

NGS SCHOLARS' ALLIANCE EDITORIAL



Issue Highlights

It has been a while since we issued our editorials. In this latest edition, we are bringing to you some changes in NGS and NGSSA, as well as recent events, such as the recent Induction Day and Singapore's National Day outing organized by NGSSA.

We would also like to have your attention on the addition of a column for scholars to share their work. In this letter, we are delighted to feature the work of Hooman Aghaebrahmi Samani on "Lovotics". We urge you to continue this sharing spirit among us scholars.

Finally, the 4th NGS Symposium is underway, scheduled to be held on the 16th January 2012. NGSSA aims to make the event rewarding for all participants and abstract submissions are now open. We hope to see you there.

Issue #4, November 2011

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Change of NGS Executive Director



Professor Li Baowen has stepped down from the Executive Directorship of NGS, after almost 3 years at helm (October 2008 to June 2011). We would like to show our appreciation to Professor Li for his leadership and dedication to school over the years.

We would also like to welcome Professor Philip Moore as the Executive Director of NGS. Professor Moore is an internationally- renowned pharmacologist with particular interests in the biology of naturally occurring gases such as nitric oxide and hydrogen sulphide. You can access Professore Moore's welcome message here at: http://www.nus.edu.sg/ngs/welcome_msg.html

Induction Day – August 2011



Attendees at the NGS Induction Day – August 2011.



Professor Philip Keith Moore's opening address.

Induction day for the AY 2010/2011 August Intake was held on the 28th July 2011 at the University Hall. This is the first Induction day event organized by the current NGSSA scholars committee ([about us](#)).

The day started with welcome addresses by current NGS Executive Director Professor Philip Keith Moore and Deputy Executive Director Visiting Professor Thomas Fox. This was followed by presentations on coursework, scholarship matters, as well as settling-in information from our NGSSA members. There were also insightful talks on career development and life after attaining your Ph.D.

After these talks, the incoming scholars were designated to meet their pre-assigned peer mentors (current NGS scholars who volunteered for this event). During the tea sessions, these peer mentors will share their personal experience and answer queries with regards to life as an NGS scholar. We appreciate the peer mentors for spending their time to ease our new scholars' transition into the NGS programme. Multiple poster presentations were available during the tea session. They allow incoming scholars to look out for prospective topics and supervisors.



Posters presentations and sharing of ideas.

NGSSA wish to thank everyone for making this event successful. We would also like to take this opportunity to welcome the newly enrolled scholars of the AY 2011/2012 August Intake to the NGS family once again!

LOVOTICS: The first robot with the ability to LOVE

In the summer of 2011, the research of human – robot relationships, known as Lovotics (<http://www.lovotics.com>) was discovered and promoted through media around the world. Lovotics has been featured in media such as Reuters, CBS News, Spiegel, Washington Post, Los Angeles Times and more (List is available online in news.lovotics.com).

Lovotics is proposed by Hooman Samani, a NGS scholar and artificial intelligence researcher in Keio-NUS CUTE Center (a collaborative lab between National University of Singapore (NUS) and Keio University of Japan). Lovotics was his PhD research: “Lovotics: Love + Robotics, Sentimental Robot with Affective Artificial Intelligence”. His Ph.D. supervisor was Assoc. Prof. Adrian Cheok.

After industrial, service and social robots, Lovotics introduces a new generation of robots, with the ability to love and be loved by humans.

The novel advanced artificial intelligence system of Lovotics includes an Artificial Endocrine System (based on physiology of love), Probabilistic Love Assembly (based on psychology of love) and Affective State Transition (based on emotions) modules.

Psychological unit of the Lovotics artificial intelligence calculates probabilistic parameters of love between humans and the robot. Various parameters such as proximity,

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propinquity, repeated exposure, similarity, desirability, attachment, reciprocal liking, satisfaction, privacy, chronemics, attraction, form, and synchrony are taken into consideration.

