Prize • NASA/Aero/Space Holdings Prize • ST Kinetics Prize

Wong Mun Teng
Diploma in Product Design & Innovation
Amtek Gold Medal & Prize • The Singapore Mint Prize

Calvin, Vichai Choo Tong Hock
Diploma in Film, Sound & Video
The Shaw Foundation Gold Medal & Prize • Media Development Authority Prize

Nadia Shah d/o Gulum Sarwar Shah
Diploma in Mass Communication
MediaCorp Gold Prize & Prize • Singapore Press Holdings Prize

Cheng Cheng Yee
Diploma in Chinese Studies
SFCCA Gold Medal & Prize • ICBC Prize • Lianhe Zaobao Prize • SCBA Prize

Cherry Justine Chie
Diploma in Early Childhood Education
MCYS Gold Medal & Prize • NTUC Challenge Prize • PAP Community Foundation Prize • PAP Community Foundation Prize

Ang Liduan
Diploma in Health Sciences (Nursing)
SingHealth Gold Medal & Prize • National University Hospital Prize • Tan Tock Seng Hospital Prize

Ang Jin Hui
Diploma in Information Technology
IDA Gold Medal & Prize • Information Technology Management Association Prize • Microsoft Prize

Josephine Gan Yiling
Diploma in Mobile Business Solutions
IDA Gold Medal & Prize • SingTel Prize

Jasmine Lim Mei Xian
Diploma in Multimedia & Animation
MDA Gold Medal & Prize • Adobe Prize

Ong Ming Jian
Diploma in Biomedical Laboratory Technology
NUH Gold Medal & Prize • Abbott Laboratories (S) Prize • Backman Coulter Singapore Prize • Biomedical Group Prize • Genetec Biotechnologies Prize

Ong Han Kee
Diploma in Biomedical Science
Applied Biosystems Gold Medal & Prize • Singapore Association of Clinical Biochemists Prize

Stephanie Surya
Diploma in Chemical & Biomolecular Engineering
Shell Gold Medal & Prize (LSTC) • GlaxoSmithKline Prize

Hazwani Binte Rahim
Diploma in Horticulture & Landscape Management
Lady Yuen-Peng McNasie Gold Medal & Prize • Garden & Landscape Centre Prize • Miraga Design Landscape & Contract Prize • NParks Prize • Tierra Design Prize

Tham Yan Lin
Diploma in Molecular Biotechnology
GlaxoSmithKline Gold Medal & Prize • Olympus Singapore Prize

Ng Khai Yin
Diploma in Pharmacy Science
NUH Gold Medal & Prize • Abbott Research Prize • Baxter Singapore Prize • M+W Zander Prize

GRADUATION SPECIAL
Our Golden Graduates of 2009
The Right Stuff

A bumper crop of students among this year’s graduating batch were awarded top scholarships. Meet two of them, Ang Soon Loong and Joyce Au Yong, who learnt to soar at Ngee Ann Polytechnic.

Today, Electronic and Computer Engineering graduate **Ang Soon Loong** may be a CAAS Local Undergraduate Scholarship winner, but he was once in limbo about his future.

When he was 17 years old, he abruptly withdrew from a life sciences course at a polytechnic, after losing interest. Trying to enroll in another polytechnic was a huge struggle as priority was given to fresh O level graduates.

“It was a scary time,” he recalled. “I wrote appeal letters, and I just showed up at schools to try and talk to someone.” He took on a job while waiting for a place, and it taught him the importance of education, which he calls “the only way up”.

At Ngee Ann Polytechnic (NP), the once playful student realised his potential. He was invited to join NP’s Christieara Programme, which enables capable students to stretch themselves. With the training provided, he was selected for the prestigious CAAS scholarship.

After getting his degree in Electrical Engineering from Nanyang Technological University, he is bound for an exciting career in Airport Emergency Operations. – Jeanine Tan

**W**hat’s a ruler and stopwatch got to do with Accountancy? For **Joyce Au Yong**, who was diagnosed with dyslexia in Primary Four, they helped her reach the top.

