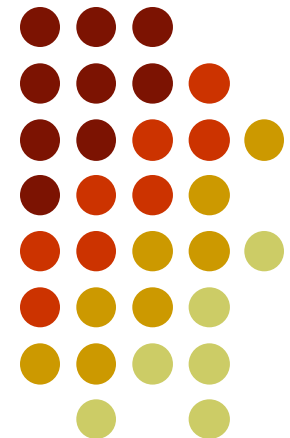


Global Young Scientists Summit (GYSS) @ One-North



International Summit

National
Research
Foundation

GLOBAL YOUNG SCIENTISTS SUMMIT @ ONE-NORTH

An International Meeting of Bright Young Researchers,
Nobel Laureates & Eminent Scientific Leaders in Singapore



Positioning of GYSS@One-North

- An international gathering of top scientific minds in Singapore to discuss science & technology trends, future game changers and how research could address major global challenges
- Speakers are scientific leaders who are recipients of
 - Fields Medal
 - Millennium Technology Prize
 - Nobel Prize
 - Turing Award
- Participants are bright young scientists – post-docs and PhD students from different parts of the world

Key Features of GYSS@One-North

National
Research
Foundation

Item	GYSS@One-North
<i>Discipline</i>	Multi-disciplinary (Physics, Chemistry, Biology/Medicine, Mathematics, Computer Science, Technology/Engineering); focus is on use-inspired research to address major global challenges
<i>Scope</i>	Science & Technology, R&D and Innovation
<i>Audience</i>	Mainly Post-docs and PhD students (35 years old and below) However, local undergrads with passion for research can be selected to attend
<i>Composition</i>	1/3 Singapore, 1/3 Asia-Pac, 1/3 Elsewhere
<i>Enabler</i>	Singapore Challenge - Prize given to the best scientific idea or innovative concept to solve a given challenge - Finalists pitch to a panel of international judges

GYSS@One-North draws inspiration from the Lindau Nobel Laureates Meeting
It has similarities but also some important differences

Inaugural GYSS@One-North
20-25 Jan 2013

National
Research
Foundation

ADVANCING SCIENCE, CREATING TECHNOLOGIES FOR A BETTER WORLD

Excite, Engage, Enable

- To excite and inspire bright young scientists to apply their minds to research that addresses serious global issues and the future needs of mankind
- To connect young researchers to like-minded peers and with eminent scientific leaders as well as to engage them through close & personal interaction sessions
- To enable the realization of innovative research ideas through awarding a prize for the best idea(s) submitted

Selection of GYSS@One-North Participants

Participant selection

- Participants to be selected by academic and research institutes with significant presence in Singapore and strong relationship with Singapore research entities
- Participants to take care of their passage to Singapore; NRF will cover the cost of the conference and local hospitality

Nomination of GYSS@One-North Participants

Nomination Criteria

- PhD students and postdocs under the age of 35
- Demonstration of passion and interest in research
- Strong organisational support, preferably recommendation letter from academic advisor or supervisor
- Possession of good English skills for active discussion and engagement with peers and speakers
- Demonstrated strong academic achievement in area of research, assessed within the top 5-10 percent of cohort

Participating Institutions/Countries

Singapore / Asia

Singapore	China	ASEAN	Asia	
NUS	Peking	Malaysia	Japan	Tokyo
NTU	Tsinghua	Indonesia		Waseda
SMU	Zhejiang	Vietnam		Keio
SUTD	SJTU	Thailand	Korea	
A*STAR		Philippines	India	IITB
		Brunei	Australia	Melbourne
		Laos		ANU (5)
		Myanmar	Hong Kong	University of HK
		Cambodia	ROC	National Taiwan University

Participating Institutions/Countries

National
Research
Foundation

Europe/USA and Corporate Labs

USA	Europe	Israel	
MIT	Cambridge	Hebrew	
Harvard	Oxford	Technion	
Stanford	ICL	BGU	
Berkeley	Southampton	Weizmann	
Caltech	TUM		
CMU	ETH	Corporate Labs	
Duke	CNRS	IBM	GE
Yale	Fraunhofer	SAP	Rolls Royce
UIUC	Karolinska Institute	HP	Philips
		Microsoft	

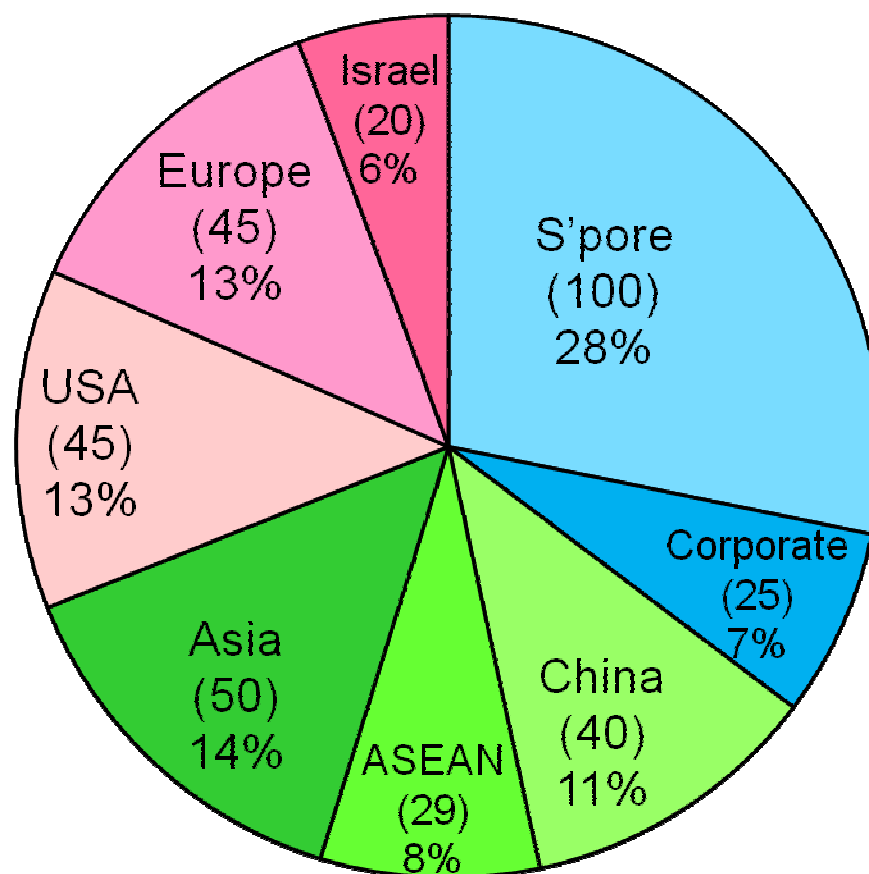
Total ~ 350

Participating Countries/Institutions

Planned Composition of Participants

National
Research
Foundation

Region	Percentage
Singapore Corporate Labs	35% (125)
Asia-Pacific <ul style="list-style-type: none">• China• Taiwan• Hong Kong• ASEAN• India• Japan• Korea• Australia/NZ	33% (119)
Western <ul style="list-style-type: none">• USA• Europe• Israel	32% (110)
Total	100% (354)



Participating Countries/Institutions

Proposed Programme Outline

- Opening on Sunday Evening (20 Jan 2013)
- 5-day program (Mon – Fri)
 - First 3 days -- Each day will have a different focus to address the theme of ***Advancing Science, Creating Technologies for a Better World***
 - Science & Research (Advancing Science)
 - Technology Innovation & Society (Creating Technologies)
 - Solutions to Global Challenges (Better World)
 - Last 1.5 days: site visits
- Closing session on Friday afternoon (25 Jan 2013)
 - Includes NRF Fellowship Award Ceremony and SG Challenge Award Ceremony

GYSS@One-North Speakers

- Speakers are eminent science and technology leaders who are prize winners of the following:
 - Fields Medal (Mathematics)
 - Millennium Technology Prize (Technology)
 - Nobel Prize (Physics, Chemistry, Medicine/Biology)
 - Turing Award (Computer Science)
- Plan is to have about 20 such scientists, with half being Nobel laureates
- NRF will first approach speakers who have good relationships with Singapore built up over the years

GYSS@One-North Speakers

- Some of the confirmed speakers include:
 - Cédric Villani, Fields Medal (2010)
 - Michael Gratzel, Millennium Technology Prize (2010)
 - Shuji Nakamura, Millennium Technology Prize (2006)
 - Eric Allin Cornell, Nobel Laureate in Physics (2001)
 - Aaron Ciechanover, Nobel Laureate in Chemistry (2004)
 - Albert Fert , Nobel Laureate in Physics (2003)
 - Anthony J. Leggett, Nobel Laureate in Physics (2003)
 - Richard Roberts, Nobel Laureate in Medicine (1993)

Proposed Masterclasses

- Speakers will be asked if they wish to conduct simple discussions, or hold masterclasses
- Speakers who want to teach a masterclass will suggest a topic which will be broadcasted to the participants
 - Participants will submit whitepapers on that particular topic
 - Speaker will choose a participant's work to be discussed
 - Participant will prepare a presentation for the session, under advisement from the speaker
- Raises the level of participation and engagement between the speakers and the young scientists

Proposed Singapore Challenge

- Theme: **Innovations for Future Cities**
- Participants will be given an option to participate in the Singapore Challenge
 - Based on their current/past research
 - Submission of whitepaper during online registration
 - Selection of 10 finalists
 - Short presentation (5-10min) by finalists, to all participants, on last day
 - Judging panel will include speakers
- Winner(s) will receive a cash prize

International Advisory Committee

National
Research
Foundation

- Established an International Advisory Committee (IAC) to:
 - Provide advice on programme and speakers
 - Curate programme

Members

Name	Designation
Prof Sir Richard Friend	SAB Chairman
Prof Ulrich Suter	CRP IEP Chairman
Dr Curtis Carlson	FEP Chairman
Prof Michael Graetzel	FEP Member Millennium Technology Prize (2010)
Prof Robert Grubbs	SAB Member Nobel Prize in Chemistry (2005)
Prof Hartmut Michel	SAB Member Nobel Prize in Chemistry (1988)
Prof Sir Anthony Leggett	FEP Member Nobel Prize in Physics (2003)
Prof Aaron Ciechanover	FEP Member Nobel Prize in Chemistry (2004)
Prof Sir Richard Roberts	CRP IEP Member Nobel Prize in Physiology or Medicine (1993)
Prof Bertil Andersson	NTU President
Prof Tan Chorh Chuan	NUS President
Prof Arnoud De Meyer	SMU President
Prof Tom Magnanti	SUTD President

*President Tony Tan has agreed to be the
GYSS@One-North patron*

Back Up Slides

GYSS@One-North Programme Outline

National
Research
Foundation

First 3 Days (Mon – Wed)

- Each day will have a different focus to address the theme of ***Advancing Science, Creating Technologies for a Better World***
 - Science & Research (Advancing Science)
 - Technology Innovation & Society (Creating Technologies)
 - Solutions to Global Challenges (Better World)
- Plenary Sessions in the morning ending with a panel discussion with the speakers to sum-up the plenary lectures and provide linkage for the programme the following day
- Master Class or Informal Sessions in the afternoons
 - Each session will be hosted by a speaker who will engage the young scientists in an informal closed door atmosphere
 - Speakers could share their own experiences as a scientist and take questions
 - 30-40 participants per session

GYSS@One-North Programme Outline

National
Research
Foundation

Last 2 Days (Thu & Fri)

- Site visits to Singapore's R&D organisations
 - Universities and A*STAR research institutes
 - CREATE
 - Public agencies & innovative companies eg. port operations, traffic management
- Fringe activities can also be organised
 - Events in Schools, Junior Colleges

Closing of GYSS (Fri afternoon)

- 10 SG Challenge finalists pitch to a panel of judges
- Award of NRF Fellowship
- SG Challenge Prize to be given to the best scientific idea or innovative concept to solve a given challenge

GYSS@One-North Programme Overview

National
Research
Foundation

SUN (20 Jan)	MON (21 Jan)	TUE (22 Jan)	WED (23 Jan)	THU (24 Jan)	FRI (25 Jan)
Registration	Breakfast Talks	Breakfast Talks	Breakfast Talks	Breakfast Talks	Breakfast Talks
	Plenary Lectures	Plenary Lectures	Plenary Lectures		Site visits to government agencies and companies involved in R&D
	<i>coffee break</i>				
	Plenary Lectures Panel Discussion	Plenary Lectures Panel Discussion	Plenary Lectures Panel Discussion		
	<i>lunch</i>				
Social Event	Informal small group sessions with speakers	Informal small group sessions with speakers	Informal small group sessions with speakers	Site visits to universities and research institutions Fringe activities	<i>lunch</i>
	<i>coffee break</i>				Judging of Singapore Challenge Proposals
	Informal small group sessions with speakers	Informal small group sessions with speakers	Informal small group sessions with speakers		Presentation of Awards - NRF Fellowship - Singapore Challenge
	<i>break</i>				Closing Session
Welcome Dinner	Networking Dinner	Networking Dinner	Concert	Night Safari	

Proposed Programme – Thursday

Site Visits

Time	Track 1	Track 2
AM	<u>NUS</u> University post-graduate and R&D landscape Research Centres of Excellence (RCEs) Research Institutes Research Enterprise	<u>NTU</u> University post-graduate and R&D landscape Research Centres of Excellence (RCEs) Research Institutes Research Enterprise
1230-1330	Lunch	
PM	<u>NRF-CREATE</u> National Research Foundation Selected CREATE entities	<u>A*STAR</u> A*STAR Research – BMRC, SERC Selected A*STAR Research Institutes

Proposed Programme – Friday

Site Visits and Closing of GYSS@One-North

National
Research
Foundation

Time	Track 1	Track 2
AM	<u>Public Agency Track</u> IDA, LTA, MOH/Duke MND, URA, NParks	<u>Industry</u> Start-ups (IDM, MedTech) Companies (Water, Energy) POCC (Port Operations)
1230-1330	Lunch	
1400-1545	SG Challenge: 10 selected whitepapers to be presented by the GYSS participants Short presentations of 5-10 min per participants Theme: Innovation for Future Cities Conceptual whitepapers to be submitted by GYSS participants Examples: TR35, TED	
1545-1630	Coffee Break	
1630-1645	NRF Fellowship Award Ceremony – President Tony Tan (<i>TBD</i>)	
1645-1715	SG Challenge Award Ceremony – President Tony Tan (<i>TBD</i>)	
1715-1730	Closing Speech (<i>TBD</i>)	

Proposed Programme/Speakers