Physiological unit of the Lovotics artificial intelligence employs artificial endocrine system consisting of artificial emotional and biological hormones. Artificial emotional hormones include Dopamine, Serotonin, Endorphin, and Oxytocin. For biological hormones Melatonin, Norepinephrine, Epinephrine, Orexin, Ghrelin, and Leptin hormones are employed.

The affective system of the robot analyzes system inputs to generate suitable states and behaviors for the robot in real-time. The affective system is modeled as closely to the human being as possible in order to be an emotionally engaging system.

Lovotics is a multidisciplinary research field utilizing concepts from philosophy, psychology, biology, anthropology, neuroscience, social science, robotics, computer science, engineering, and artificial intelligence.

Hooman Aghaebrahimi Samani is a current NGS Scholar (of intake August 2007).

email address: hooman@nus.edu.sg

Travel Notification Update

The screenshot shows the NUS Graduate School for Integrative Science and Engineering website. The navigation bar includes: HOME, ABOUT US, PROSPECTIVE STUDENTS, RESEARCH, ACHIEVEMENTS, CURRENT STUDENTS, SUPERVISORS, EVENTS, ALUMNI. The main header reads "NUS Graduate School for Integrative Science and Engineering". The "CURRENT STUDENTS" dropdown menu is open, listing items such as Programme Requirements, Modules Information, Student Card Matters, Student Pass, Social Visit Pass for Spouse or Child, Student Status Letter, NGS Student Guide, Overseas Trip Safety Guidelines (circled in red), NGS Online Student Forum, NGS Scholars' Alliance, FAQ, English Resources, and Useful Links. The main content area shows a "Forms" section with links to: NGS 2+2 Programme Application Form, Extension of Candidature, Conversion to Part Time Candidature Form, and Withdrawal from the University (Graduate Re...). Below this is a "Coursework" section with links to: Cross-Faculty Module Registration Form, Drop Cross-Faculty Modules Form, Proposed Coursework Programme, and Transfer of Credits.

Going overseas soon?

Do take note that OSHE has issued that all staff and students need to sign on indemnity form for any overseas trip. This form is now part of application form for educational allowance (for conference or overseas attachment).

Refer to the above image to access the updated Overseas Trip Safety Guidelines under the 'Current Students' tab at our [ngs website](#).

Otherwise, you can access the document at this [link](#).

National Day Parade Outing 2011



To celebrate Singapore's 46th birthday and the beginning of the new academic year, we organized an outing to watch the National Day celebration together on the 9th August 2011. To start right in the middle of where it all goes down, we met at City Hall MRT. Our group was good mixture of existing and freshly admitted NGS students giving us plenty of chances to make new friends.

While the crowd was big, we still managed to find each other and make our way to the Bay. Our best help in keeping together was a giant Jagermeister promo glove which is impossible not to notice even in the densest of crowds. This was not only very helpful but contributed to the fun of the event (some of us even wear it as a funky headdress).

Our goal was to reach the promenade in front of Marina Bay Sands, where we expected to have a clear view of the whole Bay. This turned out to be a great choice, because the view was wonderful and there was still enough room to comfortably stand around and chat, watch the parade and listen to Majulah Singapura while waiting for the fireworks to start.

Even though the fireworks lasted only a couple of minutes, it was a stunning experience to watch the colourful shapes shooting up in the sky and reflecting off the skyscrapers and the water. At the end of the day, we all agreed this was a nice way to get together and welcome our new batch of NGS friends in Singapore.

Contributed by: Benjamin Gyori

NGSSA Social Platforms - Webbly and Facebook



In recent years, NGS Scholars' Alliance (NGSSA) has been experimenting to come up with an effective social platform for fellow NGS scholars. It is vivid that Facebook is a quick and easy solution. In fact, the NGS Scholars Alliance facebook group was available since 2008 but the level participation remains lacklustre. Nonetheless, we are encouraged that things are picking up again and scholars are truly benefiting from our efforts.