“I used a ruler to guide me in reading chunks of text,” she explained. “I also used a stopwatch to record how long I took to finish written assignments, so I could challenge myself to be faster.”

Not only is Joyce a gold medallist of the Accountancy course, she also won the Nanyang Scholarship, which will fund her studies at Nanyang Technological University.

But she wasn’t always so determined – there were times when she almost gave up. But her sister, who bravely fought cancer, proved to be an inspiration.

Thanks to the support of teachers and friends at Ngee Ann, she even became a peer mentor.

“As she puts it, “I’m blessed to be healthy and living, so why complain?” – Jessy Chua

---

**Top of the Class**

- **Nanyang Scholarship**
  - Grace Ang
  - Diploma in Biomedical Science
  - Joyce Au Yong
  - Diploma in Accountancy
  - Alan Goh
  - Diploma in Accountancy
  - Richard Kong
  - Diploma in Electronic & Computer Engineering
  - Tan Ke Ren
  - Diploma in Electronic & Computer Engineering
  - Wong Yixuan
  - Diploma in Civil & Environmental Engineering

- **NUS Undergraduate (Merit) Scholarship**
  - Ang Jin Hui
  - Diploma in Information Technology

- **NUS Faculty Award**
  - Stephanie Surya
  - Diploma in Chemical & Biomolecular Engineering
  - Maxine Tan
  - Diploma in Molecular Biotechnology
  - Lew Kee Wan
  - Diploma in Electronic & Computer Engineering
  - Lim Yi Pang
  - Diploma in Banking & Financial Services
  - Daryl Wee
  - Diploma in Real Estate Business
  - Haseenah Bte Mohd Yusoff
  - Diploma in Civil & Environmental Engineering
  - Thomas Lu
  - Diploma in Chemical & Biomolecular Engineering

- **SMU Lee Kong Chian Scholars Program Scholarship**
  - Benjamin Tan
  - Diploma in Business Information Technology
  - Wan Zhihui
  - Diploma in Business Studies
  - Lim Kok Rui
  - Diploma in Banking & Financial Services

- **Alexandra Health Science Scholarship**
  - Sherman Tan
  - Diploma in Pharmacy Science

- **CAAS Undergraduate Scholarship**
  - Ang Soon Loong
  - Diploma in Electronic & Computer Engineering

- **DSTA Scholarship**
  - David Wong
  - Diploma in Biomedical Engineering

- **MOE Teaching Award**
  - Stephanie Kok
  - Diploma in Molecular Biotechnology

- **National Infocomm Scholarship**
  - Lau Han Yang
  - Diploma in Information Technology
  - Germaine Tay
  - Diploma in Information Technology

- **NParks Overseas Merit Award**
  - Alisa Wee
  - Diploma in Horticulture & Landscape Management

- **Pacific Carriers Ltd Scholarship**
  - Pek Yong Qing
  - Diploma in Logistics Management

- **Sunburst Scholarship (Temasek Holdings)**
  - Wong Mun Teng
  - Diploma in Product Design & Innovation
Two Biomedical Science students from the School of Life Sciences & Chemical Technology at Ngee Ann Polytechnic (NP) have found a quick way to identify superbugs that are resistant to antibiotics.

Lab workers usually take two to three days to identify such superbugs, as they need to grow the bacteria first to test the effectiveness of different types of antibiotics. However, Aishah Bte Mohd Rashid and Nurul Dinah Bte Kadir, who graduated this year, have found a way to do the same test in a mere two to three hours.

Under the guidance of their lecturer Dr Lau Quek Choon and Changi General Hospital’s consultant microbiologist Dr Tan Thean Yen, the pair worked on Escherichia coli and Klebsiella – bacteria that cause urinary tract infection – to develop primers to detect the genes responsible for the resistance of germs to antibiotics. A primer is a short sequence of DNA used to detect the presence of specific types of genes.

Four hundred types of bacteria were obtained from eight hospitals for the project, and the pair spent eight months on research work.

While more research needs to be done on a larger sample of bacteria in order to perfect the accuracy and sensitivity of the technique, Aishah and Dinah’s discovery nonetheless has tremendous potential.

