



# 2<sup>ND</sup> VIETNAM SUMMER SCHOOL OF SCIENCE

## "ALL ROADS LEAD TO SCIENCE"

Nguy Nhu Kan Tum Auditorium  
Vietnam National University, Hanoi  
19 Le Thanh Tong Street, Hanoi, Vietnam  
**20-21-22 August 2014**

Our website:

<http://truonghekhoahocvietnam.wordpress.com>

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## **MOTIVATION AND OBJECTIVES**

The Summer School of Science aims to inspire and support Vietnamese students and young generations who are keen as well as full of passions on pursuing research as a career. The summer school is held annually on a basis of purely academic and non-profit activities. The lectures given at the summer school will cover essentials of science, research skills as well as selected studies in natural, technical, social, economic fields.

## **ELIGIBILITY**

Eligible participants are graduate, undergraduate, and high school students. The summer school opens free of charge for all selected students. The students who complete all the courses and lectures were conferred a certificate by the school committee.

## **HISTORY**

Vietnam Summer School of Science is an initiative of a group of young Vietnamese scientists working in Singapore (Dr. Giap Van Duong, Dr. Ngo Duc The, Dr. Luu Quang Hung) who committed to inspire young students in the home country. The first summer school was held in August 2013 at College of Science, Vietnam National University, Hanoi with the supports from its staffs (Dr. Trinh Thi Thuy Giang, Dr. Nguyen Thanh Binh and Mr. Truong Ngoc Kiem). There were 80 participants selected from 180 applicants through an open application process. Six young and experienced lecturers working locally or overseas gave talks at the summer school. The 2013 summer school lectures included:

1. A review of scientific research and academic freedom – Dr. Giap Van Duong
2. Research activities at the university – Dr. Ngo Duc The
3. Scientific research: from idea to reality – Dr. Pham Thai Son
4. Plagiarism – Dr. Pham Thai Son
5. Science and art – Dr. Giap Van Duong
6. Some experiences in writing and presenting scientific results – Dr. Ngo Duc Thanh
7. Soft skills for research and working in academic career – Dr. Ngo Duc The
8. English for academic work: selection for science students – Ms. Ho Huyen
9. Government scholarships – Dr. Luu Quang Hung
10. Preparation for admission and scholarship application – Dr. Luu Quang Hung

The summer school gets good feedbacks from participants. Some students got better achievement in research, and some of them were successful to obtain scholarships to study aboard in the following academic year.



Closing ceremony of the 1st Summer School of Science, Hanoi 5-6/8/2013 held at College of Science, VNU

## **SUMMER SCHOOL 2014**

Based on the success of the first summer school of science, the second summer school is held in 2014 with more interesting contents and topics. The title for this year is "All Roads Lead to Science", and the school opens to 200 students with more topics in social and economic sciences, art and humanity in addition to the natural science presented last year. There are 3 new themes in the 2nd summer school in addition to the old topic, including: A. Science Background; B. Frontier Scientific Research (new); C. Science in Life (new); D. Experience and Interaction (new).

# DATE AND VENUE

## DATE

Wednesday 20 August 2014

Thursday 21 August 2014

Friday 22 August 2014

## VENUE

Vietnam National University Hanoi

Nguy Nhu Kon Tum Auditorium

19 Le Thanh Tong Street, Hanoi, Vietnam



Nguy Nhu Kon Tum Auditorium at 19 Le Thanh Tong Street, Hanoi, Vietnam.

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### **A. Science Background** (old topic)

This is the traditional topic since the first summer school, including higher education, academic freedom, research in the university and preparation of the science career with some specific skills.

### **B. Frontier Scientific Research** (new)

Some review talks of the scientists with the deep insight into their current research: simple enough for general audiences but still remaining the scientific quality.

### **C. Science in Life** (new)

The applications of science in the daily life, relationship between science and art, history and culture, popular science, applied science and technology transfer.

### **D. Experience & Interaction** (new)

Some presentations from the school alumina as student speakers about their experience, their achievement and success. Simulating interactions include: application assessment, project applications, team work, etc. as well.

## LECTURES

The committee is going to invite a number of young and experienced scientists to give lectures of some designated contents in agreement. The lecturer profiles and their lectures will be updated on the website. Following are some invited lecturers with their suggested courses:

## FUNDAMETALS OF SCIENCE

IA	<p><b>Scientific research and academic freedom</b></p> <p>This lecture is designed to build a framework for young researcher who chose research as a career. It will discuss various issues concerning the fundamentals of academic research, such as the nature of science, research questions, research methodology and research ethnics, etc. The difference between science and arts will be highlighted. The importance of academic freedom will also be mentioned. After the lecture, students are expected to be able to start a research properly.</p>	<p><b>Dr. Giap Van Duong,</b> GiapSchool</p>
IB	<p><b>Research in higher education</b></p> <p>Bài giảng giới thiệu tổng quan quá trình hình thành các trường đại học trên thế giới theo tiến trình lịch sử, sự phát triển của nghiên cứu khoa học tại các trường đại học như một nền tảng quan trọng của giáo dục đại học. Bài giảng cũng giới thiệu một số mô hình trường đại học, cũng như ngạch bậc nghiên cứu hàn lâm trong trường đại học, cùng với tổng kết một số thành tựu khoa học đột phá được phát triển tại các trường đại học.</p>	<p><b>Dr. Ngo Duc The,</b> Technical University of Denmark</p>
IC	<p><b>From phenomena to essence: the search for scientific knowledge</b></p> <p>Trong cuộc sống hàng ngày cũng như trong công việc chúng ta luôn phải sử dụng các kiến thức khoa học để giải quyết các vấn đề. Có những kiến thức khoa học có ý nghĩa áp dụng trong phạm vi hẹp, có những kiến thức khoa học mang tính phổ quát. Thế nào là kiến thức khoa học? Những cách thức cơ bản nào để tìm kiếm kiến thức khoa học từ các hiện tượng quan sát được và từ trực giác hoặc cảm nhận cá nhân, đặc biệt trong công việc nghiên cứu khoa học nói chung? Đây là một vấn đề rộng và cần nghiêm túc suy nghĩ và nghiên cứu sâu sắc. Bài giảng bước đầu sẽ cung cấp và thảo luận sơ lược về các vấn đề này với một số ví dụ đã xảy ra trong lịch sử nghiên cứu khoa học của nhân loại.</p>	<p><b>Dr. Nguyen Duc Dzung,</b> Hanoi University of Science and Technology</p>

## SCIENTIFIC SKILLS

2A	<p><b>Scientific report: from the laboratory to the international publication</b></p> <p>Công bố khoa học trên trường quốc tế là một trong những tiêu chí bắt buộc để đánh giá năng lực nghiên cứu của các nhà khoa học, từ đó góp phần đánh giá trình độ khoa học công nghệ của các quốc gia. Để công bố BCKH, các nhà khoa học phải chuẩn bị theo các bước: viết bài báo khoa học, gửi đăng bài trên các tạp chí chuyên ngành /trình bày BCKH tại các hội thảo khoa học và trả lời phản biện của chuyên gia bình duyệt cũng như khán giả. Bài giảng sẽ đi sâu phân tích cấu trúc, vai trò và phương pháp thực hiện từng bước trên nhằm trang bị cho học viên những kỹ năng thật cần thiết để có những BCKH đạt tiêu chuẩn quốc tế.</p>	<p><b>Dr. Tran Hai Duc,</b> Vietnam National University, Hanoi</p>
2B	<p><b>Ethnics and citations in science</b></p> <p>Đạo văn là một vấn nạn rất nghiêm trọng trong nghiên cứu khoa học, tuy nhiên, hiểu và phòng tránh đạo văn như thế nào thì hầu như chưa được đề cập trong các trường đại học tại Việt Nam. Phần một của bài giảng sẽ đề cập đến khái niệm đạo văn và các quy định về đạo văn của các trường đại học và nhà xuất bản lớn trên thế giới. Phần hai của bài giảng sẽ là phần thực hành đạo văn, trong đó sinh viên được chia thành các nhóm nhỏ và cùng phân tích về các lỗi đạo văn trong các trường hợp đạo văn điển hình đã được phát hiện hoặc chưa được phát hiện trên thế giới và tại Việt Nam.</p>	<p><b>Dr. Dang Van Son,</b> Ruhr-University Bochum</p>
2C	<p><b>Presentation and edit of technical figures for academic conference and journal</b></p> <p>Trong các hội thảo khoa học hoặc theo yêu cầu của các tạp chí khoa học cần thiết phải xử dụng các biểu đồ một cách chính xác. Bài giảng sẽ trình bày các bước để lập biểu đồ bằng phần mềm thông dụng Excel và phần mềm chuyên sâu Origin. Các yêu cầu của một biểu đồ như dạng biểu đồ, phông chữ, ký hiệu cũng được trình bày chi tiết. Bài giảng cũng giải thích cách đưa các biểu đồ vào Powerpoint để trình chiếu hoặc đưa vào manuscript của các tạp chí.</p>	<p><b>Dr. Nguyen Chau Lan,</b> University of Transport and Communications</p>



2D	<p><b>Creative Innovation: How to start?</b></p> <p>Creative innovation is a fashionable topic among policy makers, entrepreneurs and experts. It is considered to be one of the game-changers for Vietnam low productivity economy. However, the crucial question is: How to start? This lecture will answer this question by providing a technical and manageable process, namely GT Innovation, to help starting a creative innovation process, in both technology and management.</p>	<p><b>Dr. Giap Van Duong,</b> GiapSchool</p>
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## RESEARCH WORKS