Facebook provides a channel for social updates and allows easy interaction amongst scholars in a web-based environment. Besides that, NGSSA could highlight latest news and events to the students effectively. One example would be the recent NGS L.O.R. symposium contest which gives out \$20 vouchers every week. However, Facebook also has its limitation. We realize that despite its popularity, not every scholar has a facebook account. Also, we need an avenue to present information in a form of concise and multimedia-rich hub. Thus, we introduced the NGSSA web portal on 4th July 2011. Basically, it agglomerates all resources into a concept similar to one-stop service centre.

We found out that NGS students have had a hard time getting to know fellow scholars, which poses barriers for possible collaborations or even socializing. As of Late August 2011, a NGS student directory is

available on the NGSSA web portal. On top of this, we also hope to establish a link between alumni and the current students, facilitating useful communication (e.g. seeking career advice). For that purpose, we have now a collective facebook group for current members and alumni alike.

NGSSA has also started to collect individual responses, suggestions and feedbacks pertaining to NGS. This is achieved through a contact form in the web portal that allows NGS scholars to provide anonymous responses to us. As Neil Armstrong's might say: "That's one small step for NGSSA, one giant leap for NGS experience."

NGSSA is ultimately a students group. On top of sharing of research ideas, we believe that sharing of personal stories can be inspiring and beneficial to others. As such, we encourage anyone to submit stories about snippets of their NGS life and we will post them up on the blog or include them in upcoming editorials.

If you have not joined our facebook group or visited our webbly web portal, wait no longer!

Visit the NGSSA Facebook Group at: <http://www.facebook.com/groups/ngs.scholars.alliance/>, and the NGSSA web portal at: <http://ngssa.weebly.com/>

Join the NGS L.O.R. Symposium

NGS Symposium is a student-run annual symposium that serves as a platform for the family of NGS/AGS scholars to present and share ideas. This year, the theme of the 4th Symposium is Life, Opportunities, and Research (L.O.R.). The main inspiration for this theme is the life of the scholar: the research work he undertakes and the opportunities that may await upon graduation.

As NGS/AGS scholars come from diverse backgrounds, NGS Scholars' Alliance hopes to bring something new to the table by making the symposium relevant and accessible to everyone. NGS L.O.R. will feature research and general talks in a refreshing style, poster presentations and discussions with members of the industry. We will provide guidance and feedback to help students present their ideas and research in simple and engaging ways.

If you are interested in presenting at the 4th NGS Symposium, please send us an abstract for a talk or a poster. The talk can be based on your perspectives of life (Flavor 1) or your research (Flavor 2). The poster is an alternative method to present your research work to the participants.

Flavor 1 - Talks on Life

Introduces your perspective on your PhD life, the challenges you faced, as well as briefly about what you are doing (or trying to do). Of course, the presenter should have at least an accessible introduction and motivation section to allow audiences to follow through. Nonetheless, this does not stop you from being creative and giving an interesting and engaging presentation.

Flavor 2 - Talks on Research

You can introduce your research area (e.g. graphene research), but the focus of the talk may not be limited to your group's research work. Ideally, the topic itself is interdisciplinary and the talk can point out some of these aspects (e.g. graphene can be used as a matrix to grow stem cells on). You are encouraged to use experimental results but be advised not to lose the audience during the explanation! Please provide sufficient background data as well as the significance of your research for engaging the audience's interest.

Remember the date **January 16, 2012**, and join us now by submitting abstract by 1st Dec 2011. For more details about submission guidelines, please visit:

<http://ngssa.weebly.com/symposium.html>.

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

Blog: <http://ngssa.weebly.com/> email: ngs.alliance@gmail.com

Editors

NGSSA Communications Team:

Goh Bing Hui Terence

Loh Iong Ying

Wu Yong Zhi