Faster detection of superbugs can lower the risk of harm to major organs, decrease the pain and discomfort suffered by patients as well as hasten the administration of new and improved types of antibiotics.

The project was named one of the winners of the Poly Student Research Project award in March this year. There were two winners from each of the five polytechnics.

“Working on the project really taught us about what research work involves. It’s a very meticulous process,” said Dinah.

She added, “It’s also reaffirmed my passion for microbiology. The research we do can save lives.”

The other project from NP that won the Poly Student Research Project award focused on diagnosing sleep apnea automatically.

Biomedical Engineering students Tan Wei Yan and Tan Jun Long from the School of Engineering developed software that can diagnose sleep apnea – a condition where people with narrowed airways stop breathing for about 10 seconds or more – based on either the cardiac, brain, muscle signals or eye movement.

Conventional diagnosis in hospitals is based on a combination of all four signals of the body.
Heading the Way

An accident that left Electronic & Computer Engineering graduate Lee Kee Wan partially paralysed for three months inspired him to create the award-winning Head-controlled Wheelchair

TEXT: JESSY CHUA

When Electronic & Computer Engineering graduate Lee Kee Wan was 26, he got into a serious motorcycle accident, and ended up being temporarily paralysed from the neck down.

While Kee Wan, 31, has since made a full recovery, he channelled that traumatic experience into creating the Head-controlled Wheelchair, which won him and teammate Chong Chun Ming the Gold Award in the Student Design Challenge of i-CREATE 2009.

i-CREATE, an annual international conference that provides a platform for the exchange of Rehabilitation Engineering and Assistive Technology ideas, was held at the Singapore Management University in April.

The Student Design Challenge saw 25 submissions from various Institutes of Higher Learning in Singapore and Thailand.

Recalling the three-month recovery period from the accident, Kee Wan said, “I was bedridden and wasn’t able to move from my neck down. I also couldn’t get anywhere without the help of nurses.”

“So I thought, wouldn’t it be great if a device could help people like me move about with autonomy? This would help them to gain independence and become more self-reliant.”

Powered by a coin-sized sensor module, the Head-controlled Wheelchair, which was developed as a final year project, helps the mobility-impaired get around by using minimal head movements.

To move the wheelchair forward, the user needs only put on a head-controlled sensor module and tilt his head forward slightly. The module then sends signals to a main control unit to trigger movement.

The module also alerts the main control unit to switch off power automatically when the wheelchair remains stationary for more than five seconds, making it energy efficient.

“I suppose our winning edge is in the device’s simplicity, reliability and user-friendliness. It’s also relatively low-cost, as we spent only $500 to develop the product,” said Kee Wan.

“It’s an add-on solution to existing wheelchairs, and provides another option to the joystick-controlled electric wheelchairs commonly found in the market today, which are unsuitable for people who are paralysed from the neck down,” he added.

Fuelling a Green Future

TEXT: JEANINE TAN

Making significant steps forward into a future of clean energy, Dr Geng Anli, a senior lecturer at the School of Life Sciences & Chemical Technology, is currently researching how to generate ethanol, a biofuel, from agriculture, wood and municipal waste in an efficient manner. Biofuels are eco-friendly fuels derived from plant and animal matter.

Her project, Developing Novel Biocatalysts for Cellulosic Ethanol Production, has been awarded an A*Star Bioenergy Project Proposal grant worth about $490,000. It is one of seven projects receiving funding from A*Star. These projects were chosen from 29 project proposals submitted by various research institutes, universities and polytechnics.

Dr Geng said, “Currently, bioenergy technology is not economically feasible, but through extensive R&D endeavours, it’s possible to make biofuels competitive to fossil fuels. This will have a positive impact on our environment in the future.”
Rising up to the Challenge

When I packed my bags for San Francisco, as one of 20 students taking part in the three-week California Challenge, I thought only my brain was going to get a workout.

I was absolutely wrong.

Two weeks into my trip, I found myself on all fours, twisting and turning my body in ways I never thought possible, to get through the miniscule pathway of the Moaning Cavern, the famous limestone cave in California and one of the oldest archaeological sites in America.

In order for all of us to make it through the cave, an incredible amount of teamwork and communication was required.

I guess they weren’t kidding when they called it the California Challenge.

But that’s precisely why those three weeks were so memorable. It was about getting out of my comfort zone and learning to see and do things in a whole new way.

When There’s No Right (or Wrong) Answer

Back in Singapore, if I wanted to watch a movie, I’d go to the cinema. But at Menlo College in Silicon Valley, where I spent two weeks taking a “Money, Business and American Culture” course, the classroom became the cinema.

As a Banking & Financial Services student, I’m no stranger to the topic of money and business, but a big part of this course was about analysing scenes from iconic films and discussing how they reflected the American economy. One such film was “Wall Street” (1987), which depicted the effects of greed.

I really liked that the liberal arts focuses on presenting a viewpoint. There are no right or wrong answers.

The lessons I’ve learnt hold strong even now that I’m back home – I try not to take anything at face value. I look deeper, explore further, and try to seek out the message beneath the surface.

Going Beyond the Classroom

Some of my greatest learning experiences took place outside the classroom.

On a visit to Habitat for Humanity, I picked up some basic carpentry skills reconstructing homes that would later be sold to the city’s poor at a lower rate. I realise I prefer providing a service instead of just donating money, as the satisfaction is far greater.

I also had the chance to hang out with American students. Language differences aside – they thought I was speaking a foreign language when I used Singlish; while I was puzzled when one of them asked if I wanted to “ride shotgun” – there were also deeply-rooted differences in mindsets that left me thinking about my own culture.

Most of them shift out from their family home when they graduate from high school and enter college, but here in Singapore, most of us only establish our own homes when we get married.

The American culture focuses a lot on independence, while in the Asian culture, the family unit is the cornerstone.

Would I be ready to live on my own now, at the age of 19? Maybe not – but it’s opened my mind to the world of possibilities out there.
When Keith Ng and Damon Widjaja started their own company Swoozh, it was because Keith followed the advice that a lecturer from Ngee Ann Polytechnic gave him more than seven years ago.

Get straight to the point.

And so barely a year after graduating from the Singapore Management University with a Bachelor in Science in Information System Management, the two alumni from the School of InfoComm Technology have plunged headlong into developing an application for Facebook, one of the most popular social networking sites in the world.

Their Famous Market Exchange, or FAME, is a virtual stock market where users can trade their friends to make profits.

The pair stumbled across the idea of developing FAME when they were interns at Standard Chartered Bank during their undergraduate days. At the bank, they worked on prediction markets, which are online trading sites where people try to make a profit by betting on what is going to happen in a particular event.

“This concept is usually intended for a niche market, but we wanted to bring it out for everyone,” he explained.

So, not only can users trade their friends, they can also speculate on celebrities and various events around the world.

As of June this year, FAME is a bustling community with over 2,000 active members, and the number is growing every day.

FAME is also the only Singaporean application among fbFund 2009’s top 50 finalists. fbFund is a seed fund for promising applications on the Facebook platform.

However, Keith and Damon admitted that the progress was initially slow, especially financially.

It was only three months after they started Swoozh that they were awarded $50,000 by Athena Innobator under the Media Development Authority’s i.JAM (IDM Jump-start and Mentor) Microfunding Scheme, which gives budding entrepreneurs a chance to start their own businesses.

Being part of the scheme greatly helped in getting things into full swing, and they were even leased an office space for free.

In the near future, the pair also hopes to take FAME beyond the realm of Facebook.

“We hope that FAME can be a brand name, so that it comes to mind immediately when people talk about Facebook games,” said Keith.
Smart Style

Life shouldn’t be hard, which is why these clever products designed by graduating students of the Diploma in Product Design & Innovation course aim to make doing everyday tasks easier

TEXT: JESSY CHUA

Onestick

How it works: These training chopsticks make it impossible to pick up your food if you can’t hold them correctly – thanks to a pivot system, the sticks simply “collapse” if your grip isn’t right.

Who would love it: The perfectionist. A fork’s a lot less intimidating, but can the fork boast of 3,000 years of history behind it?

By: Rakcent Wong

Trigreen

How it works: This foldable hazard triangle for use during car breakdowns charges itself by storing up heat energy from the boot of the car.

Who would love it: The environmentalist driver who’s run out of luck on the roads.

By: Soh Xiao Jun

S2 Tools

How it works: This tool set, all dressed up in purple, is specially designed for use by women who like to do their own DIY work. Not only are they smaller in size for a better grip, they are also lighter.

Who would love it: Independent women, as well as the modern man who doesn’t equate power tools with being macho.

By: Karthikesan s/o Kuppuswami

Portable Dog Poo Scooper

How it works: When out on a walk, simply position the scooper under the pet when it’s about to do its dirty deed. With a light tug, the newspaper is easily removed to be disposed.

Who would love it: The considerate pet owner, and pretty much everyone else, who would be glad for poop-free streets.

By: Ang Hui Ting
Triumphant Teachers

Wheelock College’s pioneer batch of Early Childhood Education students have more than one reason to rejoice at graduation – many have secured jobs even before commencement

TEXT: MELODIE LEE

Cynthia Tan, the top graduate of the pioneer batch of Wheelock College’s degree in Early Childhood Education, says the course was so challenging that at the start of each semester, there was always someone who toyed with the idea of dropping out.

But as they say, no pain, no gain. Of the 59 students in the cohort, more than 70 per cent had already secured employment by the time of the commencement ceremony on June 3.

Launched in June 2007, the degree is offered by Wheelock College in collaboration with Ngee Ann Polytechnic (NP) and the SEED Institute (formerly known as Regional Training and Resource Centre in Early Childhood Care and Education for Asia).

“The studying at Wheelock required a different set of thinking; it was not a textbook-based education, but rather, it was about thinking critically.”

The degree has been customised for NP’s Diploma in Early Childhood Education, and Diploma in Child Psychology & Early Education graduates.

“It was intensive, but I gained a lot of experience. Studying at Wheelock required a different set of thinking; it was not a textbook-based education, but rather, it was about thinking critically, gaining a certain understanding of concepts and learning how to apply them,” said Cynthia.

Cynthia credits NP’s Early Childhood Education diploma course for nurturing her passion for teaching the young. Like many of her peers, she is already working as a teacher – she is currently teaching at the Caterpillar’s Cove childcare centre in NP.

Pursuing her degree at Wheelock College was a natural choice for her, as when she graduated with her diploma, there were no local universities offering a degree programme, and studying overseas would have been expensive.

But under the NP-Foreign Specialised Institute Scholarship, she received a yearly grant of $3,000 for her studies.

Dr David Fedo, Executive Director of the Wheelock College Center for International Education, Leadership, and Innovation-Singapore, said the graduates are passionate about nurturing and mentoring children, and in turn, supporting the families of children and the communities in which they live.

“We at Wheelock College are confident that they will make a measurable difference in Singapore as superb teachers and leaders in the early childhood education profession,” he added.

With the third batch of 60 students starting their degree programme in June this year, there will be a steady supply of highly-trained professionals for the industry.

There are about 500 kindergartens and about 750 childcare centres in Singapore. Employment opportunities will continue to increase as another 200 childcare centres will open by 2013, as part of the Government’s plan to develop the childcare sector.

All this is good news for Cynthia, who already has her sights set on possible leadership positions in the sector.

“In my experience at Wheelock and The Caterpillar’s Cove, I’ve learnt how to run a childcare centre. I might think about opening my own centre in the future!” she said.
Eighty students from the School of Film & Media Studies (FMS) dealt with death in March this year.

As part of Lien Foundation’s "Life Before Death” campaign, Ngee Ann Polytechnic was commissioned by the non-profit organisation to spearhead a poll on Singaporeans’ attitudes towards death and dying.

The “Life Before Death” campaign, which was started in 2006, seeks to introduce Singaporeans to the idea of “dying well”, and increase the acceptance of hospice and palliative care to help them cope better with end-of-life issues.