3A	<p><b>Some recent findings in enzyme study</b></p> <p>Enzyme là tên gọi chung chỉ các chất xúc tác sinh học (được tạo ra trong cơ thể sống) có khả năng làm tăng tốc độ của phản ứng biến đổi chất tham gia thành sản phẩm. Nhiều nhà khoa học trên thế giới đã và đang tiến hành các nghiên cứu liên quan đến những loại enzyme khác nhau, trong đó có hệ thống bao gồm khoảng 20 enzyme với tên chung là aminoacyl-tRNA synthetase xúc tác cho việc tổng hợp phức hệ amino acid với RNA vận chuyển tương ứng. Đây là bước quan trọng nhất trong quá trình sinh tổng hợp nên protein, những phân tử đóng vai trò thiết yếu trong cơ thể sống. Nghiên cứu về tryptophanyl-tRNA synthetase (TrpRS) nhằm mục tiêu làm sáng tỏ quá trình tiến hóa ở cấp độ phân tử cũng như tương tác giữa các vùng cấu tạo nên TrpRS. Một số ứng dụng của nghiên cứu này nói riêng cũng như các nghiên cứu về enzyme nói chung trong các lĩnh vực khác nhau của cuộc sống sẽ được đề cập tới.</p>	<p><b>Dr. Pham Bao Yen,</b> Vietnam National University, Hanoi</p>
3B	<p><b>Causality in social science</b></p>	<p><b>Dr. Nguyen Ngoc Anh,</b> Development and Policies Research Center</p>
3C	<p><b>Investigation of landslide along highway #6</b></p> <p>Trượt lở đất tại các tỉnh miền núi phía bắc gây ra rất nhiều thiệt hại về kinh tế và tính mạng của con người. Bài giảng sẽ trình bày kiến thức cơ bản về trượt lở đất. Phân tích các nguyên nhân gây ra trượt lở đất dọc theo quốc lộ 6 từ Hòa Bình đến Sơn La. Đồng thời đưa ra các giải pháp giảm thiểu nguy cơ trượt lở đất.</p>	<p><b>Dr. Nguyen Chau Lan,</b> University of Transport and Communications</p>

3D	<p><b>Climate change adaption, disaster mitigation and associated policies</b></p> <p>Bài giảng trình bày lý thuyết kèm thực hành đơn giản về cách tiếp cận nghiên cứu chính sách thích ứng biến đổi khí hậu và ứng phó thiên tai. Nội dung cụ thể bao gồm: Lý thuyết: (1) Phương pháp tiếp cận nghiên cứu chính sách liên quan đến thích ứng BDKH; (2) Phương pháp phân tích và xử lý thông tin; (3) Cách viết một bài báo khoa học liên quan đến chính sách thích ứng biến đổi khí hậu. Thực hành: bao gồm (1) Thảo luận về 1 chủ đề giả định, (2) Phân tích và trình bày kết quả (3) Phản biện.</p>	<p><b>Dr. Nguyen Ngoc Huy,</b> Institute for Social and Environmental Transition</p>
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POPULAR AND NATURAL SCIENCE		
4A	<p><b>Art and humanity</b></p> <p>What is Art? What is art for art's sake and art for human being? What is humanistic in arts? What is the role of arts in human life? What is the relationship between art, science and religion? The answer is lies within the Course 4A. This course is an introduction to and survey of Art and Humanity with the purpose of helping students to understand and appreciate art and what it has to offer. We will consider materials and techniques, historical, religious, and cultural contexts, as well as ideas, concepts, and aesthetics. In this course, students will explore the formal elements of visual language and how it functions in communicating ideas and emotions. A study of humanity will help the students to realize that art lies in the heart of human experience. The course will help students develop an approach to variety of artistic expressions – painting, sculpture, photography, film, music, theater and dance. Within these art forms, we will discuss subjects related to humanity studies such as religion, spirituality, ethics, politics and cultural value.</p>	<p><b>Dr. Dinh Hong Hai,</b> Vietnam Academy of Social Sciences</p>
4B	<p><b>Production mindset and applied research</b></p> <p>Một xã hội phát triển cần phải tạo ra nhiều giá trị, trong đó các giá trị vật chất và các giá trị về tri thức. Trong hoàn cảnh Việt Nam hiện nay, có lẽ trình độ về sản xuất và sự cạnh tranh về chất lượng của các sản phẩm và dịch vụ là chưa cao. Có nhiều tham số liên quan tới vấn đề này, một trong những điểm quan trọng theo chúng tôi đó là “tư duy sản xuất” và nhận thức cũng như cách thức về việc “nghiên cứu ứng dụng” của chúng ta còn chưa rõ ràng và còn nhiều điểm bất cập. Thông qua một số ví dụ, cũng như một số kinh nghiệm cá nhân quan sát được ở các nước phát triển, chúng tôi sẽ thảo luận về các vấn đề nêu trên trong bài giảng này.</p>	<p><b>Dr. Nguyen Duc Dzung,</b> Hanoi University of Science and Technology</p>

4C	<p><b>Nano-emulsion: a potential ophthalmic drug delivery system</b></p> <p>Although very convenient for patients, conventional eye drops usually require high drug doses, frequent administration because of the poor drug bioavailability and therapeutic response. Nanoemulsions with their numerous advantages such as sustained drug release profile and high penetration into the deeper layers of the ocular structure and the aqueous humor are a promising carrier system instead of conventional ophthalmic dosage forms. In this study, diclofenac nanoemulsions prepared by ultrasonication and high-pressure homogenization method displayed small average diameters (62.78 nm), high entrapment efficiency (98.55±0.05%) and good stability. Besides, on the initial results of bioavailability study, nanoemulsions also exhibited better pharmacokinetic parameters compared to drug solution.</p>	<p><b>Vu Ngoc Mai</b>, Hanoi University of Pharmacy</p>
4D	<p><b>Effect of silicic acid concentration on surface charge and colloidal properties of goethite</b></p> <p>Goethite occurred in a dispersed state can be removed from soil if its surface charge becomes more negative. Silicic acid (<math>H_4SiO_4</math>) in soil solution associates with goethite through innerphere complexes. It arises a suspicion that silicic acid can change the surface charge density of the goethite, and colloidal properties can therefore be affected as a consequence. Batch experiments for examining sorption of acid silicic on goethite were conducted in a concentration range of 0 – 40 mg SiL<sup>-1</sup>. Electrolyte background for each experiment was prepared at 0,01 or 0,05 mmol·L<sup>-1</sup> (NaCl). Particle charge detector (Mutek, PCD 05) was used for surface charge quantitative. Colloidal properties was investigated by determining light scatter with a spectrophotometer. Sorption of silicic acid on the goethite was facilitated with an increase of pH. A maximum sorption capacity was found at pH ~9. Surface charge of the goethite was observed to be more negative with a decrease of electrolyte background and increases of pH and sorbed Si. Silicic acid can affect colloidal properties of the goethite in 2 ways: 1) At pH &lt; 5, dispersion of the goethite was more effective at lower concentrations (5 and 10 mg L<sup>-1</sup>); and 2) At pH &gt; 9, dispersion was correlated with silicic acid concentration in the solution. In general, silicic acid can affect the colloidal property of goethite (in a similar way as anions) by forming innerphere complexes (Si-O-Si) and modifying the surface charge of the goethite.</p>	<p><b>Dam Thi Ngoc Than</b>, Vietnam National University, Hanoi</p>

