

## INTRODUCTION

Concrete Pontoon Competition (CPC) 2017 will be held on **17 & 18 September 2017**. This competition is organised by Jamilus Research center, Faculty of Civil and Environmental Engineering, UTHM and co-organised by Concrete Society of Malaysia (CSM). The objectives of the competition are to develop creative work in designing and building of concrete structures and to promote a culture of sustainability by using waste materials. The competition is open to all members of higher learning institutions and other agencies.

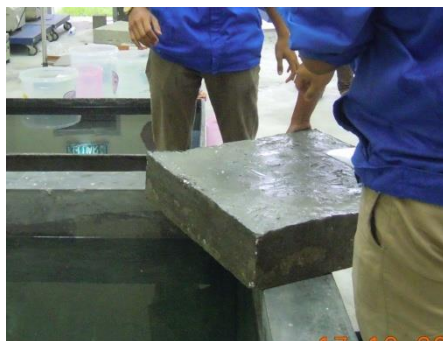
## CONCRETE PONTOON

Concrete pontoon is a floating concrete structure made from concrete materials. pontoons are used in marine engineering and construction such as shipbuilding, marine salvage, dredging and at the port facilities. In one applications, pontoons are sunk, positioned under objects that need to be raised (such as sunken ships being recovered for their scrap metal or to clear channels), and then pumped full of air with air compressors, raising the object. pontoons are also used to build things like pontoon bridges and floating piers.



## RULES AND REGULATION

- ICPC2017 is open to all higher learning institutions, industries and entrepreneurs.
- Students and academic staffs from any higher learning institution (university, polytechnic and college) or any working individuals from government sectors, industry or enterprise can be the participants.
- A team of participant may register up to a maximum of **FOUR (4)** members.
- There is no limitation for the number of teams coming from the same organisation.
- Similar pontoon design and material formulation is prohibited for the teams coming from the same organisation.
- Only registered team members are allowed to present and answer questions during the competition.
- **ONE (1)** advisor is allowed to accompany the team, but not allowed to present and answer questions during the competition.
- Entries not complying with the rules and regulations of the competition will be disqualified.
- Decisions by the judges are final.



## REQUIREMENTS

### Concrete pontoon:

#### (i) Shape and Dimension

Square shape with dimension of 500 mm length x 500 mm width x 100 mm thick.

#### (ii) Material

- The concrete use in the pontoon must be cement based.
- The total volume of pontoon must consist at least 50% concrete.
- Sustainable materials (i.e. recycle and waste materials) are encouraged to be used in the pontoon.
- The use of expanded polyethylene and polystyrene in the pontoon (both as infill or in the concrete mixture) is strictly **NOT ALLOWED** leading to the team being disqualified.

#### (iii) Concrete specimen and specification

- The minimum concrete compressive strength must be 2.5 MPa.
- The surface of the pontoon must be concrete.
- The surface appearance of the pontoon must be original free form additional coating, finishing or plastering.
- Each team is required to bring **ONE (1)** pontoon and **TWO (2)** 150 mm concrete cubes. The concrete cubes must be made from the same concrete used in the pontoon.

### Testing:

- The 150 mm cubes will be used to evaluate the concrete strength.
- **The pontoon will be forced to fully submerge in the water for 5 minutes.** Then an initial 5 kg load will be applied on the top surface of the pontoon. Incremental load will be imposed every 5 minutes until the pontoon submerges in the water. The maximum load before the pontoon submerges in the water will be recorded.

## Poster and presentation

- Each team has to prepare an **A1** size poster displaying the information such as the team members, materials used in the pontoon, pontoon design, concrete mixture and fabrication of the pontoon.
- Oral presentation by the team is required.

## REGISTRATION FORM

(To be returned by/before **18 August 2017**).

I would like to register for the “**International Concrete Pontoon Competition 2017**”. My team members are given below:

Name	I.C. No
1.	
2.	
3.	
4.	

Organization & Address:

.....  
.....

Tel No:.....

Fax No:.....

Mobile No:.....

E-mail address:.....

### CONTACT PERSON

Any Inquires regarding competition and assistance for accommodation feel free to contact:

Dr. Norhaslinda Abas / Dr.Shahiron Shahidan  
Secretary of CPC 2017

Faculty of Civil and Environmental Engineering,  
University Tun Hussein Onn Malaysia (UTHM)

86400 Parit Raja BatuPahat, Johor

Tel No: 0137120058/0123660671

Fax No:07-4536588

E-mail: [pontoonuthm@gmail.com](mailto:pontoonuthm@gmail.com)

Website: <http://jrc.uthm.edu/pontoon.html>

## PRIZES

### The Best Pontoon Prizes

1 <sup>st</sup>	=	RM 2000.00
2 <sup>nd</sup>	=	RM 1500.00
3 <sup>rd</sup>	=	RM 1000.00

### The Best Poster Prizes

1 <sup>st</sup>	=	RM 400.00
2 <sup>nd</sup>	=	RM 300.00
3 <sup>rd</sup>	=	RM 200.00

### 4 x Special Award

RM 100 for each category

All contestants will be given a certificate of participation

## JUDGEMENT CRITERIA

- The assessment of the pontoon will be based on the following criteria:
  - Lightness of the pontoon
  - Stability of the pontoon
  - Floatation/buoyancy of the pontoon
  - Concrete strength
  - Creativity and innovative (pontoon design and materials used)
  - Poster design
  - Oral presentation

## FEES

### Registration fees:

Local : RM 500.00 per team

International : RM 660.00 per team

### Payment method:

Payment should be made before **1 September 2017**

through Electronic Fund Transfer (EFT) to:

A/C Name: Universiti Tun Hussein Onn Malaysia

A/C No : 0107-0000001-71-6 (Bank Muamalat)

\*Please inform the organiser after the payment has been made.

“Innovation in Sustainable Material Application”



Date:

17 & 18 September 2017

Venue:

Universiti Tun Hussein Onn Malaysia  
(UTHM)

Organised by:



Co-organised by:

