

NTU Bridge Design Competition 2018

(10 & 11 March 2018)

BCA ACADEMY

Outstanding Performance by teams from BCA Academy



Photo story by:
SBD/Dr Mano Kalaiarasan

What is the Competition about?

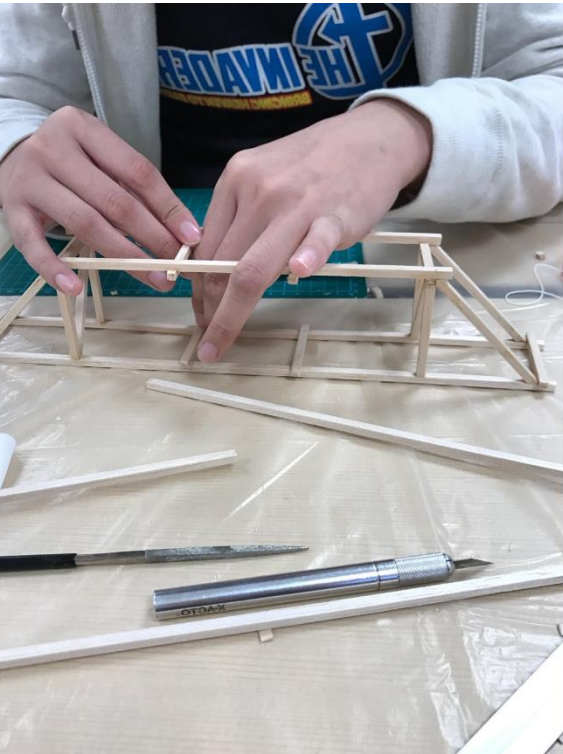
BCA ACADEMY

*Yearly event
since 2014*

*2 days event
over the
weekend*

2 categories

- **University: 25 teams**
(S'pore/Indonesia/Malaysia)
- **Polytechnic: 26 teams**
(local polys/BCAA)



*Day 1, teams analyze,
design and construct 3D-
prototype scale model of a
bridge within 6 hours
based on given case study
(balsa wood, bass wood and
cyanoacrylate adhesive)*

*Day 2, teams must present
the design of their bridge
to a judging panel and
justify why it is the best
option. Finally, bridge is
tested to failure.*

Prizes/Awards

- (1) **5 Prizes awarded based on
optimal
sustainable
economical
aesthetics**
- (2) **Most Favourite Design
Award**

Organiser:
NTU Civil and
Environmental Club

Sponsors:
Building and Construction Authority
The Institute of Structural Engineers

BCA Academy Teams' Past Achievement

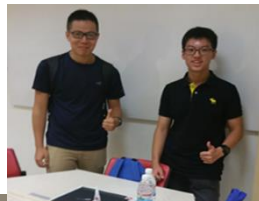
BCA ACADEMY

Year 2016

Swept Top 4
prizes in
Polytechnic
category



1st Prize
Shi Huai & Wang
Jiang (2016)



3rd Prize
Chen Xing Yu & Ma
Ming You (2016)



2nd Prize
Zhou Miao Miao &
Chen Nengjian
(2016)



4th Prize
Li Juan & Wang Jian
Zheng (2016)

Year 2017

Bagged 2nd
Prize in
Polytechnic
category

2nd Prize
Qian Long & Lee Wai Chi (2017)



2018 BCAA Student Warriors

BCA ACADEMY

*Contest in
Poly
category*

15

*Enthusiastic
and
Motivated
Teams*

*2 Students
per team*

30

*DCE/DQS/DCIT
students*

*Led by Senior Lecturer,
Dr Mano Kalaiarasan
with Senior Lecturer,
Dr Yeo Sir Hoon*





Hey, Why Not Try This.....



BCA ACADEMY

After Competition Briefing



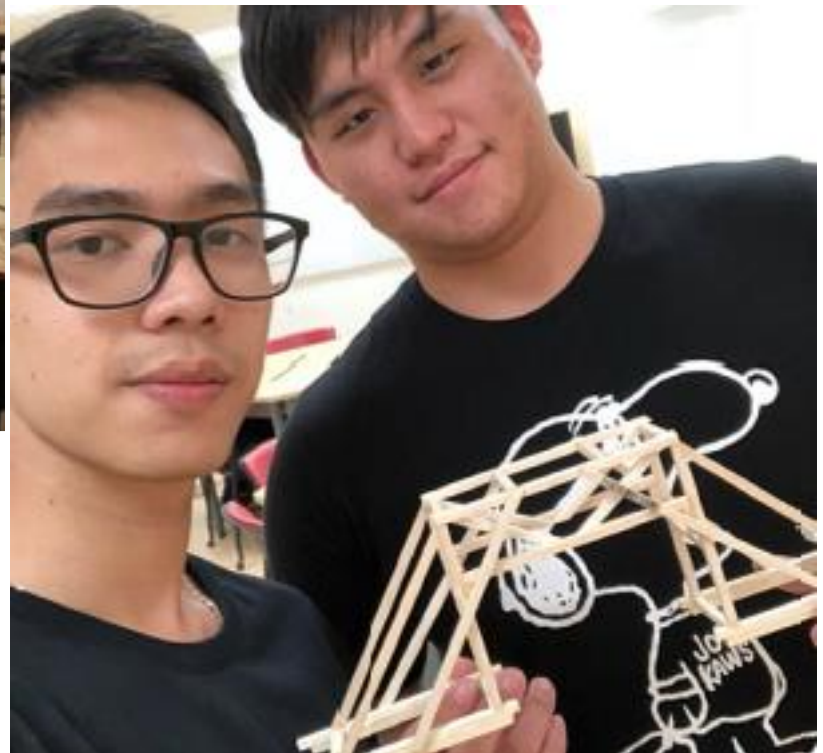
Are You Sure
It's Like That?

I Need A Break. It's A
Long Day.....



Day 1 Some of the Completed Bridge Models

BCA ACADEMY

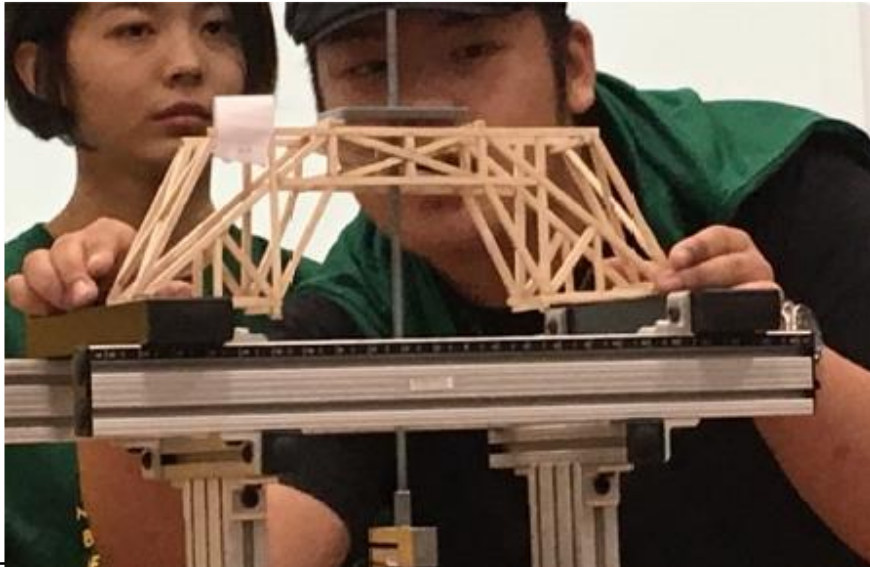


Teams Proudly Showing Off
Their 3D Prototype Bridge
Model

Day 2 Load Failure Test.....How is it Done?

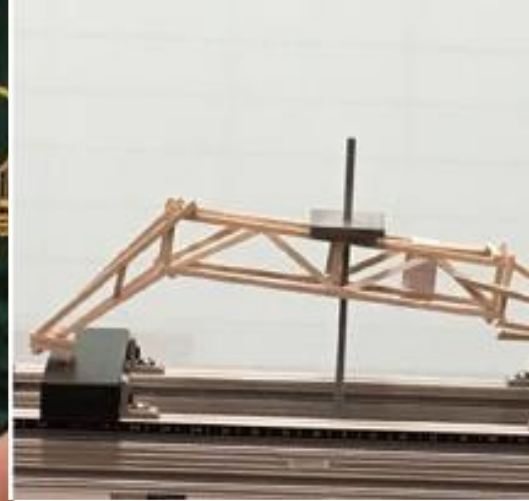
Set-Up Bridge Model on Load Testing Machine

Team Member Applying Load to Bridge Model



BCA ACADEMY

Bridge Fail After load Test



Model bridge is set-up on load testing machine

Out of the 3 loading points, 1 point is selected by drawing lots

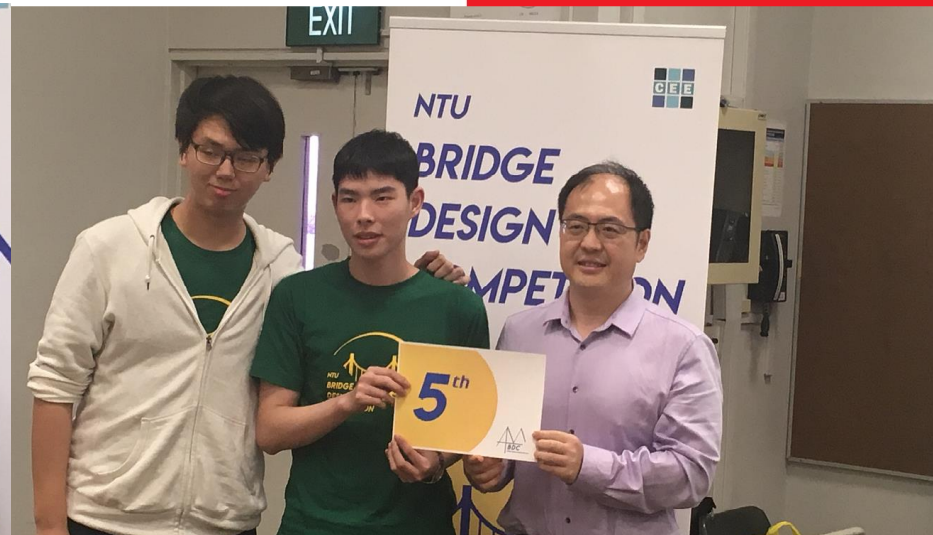
Load is applied by team until failure load is reached

Bridge failure is defined when the bridge cannot carry any additional load or until unacceptable deflection

Well Done to Our 2018 BCA Academy Teams for Winning Prizes/Awards



Overall Champion
1st Prize won by Vuong Duy Anh & Tran Huu Duc



5th Prize won by Wu Wen Xuan & Hao Pengfei



Long Yilin & Irfan Enkiswa
won the Most Favourite Design Award