4E	<p><b>Physics of photography</b></p> <p>Camera-equipped devices become indispensable in our daily life, with millions of products sold and billions of photos generated. However, majority of people do not know how to use camera properly to take photo, mostly due to poor understanding of underlying physics. This talk introduces basic optical knowledge of photography. The lecture starts with how professional camera works, classification of lens, definitions of focal length and angle of view, relationship between resolution and quality. Then, we elucidate elements of exposure (aperture, depth of field, shutter speed) and discuss how it effects the captured photo. Next, we describe color terms including ISO, white balance, color temperature. Lastly, histogram and camera/photo tips for beginners are presented.</p>	<p><b>Dr. Luu Quang Hung,</b> National University of Singapore</p>
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<b>SOCIAL SCIENCE</b>		
5A	<p><b>How was history written?</b></p> <p>Câu hỏi đầu tiên: vì sao người ta lại viết sử? Lịch sử được viết ra có tác dụng gì đối với người viết ra nó? Lịch sử được viết ra như thế nào? Bằng cách nào? Bằng phương tiện gì? Cái lịch sử mà ta biết chủ yếu được viết ra với tư cách nó là một phương tiện của giới cầm quyền, của người chiến thắng, dùng để bài bác các kẻ chiến bại và ca ngợi sự thành công và củng cố tính chính thống của họ. Đây là động lực để lịch sử được ghi chép lại, và tính mục đích của nó đã khiến lịch sử được ghi chép lại/ sáng tạo nên bằng nhiều phương thức khác nhau. Bài thuyết trình sẽ đi vào phân tích các phương thức tạo tác lịch sử, bao gồm các khía cạnh sau: (1) Mỹ hóa lịch sử. vd: cái chết của Hai bà Trưng, Lý Thường Kiệt, Quang Trung.... (2) Xú hóa lịch sử. vd: Nguyễn Ánh, Tự Đức- , Lê Chiêu Thống.... (3) Thần quyền hóa/ thiêng hóa lịch sử. sấm ngữ, sùng bái cá nhân. (4) Huyền thoại hóa lịch sử. Nguyễn Trãi, gò Đống Đa, tượng đá Mỹ Châu. (5) Hiện đại hóa lịch sử: 938- 968, công xã nông thôn, văn hiến, bản sắc dân tộc, lingua, các thuật ngữ mỹ thuật cổ...</p>	<p><b>Dr. Tran Trong Duong,</b> Vietnam Academy of Social Sciences</p>

5B	<p><b>Seeking for the truth: Initial strategies</b></p> <p>Nghiên cứu khoa học là một hành trình gian khổ và dài lâu nhằm khám phá sự thật. Con đường đó là không giống nhau ở mỗi người bởi đó là những thực thể riêng biệt với căn cốt sinh học và tinh thần khác nhau, nhu cầu và mục đích nghiên cứu khoa học cũng như chuyên ngành khoa học là không giống nhau. Tuy nhiên, một số thao tác cơ bản có thể được áp dụng chung cho những bước đầu tiên của hành trình đó. Bài giảng giới thiệu và hướng dẫn thực hành một số thao tác ban đầu của phương thức đọc hiểu tài liệu (critical reading) và phương thức tư duy (critical thinking) nhằm trang bị cho học viên một số kỹ năng cơ bản để nhận thức, đánh giá, phản biện tài liệu trong quá trình nghiên cứu, đặc biệt là đối với nghiên cứu khoa học xã hội và nhân văn.</p>	<p><b>Dr. Nguyen To Lan,</b> Vietnam Academy of Social Sciences</p>
5C	<p><b>Recent issues in research methodology for social science</b></p> <p>Bài giảng trình bày và thảo luận sai lầm về phương pháp luận trong khoa học xã hội vài thế kỷ gần đây do nỗ lực áp dụng phương pháp của khoa học tự nhiên, dưới sự ảnh hưởng của Newton và các nhà vật lý hàng đầu.</p>	<p><b>Dr. Nguyen Duc Thanh,</b> Vietnam Centre for Economic and Policy Research</p>