In a two-week period, these students took to the heartlands and CBD district to speak to a cross-section of about 800 Singaporeans aged between 20 and 59.

Mr Lee Poh Wah, CEO of Lien Foundation said, “From the research team to the surveyors on the street, the students played a key role in getting the responses to the survey on how people view end-of-life issues, which has gained the attention of media and even policy makers.”

The survey marks the first-ever large scale survey on Singaporeans’ perceptions of death and attitudes towards dying. The results (see graphics) were published in The Straits Times in April this year.

“For many, death remains an uncomfortable subject. It definitely got me excited to work on such a pioneering research topic,” said Brian Lim, one of the student leaders of the project, who graduated from FMS this year.

In addition to the survey, FMS students also spoke to 40 people from all walks of life to document their stories on the “Life Before Death” website at www.lifebeforedeath.sg.

72% To be free from pain
71% To be surrounded by people I love
68% To be conscious and able to communicate

Food was on Cindy Ng’s mind at the 8th Chinese Bridge Competition, which was held at Nanyang Technological University’s Confucius Institute in May.

The Diploma in Chinese Studies graduate’s Chinese skit on the origins of popular local delights such as popiah, kueh lapis and chicken rice helped her emerge champion. She won a two-week tour to China worth $3,000.

In the skit, she plays a Chinese mother who tries to convince her Malay son that these dishes are of Chinese, and not Malay, origins.

“I was inspired by an article in Lianhe Zaobao’s forum page. People were arguing about the origins of certain foods, and I thought that it would make an excellent topic as food is very central to the Chinese culture,” said the 21-year-old.

She performed the skit with the help of a Malay friend, Adi Jumaludin, who performed his parts in Mandarin.

In July, Cindy represented Singapore at the international leg of the competition held in Hunan, Beijing, where she pitted her Chinese language skills against students from 50 countries.
Mrs Choo Jin Yi, the academic manager of the Diploma in Banking & Financial Services course, has been known to cry in front of her students.

No, it’s not that they make her angry. It’s because in her work, Mrs Choo often finds herself playing counselor to troubled students, who turn to her when they have problems.

“I have a soft heart. My colleagues always tell me, ‘Jin Yi, don’t cry with them!’” she said with a laugh. “But it’s only when these students know that you genuinely feel for them, that they tell you their deepest secrets.”

For her dedication to her students, she was awarded the PS21 Star Service award this year. The award recognises individuals in statutory boards and the civil service who have shown exceptional service standards.

But despite her now well-known dedication to her students in her 18 years at Ngee Ann, Mrs Choo did not start out wanting to be an educator. She was a high-flying investment banker at a top local bank for more than a decade, but even then, as a mentor to fresh graduates, she had always worked well with youths.

“A lot of us join the industry with a true intent to teach and be with young people, so I’m not the only one,” she said.

“There isn’t any specific quality you need to have. I think all you need is a genuine interest in your students.”

S he has been a journalist, teacher and grassroots volunteer. Now, School of Interdisciplinary Studies lecturer Ms Khartini Abdul Khalid can add another feather to her cap — scholar.

Ms Khartini was awarded two prestigious scholarships this year — the Tan Kah Kee Postgraduate Scholarship and the Fulbright Scholarship.

A journalist with Berita Harian for seven years before she joined Ngee Ann Polytechnic (NP) in 2005, she is currently pursuing her Master of Arts in International Relations at The Fletcher School at Tufts University in Massachusetts, USA.

For Ms Khartini, pushing herself to experience the many facets of life is what makes her a better teacher.

With one of her interests being Southeast Asian politics, she hopes to cultivate her students’ interest in how Singapore relates to the world, which was also a topic she taught at NP.

“They have only known a life of peace and progress so there’s this feeling that the world outside of Singapore shouldn’t matter, perhaps because they think that life in Singapore will always be this good,” she said.

“Over time they develop a false sense of security, but in reality, there are conflicts and political turmoil in recent years that happened in countries close to us. In fact, such conflicts can also happen to us if there is a drastic change in social dynamics.”

Ms Khartini Abdul Khalid (back row, extreme right) with Fulbright Scholars from all over the world.

A Star is Born

Ms Choo Jin Yi, the academic manager of the Diploma in Banking & Financial Services course, has been known to cry in front of her students.

No, it’s not that they make her angry. It’s because in her work, Mrs Choo often finds herself playing counselor to troubled students, who turn to her when they have problems.

“I have a soft heart. My colleagues always tell me, ‘Jin Yi, don’t cry with them!’” she said with a laugh. “But it’s only when these students know that you genuinely feel for them, that they tell you their deepest secrets.”

For her dedication to her students, she was awarded the PS21 Star Service award this year. The award recognises individuals in statutory boards and the civil service who have shown exceptional service standards.

But despite her now well-known dedication to her students in her 18 years at Ngee Ann, Mrs Choo did not start out wanting to be an educator. She was a high-flying investment banker at a top local bank for more than a decade, but even then, as a mentor to fresh graduates, she had always worked well with youths.

Ask her to point out a particular quality that makes her such a great teacher, and she demurs.

“A lot of us join the industry with a true intent to teach and be with young people, so I’m not the only one,” she said.

“There isn’t any specific quality you need to have. I think all you need is a genuine interest in your students.”

Ms Khartini Abdul Khalid (back row, extreme right) with Fulbright Scholars from all over the world.
Creativity Makes the Cut

In a talk at Ngee Ann Polytechnic, Oscar-winning producer Lord David Puttnam says filmmakers can overcome censorship with creativity

TEXT: KENNETH CHAN • PHOTO: CHEONG JIA HUI

Academy award-winning producer and educator Lord David Puttnam is puzzled by how people seem to think that they are less creative the older they get.

He shared his experience of asking a class of six-year-old children if they thought they were creative, and the whole class raised their hands. But when he put the same question to a class of 16-year-olds, the response was drastically different.

“I’ll be lucky if I get a few hands up,” he said. “Can anyone please tell me what happened to these kids between the age of six and 16? Who told them that they are not creative people?”


“What most filmmakers forget is the power of metaphors. You don’t have to stick a finger up to a nation to express your opinions.”

The four-time Academy Award nominee, who won a Best Producer Oscar for “Chariots of Fire”, shared his opinions on filmmaking with an audience that included students of Chapman’s Creative Producing degree course, as well as staff and alumni from NP’s School of Film & Media Studies.

After more than two decades in the film industry, the 68-year-old now channels his energy into the area of education.

He is a strong advocate of creativity as a solution to tight censorship policies, which is why creative individuals are important to the film industry.

“People often complain about censorship laws and how they restrict creativity and artistic freedom,” he said.

“What most filmmakers forget is the power of metaphors. You don’t have to stick a finger up to a nation to express your opinions. They are so many ways to say one thing and you just have to find your way around it.”

Other topics that were discussed during the two-hour long session included the role of film producers, censorship policies, the urgency for innovative leaders and the future of the big screen.

In a nod to the burgeoning creative industries in Singapore, which saw growth of 27 per cent in the last few years, Lord Puttnam encouraged aspiring filmmakers and producers to hone their craft.

“Films are like mirrors of society. So you are going to be the ones who will lead the rest, and you better know what you’re doing.”

Chapman University’s Bachelor of Fine Arts in Creative Producing

The two-year accelerated degree programme is offered via a partnership between Ngee Ann Polytechnic and Chapman University in South California. It is specially tailored for graduates with Diplomas in Film, Sound & Video, or Mass Communications from the Polytechnic’s School of Film & Media Studies.

Other prominent names in the film industry invited to speak to students include well-known producers such as Mr Terence Chang, who produced “Red Cliff” and Mr Andre Morgan, who produced “Perhaps Love.”
It may be tough to get tickets to the second Singapore Grand Prix in September, but six students from Henderson Secondary School not only scored grand stand tickets, they will also get the chance to meet Italian F1 driver Jarno Trulli in person.