## EXPERIENCE AND DISCUSSION

6A	<p><b>Research career and soft skills</b></p> <p>Nghiên cứu khoa học là một nghề bình thường như mọi nghề nghiệp khác trong xã hội, và cũng đòi hỏi những kỹ năng đặc thù nghề nghiệp bên cạnh các kiến thức chuyên môn. Bài giảng giới thiệu những kỹ năng mềm mà một người làm khoa học cần trang bị: cách thức làm việc nhóm, giải quyết các vấn đề của làm việc nhóm, tư duy phản biện, kỹ năng quản lý nghề nghiệp và định hướng tương lai.</p>	<p><b>Dr. Ngo Duc The,</b> Technical University of Denmark</p>
6B	<p><b>Government scholarships</b></p> <p>We explain why fighting for a government scholarship is a smart way to pursuit a postgraduate study oversea in the field of science. Local scholarship is briefly introduced. However, we focus on major scholarships provided by Japan, Australia, US, UK, France and Europa governments/agencies. Competitive advantage is analyzed and the strategic and tactic preparation for winning such scholarship is suggested.</p>	<p><b>Dr. Luu Quang Hung,</b> National University of Singapore</p>

6C	<p><b>Experiences in applying Erasmus Mundus scholarship</b></p>	<p><b>Doan Thi Que</b>, Vietnam National University, Hanoi</p> <p><b>Nguyen Minh Chau</b>, Vietnam National University, Hanoi</p>
6D	<p><b>Preparation for scholarship and job applications</b></p> <p>Bài giảng giới thiệu những nội dung cần chuẩn bị cho một hồ sơ xin học bổng du học và tìm việc trong lĩnh vực khoa học nói chung. Sau đó, phần tương tác sẽ đi vào thảo luận chi tiết các viết thư ứng cử, chuẩn bị lý lịch khoa học, etc.</p>	<p><b>Dr. Luu Quang Hung</b>, National University of Singapore</p> <p><b>Dr. Ngo Duc The</b>, Technical University of Denmark</p>

# SCHEDULE

<b>DAY 1 – WEDNESDAY, 20 AUGUST 2014</b>		
<b>07:00 – 08:30</b>	<b>OPENING CEREMONY</b>	Dr. Giap Van Duong
07:00 – 08:00	Registration	
08:00 – 08:10	<b>Welcome speech</b>	Dr. Trinh Thi Thuy Giang, Dr. Nguyen Thanh Binh, Ms. Hua Thanh Hoa
08:10 – 08:30	<b>Opening speech</b>	Dr. Giap Van Duong, Dr. Ngo Duc The, Dr. Luu Quang Hung
<b>08:30 – 12:30</b>	<b>SESSION 1: FUNDAMETALS OF SCIENCE</b>	Dr. Luu Quang Hung
08:30 – 10:00	<b>1A: Scientific research and academic freedom</b>	Dr. Giap Van Duong
10:00 – 10:30	Morning tea break	
10:30 – 11:30	<b>1B: Research in higher education</b>	Dr. Ngo Duc The
11:30 – 12:30	<b>1C: From phenomena to essence: the search for scientific knowledge</b>	Dr. Nguyen Duc Dzung
12:30 – 14:00	Lunch time	
<b>14:00 – 18:30</b>	<b>SESSION 2: SCIENTIFIC SKILLS</b>	Dr. Ngo Duc The
14:00 – 15:00	<b>2A: Scientific report: from the laboratory to the international publication</b>	Dr. Tran Hai Duc
15:00 – 16:00	<b>2B: Ethnic and citations in science</b>	Dr. Dang Van Son
16:00 – 16:30	Afternoon tea break	

16:30 – 17:30	<b>2C: Presentation and edit of technical figures for academic conference and journal</b>	Dr. Nguyen Chau Lan
17:30 – 18:30	<b>2D: Creative innovation: How to start?</b> (Optional)	Dr. Giap Van Duong

## DAY 2 – THURSDAY, 21 AUGUST 2014

<b>07:30 – 12:30</b>	<b>SESSION 3: RESEARCH WORKS</b>	Dr. Giap Van Duong
07:30 – 08:00	Registration	
08:00 – 09:00	<b>3A: Some recent findings in enzyme study</b>	Dr. Pham Bao Yen
09:00 – 10:00	<b>3B: Causality in social science</b>	Dr. Nguyen Ngoc Anh
10:00 – 10:30	Morning tea break	
10:30 – 11:30	<b>3C: Investigation of landslide along highway #6</b>	Dr. Nguyen Chau Lan
11:30 – 12:30	<b>3D: Climate change adaption, disaster mitigation and associated policies</b>	Dr. Nguyen Ngoc Huy
12:30 – 14:00	Lunch time	
<b>14:00 – 18:30</b>	<b>SESSION 4: POPULAR AND NATURAL SCIENCE</b>	Dr. Ngo Duc The
14:00 – 15:00	<b>4A: Art and humanity</b>	Dr. Dinh Hong Hai
15:00 – 16:00	<b>4B: Production mindset and applied research</b>	Dr. Nguyen Duc Dzung
16:00 – 16:30	Afternoon tea break	
16:30 – 17:00	<b>4C: Nano-emulsion: a potential ophthalmic drug delivery system</b>	Ms. Vu Ngoc Mai (alumnus)
17:00 – 17:30	<b>4D: Effect of silicic acid concentration on surface charge and colloidal properties of goethite</b>	Ms. Dam Thi Ngoc Than (student)
17:30 – 18:30	<b>4E: Physics of photography</b> (Optional)	Dr. Luu Quang Hung



## DAY 3 – FRIDAY, 22 AUGUST 2014

<b>07:30 – 12:30</b>	<b>SESSION 5: SOCIAL SCIENCES</b>	<b>Dr. Giap Van Duong</b>
07:30 – 08:00	Registration	
08:00 – 09:30	<b>5A: How was history written?</b>	Dr. Tran Trong Duong
09:30 – 10:00	Morning tea break	
10:00 – 11:00	<b>5B: Seeking for the truth: Initial strategies</b>	Dr. Nguyen To Lan
11:00 – 12:30	<b>5C: Recent issues in research methodology for social science</b>	Dr. Nguyen Duc Thanh
12:30 – 14:00	Lunch time	
<b>14:00 – 17:30</b>	<b>SESSION 6: EXPERIENCE AND DISCUSSION</b>	<b>Dr. Giap Van Duong</b>
14:00 – 14:30	<b>6A: Research career and soft skills</b>	Dr. Ngo Duc The
14:30 – 15:00	<b>6B: Government scholarships</b>	Dr. Luu Quang Hung
15:00 – 15:30	Afternoon tea break	
15:30 – 16:00	<b>6C: Experiences in applying Erasmus Mundus scholarship</b>	Ms. Doan Thi Que and Ms. Nguyen Minh Chau (alumni)
16:00 – 17:30	<b>6D: Preparation for scholarship and job applications</b>	Dr. Luu Quang Hung, Dr. Ngo Duc The
<b>17:30 – 18:00</b>	<b>CLOSING CEREMONY</b>	<b>Dr. Ngo Duc The</b>
17:30 – 17:50	<b>Closing speeches</b>	Dr. Giap Van Duong, Dr. Trinh Thi Thuy Giang, Dr. Nguyen Thanh Binh, Dr. Ngo Duc The, Dr. Luu Quang Hung, Ms. Hua Thanh Hoa
17:50 – 18:00	Certificate awarding and photo taking	

## ORGANIZATION COMMITTEES

### 1. Program Committee

- Dr. Giap Van Duong (Giapschool, Vietnam);
- Dr. Ngo Duc The (DTU, Denmark);
- Dr. Luu Quang Hung (NUS, Singapore and VNU)

### 2. Local Committee

- Dr. Trinh Thi Thuy Giang (Head of Personnel Dept., College of Science, VNU)
- Dr. Nguyen Thanh Binh (Head of Student & Politic Affair Dept., College of Science, VNU)
- Ms. Hua Thanh Hoa (President of Youth Society, College of Science, VNU)
- Mr. Tran Quoc Tu Kieu (Vice-President of Youth Society, College of Science, VNU)
- Dr. Tran Hai Duc (College of Science, VNU)

### 3. Volunteers and supporters

- Ms. Vu Ngoc Mai, speaker
- Ms. Dam Thi Ngoc Than, speaker
- Ms. Doan Thi Que, speaker
- Ms. Nguyen Minh Chau, speaker
- Mr. Nguyen Bao Huy, supporter
- Ms. Nguyen Phuong Thao, supporter
- Ms. Nguyen Ai Nuong, supporter
- Mr. Trinh Viet Hung, supporter
- Mr. Hoang The Viet, supporter

## FINANCIAL ISSUES

The program committee is responsible for the contents. Lecturers contribute to the school on a voluntary basis and cover expenses by themselves. The students attending the school are free of charge.

We acknowledge the supports from host and partners. Facilities are hosted by the College of Science, VNU Hanoi. VERP and Vietnam Scholars Network funded the banquet for faculties and organizers. Trung Nguyen Corporation provided coffee services. GiapSchool, VSL, VNU News, VietNamNet sponsored the PR. Microsoft Research and WordPress provided the conference portal and website hosting.

We welcome any contributions that can help organizing this event. Please kindly approach us at: [truonghekhoahoc@gmail.com](mailto:truonghekhoahoc@gmail.com) for more information.



**NGUYEN NGOC ANH** (1971) owned his Bachelor of Arts (honors) from Hanoi Foreign Trade University in 1993, and his Master and PhD degrees both from Lancaster University (UK) in 1997 and 2002, respectively. He has been an officer at the Department of Asia-Pacific Affairs and the Department of Europe and North America of the Ministry of Trade (1995-1996, 1998-1999, 2005), a postdoctoral/research fellow at Lancaster University (UK, 2002-2004), and a lecturer at Hanoi School of Business (2004-2008). His professional career embraces positions such as senior researcher at National Council for Science and Technology Policy (2005-2008), chief economist at Development and Policies Research Center (2005-now), and advisor to the Economic Committee of the National Assembly (2008-now). His foci are international business and economics.



**TRAN HAI DUC** (1984) graduated from Vietnam National University, Hanoi with the degree of Bachelor of Science in Physics in 2006. He then received his Master and PhD in Physics from Chungbuk National University (Republic of Korea) in 2009 and 2014, respectively. He currently worked as a lecturer at Faculty of Physics, College of Science, Vietnam National University, Hanoi. His research interests focus on vortex dynamics in superconductors, fabrications of nanosized artificial pinning centers, oxide and superconducting films, especially the superconducting cables for power-related applications.



**GIAP VAN DUONG** (1976) got his Bachelor of Engineering from Hanoi University of Technology in 1999, Master of Engineering from Chonbuk National University (South Korea) in 2002 and PhD from the Vienna University of Technology (Austria) in 2006. He was a postdoctoral researcher at Vienna University of Technology (Austria, 2006-2007) and University of Liverpool (UK, 2007-2010), prior to joining the National University of Singapore (Singapore, 2010-2012) as a research scientist. His areas of expertise consist of magnetic materials, material physics and nanophysics. In 2013, he returned to Vietnam to start his education projects, including GiapSchool, Books4Experts and Books4Children.



**TRAN TRONG DUONG** (1980) has worked as a researcher at The Institute of Sino-Nom Studies, Vietnamese Academy of Social Sciences since 2007, and as a lecture at Hanoi Academy of Buddhism since 2010. He graduated with the Bachelor and Master of Linguistics and Literature in 2002 and 2005, respectively, from the Colleague of Social Sciences and Humanities, Vietnam National University, Hanoi. He received the Ph.D. degree of Linguistics and Literature from the Graduate Academy of Social Sciences in 2011. His major is historical linguistics, religious symbolics, and Vietnamese medieval history



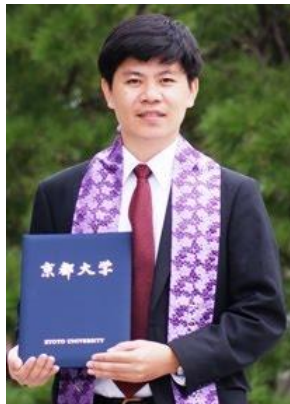
**NGUYEN DUC DZUNG** (1979) graduated from Vietnam National University, Hanoi with the Bachelor of Science degrees (from Honors Program) in 2001, respectively. He was then awarded PhD degree in physics from the Osaka University (Japan) in 2009. He worked as a lecturer at Vietnam National University Hanoi (2001-2005), research associate at Osaka University (2009-2010), research scientist at Vietnam Standard and Quality Institute (2010-2012) prior to joining Hanoi University of Science and Technology as a lecturer. His research interests involve transmission electron microscopy and nano-ananlysis applied to nanomaterials, and technology transferring.



**DINH HONG HAI** (1970) got double bachelor degrees from Hanoi University of Industrial Fine Arts in 1996 and Vietnam National University Hanoi in 1998. He gained his Master of Philosophy program from University of Delhi (India) in 2006. He has studied at Harvard University (USA, 2008-2010) and defended his PhD dissertation at the Graduate School of Social Sciences in 2011. He also worked as a research fellow at the Chinese Academy of Social Sciences (China, 2006-2007). He is now a researcher at Vietnam Academy of Social Sciences (since 2001) and a lecturer at Vietnam National University Hanoi. His research fields are arts, humanity, anthropology and related social sciences.



**LUU QUANG HUNG** (1982) completed his Bachelor of Science (from Honors Program) at Vietnam National University, Hanoi in 2004 and PhD from Kyoto University (Japan) in 2012. He has been a lecturer at Vietnam National University, Hanoi (2004-2008), a doctoral fellow at University of Queensland (Australia, 2005) and a project researcher at Kyoto University (Japan, 2011-2012). Since 2012, he has joined the National University of Singapore (Singapore) as a research fellow. His research interest involves physical oceanography and climate change. He is a founder of Sakura Scholarship Foundation (2010) and Orchid Scholarship Foundation (2012) to encourage poor, talented and passionate high-school students in Vietnam.



**NGUYEN NGOC HUUY** (1979) received his Bachelor and Master of Science degrees from Hue University in 2001 and 2004, respectively; and his PhD from Kyoto University (Japan) in 2010. He worked as a lecturer at Hue University of Agricultural and Forestry (2002-2006) and a researcher at Kyoto University (Japan, 2010-2012), before joining as a technical specialist at the Institute for Social and Environmental Transition (2012-now). He consulted for several international organizations, including World Wide Fund Indochina (2003), Asian Cities Climate Change Resilience Network (2009), United Nation Strategy of Disaster Reduction (2009), United Nations Convention to Combat Desertification (2010), Asian Disaster Reduction Center (2010), International Fund for Agriculture (2011), United Nations Educational, Scientific and Cultural Organization (UNESCO, 2011). His major is climate change and biology.



**NGUYEN CHAU LAN** (1981) got his Bachelor and Master of Civil Engineering from University of Transport and Communications, Hanoi in 2004 and 2008, respectively. He obtained his PhD degree in Graduate School of Global Environmental Studies, Kyoto University (Japan) in 2013. He is a lecturer at Civil engineering department, University of Transport and Communications (2005-now). His interested researches are soil mechanics, foundations design, waste landfill and landslide.



**NGUYEN TO LAN** (1981) obtained her Bachelor and Master degrees in Linguistics and Literature from College of Social Sciences and Humanities, Vietnam National University Hanoi in 2003 and 2006 respectively, and graduated from another Bachelor program in Chinese Linguistics from College of Languages and International Studies at the same university in 2007. She then received the Ph.D. in Linguistics and Literature from the Graduate Academy of Social Sciences in 2012. She has been working as a researcher at the Institute of Sino-Nom Studies, Vietnamese Academy of Social Sciences since 2004. In 2010, she received an ASIA Fellows Award to carry out a comparative study of Vietnamese traditional performance and Cantonese Opera in China. She was also a visiting scholar at Harvard-Yenching Institute (2013–2014). She has given various lectures at universities in China, Taiwan, Hong Kong, Japan and the USA on theatre literature, folk performance, traditional customs, and the interactive relationship between Vietnam, China, Japan and Korea from transculturation studies perspective.



**DANG VAN SON** (1981) holds a PhD, supported from Marie Curie FP6 program, from the University of Birmingham (UK) since 2011. He was an honour researcher at the University of Birmingham (6 months) and consultant at Coated Conductor Cylinders Ltd (Malvern, UK). He is currently FP7 Marie Curie research fellow (Experienced Researcher-ER, Postdoc) in Inorganic Chemistry department, Ruhr-University Bochum, Germany. Dr Dang research interests include high temperature superconductor (HTS) applications for long-length coated conductor, flux pinning centres for HTS and modelling of flux pinning centres. Current project includes high K dielectric ultra-thin films for next generation of electronic devices involving chemistry precursor and thin film deposition by Atomic layer deposition (ALD) and Metal-organic chemical vapour deposition (MOCVD).



**NGUYEN DUC THANH** (1977) earned his PhD. in Development Economics from National Graduate Institute for Policy Studies (GRIPS), Tokyo, Japan in 2008. He is Director of VEPR and member of the Economic Advisory Group to the Prime Minister of Vietnam. Dr. Thanh was a senior researcher in the Policy Advisory Group at the Ministry of Finance from March 2007 to September 2008. In July 2008, he co-founded the Vietnam Centre for Economic and Policy Research (VEPR) at University of Economics and Business, Vietnam National University, Hanoi, and has been acting as VEPR's Director and Chief Economist since then. Since September 2011, Dr. Thanh has been a member of the Economic Advisory Group to the Prime Minister of Vietnam. He has been teaching macroeconomics at leading universities in Vietnam, and publishing extensively in academic journals and is involved actively in the country's policy debates. He is the founder and chief editor of the influencing Vietnam Annual Economic Reports, which are widely recognized in the economic research and policy making profession. The Report has been annually published by VEPR since 2009. Dr. Thanh is a member of the East Asian Economic Association. He is currently a member of the Policy Advisory Committee of the Organization for Vietnam Young Entrepreneurs, and economic adviser to several policy research programs, business associations, commercial banks, investment funds and TV channels.



**NGO DUC THE** (1982) graduated from Vietnam National University, Hanoi with the Bachelor and Master of Science degrees in 2004 and 2006, respectively. He then obtained his PhD from University of Glasgow (UK) in 2010. He worked as a research fellow at Vietnam National University, Hanoi (2004-2006 and 2010), Toyota Technological Institute (Japan, 2010-2011) and National University of Singapore (Singapore, 2011-2013). He is continuing his postdoctoral study at Technical University of Denmark (Denmark, 2013-now). His research interests include magnetic materials, nanophysics and electron microscopy. In 2013, he initiated the Science Summer School to inspire and support young Vietnamese researchers pursuing academic careers.



**PHAM BAD YEN** (1982) graduated with a Bachelor degree in Biochemistry from Vietnam National University, Hanoi in 2004 and received her PhD degree in Biochemistry and Molecular Biology/Enzymology from the Department of Biochemistry and Biophysics, University of North Carolina at Chapel Hill in 2009. She finished her postdoctoral training in 2011 at the same institution. Since September 2011, she has been working at the Key Laboratory of Enzyme and Protein Technology (KLEPT). She worked on various research projects including nanomaterials and biomedical science.



# REGISTRATIONS

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## APPLICATION

Top 200 passionate and excellent students will be selected for the summer school. To apply, the applicant must submit the application package, including:

1. Curriculum vitae (in English);
2. Motivation letter (in English writing is preferred; Hints: in the letter, the applicant should introduce him/herself briefly, his purpose to attend the school and how the knowledge obtained from the school fits his/her dream);
3. Register personal information

Documents (1) and (2) must be prepared in PDF files. Their file names should be in formatted using the applicant's full name (for example, [nguyenvana\\_cv.pdf](#) for curriculum vitae and [nguyenvana\\_letter.pdf](#) for the motivation letter).

**Note that: The application will not be accepted if any one of above 3 items is missing.**

## HOW TO SUBMIT

There are 2 ways to submit your document. You can select one of them that fit you.

**Option 1** (Highly recommended – which will increase your chance of acceptance)

Submit documents (1) and (2) and declare information at portal: <https://cmt.research.microsoft.com/VSSSS2014/>

You do not need to declare document (3) in the above list.

**Option 2**

Send documents (1) and (2) to the organizing committee email: [truonghekhoahoc@gmail.com](mailto:truonghekhoahoc@gmail.com).

Register personal information at <http://goo.gl/sczEqj>

The alumni students are unlikely eligible to attend the summer school this year. However, they are welcomed to join as a student speaker or volunteer to support the organizing committee. They are not requested to submit the motivation letter and curriculum vitae as their profile are still with the committee. However, they are encouraged to submit their updated CV, and registration of personal information is still compulsory.

## IMPORTANT DATES

**Deadline of Application: 4 August 2014 (23:59, GMT+7).**

**Announcement of Acceptance: 12 August 2014.**