Lian Zheng Jie, Ong Xiang Zheng, Sarath Sreekumar Pillai, Choong Yew Fei, Alvin Ho and Jared Chong are the winners of F1 in Schools – The Singapore Challenge, which was held on July 29 at Ngee Ann Polytechnic (NP).

A flagship event by NP’s School of Engineering since 2005, F1 in Schools – The Singapore Challenge also roped in the People’s Association Youth Movement as co-organisers this year.

The challenge had 29 secondary schools compete to design miniature race cars that not only moved fast, but also showcased sound engineering principles.

So for four months, the six students, who are from secondary two and three, lived and breathed fast cars as they designed their little vehicle from scratch, with the help of 3D computer-aided design software.

In order to design their car, they had to take into consideration engineering fundamentals such as drag forces, aerodynamic shapes and friction.

Based on the successful design, staff and students from NP then assisted the secondary school students in building their cars. Fuelled by compressed carbon dioxide, the cars can reach a maximum speed of 120kmh as they sped along the 24m track.

“Most students have very little contact with motorsports engineering. This challenge takes our students out of a classroom setting and engages their interest in a fun and exciting way,” said Mr Kenneth Tan, mentor of the winning team and a Mathematics and Computer Applications teacher from Henderson Secondary School.

“This was definitely an exciting experience for them and has certainly challenged negative stereotypes usually associated with engineering.”

Senior lecturer from NP’s Mechanical Engineering Division, Mr Philip Tan, who coordinated the event, said, “We hope to expose students to the many facets of engineering, and show them that engineering is cool and fun.”

He added, “We also hope to project that engineering is not a male-dominated profession – girls can do just as well.”

In addition to getting the chance to watch the Singapore Grand Prix up close, the Henderson Secondary School students also received a $6,000 cash prize, which will subsidise their trip to represent Singapore at the F1 in Schools World Championships 2010.
Is there a Doctor in the House?

Her Zhisheng kickstarted his career in the biological sciences with a Diploma in Biotechnology – now he’s studying for his PhD

TEXT: JESSY CHUA

When Her Zhisheng tells people he is a PhD student, they usually respond with “Wow!”

While it is impressive that he is studying for his doctorate, what really gets people talking is that his route to a PhD began with a diploma, which is unusual among his peers.

The 26-year-old Diploma in Biotechnology alumnus from Ngee Ann Polytechnic (NP), who went on to graduate from Nanyang Technological University with first class honours in Biological Sciences, was conferred the NUS President Graduate Fellowship by the Yong Loo Lin School of Medicine in January this year.

He is currently doing research work at A*Star Singapore Immunology Network.

What do people say when you tell them you were from poly?

I suppose they are impressed. I feel it when I talk to people. Back in my university days, the mindset of my peers was that poly students who make it to university are very good students.

In lab groupings for instance, it’s a very common practice to group JC and poly students together so that we can learn from each other.

Was it always part of the plan to get your PhD?

Well, I guess pursuing a PhD was a natural progression for me after completing my Bachelor in Biological Sciences at NTU.

I have to admit that I toyed with the idea of aiming for a PhD even back in poly, but I had doubts that I could do it. It was only two years before I graduated from NTU that my desire and drive became stronger.

But I still have some way to go. I’ve only just completed my first semester, and as any PhD student would know, the first two years of the programme is the most crucial. I have to perform well.

How did your poly background come in handy?

It definitely did! My poly background laid a very strong foundation for the practical aspects of my biological science degree.

In NP, we were given a lot of practical lessons which made me well-equipped with the hands-on aspects of conducting experiments. In fact, it’s a known fact that lab work is the strength of all poly students.

You’re currently researching a virus – tell us more.

I’m assisting Professor Lisa Ng at A*Star Singapore Immunology Network in research on our body’s immunological response to the Chikungunya virus.

If you can recall, Singapore had an outbreak of this virus in January 2008. It’s a virus that can be transmitted by mosquito. Mostly, my research work involves investigating the source and nature of the infection.

So what are your plans after getting your PhD?

I’m definitely looking forward to a career in research and academia. And I won’t rule out teaching! np