



Maribor, March 20, 2014

### Invitation to the competition

Students' Association of the Faculty of Civil Engineering organizes a variety of successful projects each year, such as field trips, visiting building sites and students' competitions. This year we organize the 5<sup>th</sup> traditional contest in building spaghetti bridges – How Strong is the Bridge?

For this year's competition in constructing bridges we would like to invite students from the nearby Faculties of Civil Engineering.

**The three day competition will be held at the Faculty of Civil Engineering in Maribor from April 22 to 24, 2014.** Maximum 15 teams will participate; each faculty will be represented by one team. Each group can consist of three contestants and one representative. The competition will be finished on the third day with loading the constructed bridges with static load. The bridge with maximum load capacity will win.

**All details about the project and registration deadline can be found in the enclosure.**

The How Strong is the Bridge? project is supported by the Faculty of Civil Engineering, the Faculty of Mechanical Engineering and the Rector of University of Maribor.

We would be honoured if you respond to our invitation.

Yours sincerely,

Head of competition  
How strong is the bridge?  
Gregor Trlep

Enclosure:

- Presentation of the project
- <http://www.facebook.com/HowStrongIsTheBridge>





Univerza v Mariboru

Fakulteta za gradbeništvo



Univerza v Mariboru



# HOW STRONG IS THE BRIDGE?

INTERNATIONAL COMPETITION IN CONSTRUCTING  
SPAGHETTI BRIDGES

# HOW STRONG IS THE BRIDGE?

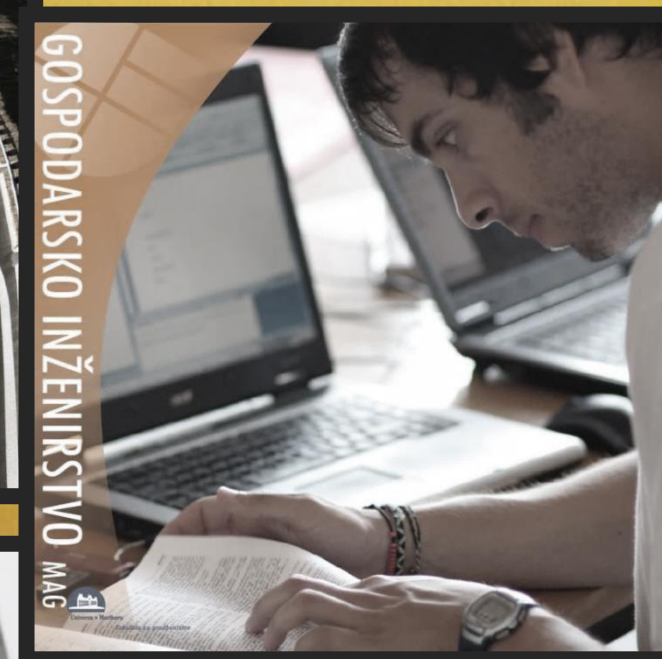
# ORGANIZER

UNIVERSITY OF MARIBOR  
FACULTY OF CIVIL ENGINEERING

<http://www.fg.uni-mb.si/>

DIVISIONS ON FACULTY:

- CIVIL ENGINEERING
- INDUSTRIAL ENGINEERING
- TRAFFIC ENGINEERING
- ARCHITECTURE



# HOW STRONG IS THE BRIDGE?

# ORGANIZER

PROJECTS OF STUDENT'S  
ASSOCIATION OF THE FACULTY OF  
CIVIL ENGINEERING

VISION – COOPERATION AND  
SOCIALISING STUDENTS OF ALL  
DEVISIONS, VOLUNTARY ACTION,  
CARE FOR EXTRACURRICULAR  
ACTIVITIES AND INFORMING STUDENTS  
ABOUT EVENTS ON FACULTY.



# HOW STRONG IS THE BRIDGE?

# ORGANIZER

OTHER PROJECTS OF STUDENT'S  
ASSOCIATION OF THE FACULTY OF CIVIL  
ENGINEERING

TRADITIONAL FRESHMAN'S PARTY AND  
"MEET YOURS COLLEAGUES PARTY"

EXCURSIONS (DUBAI, BELGRADE, KRAKOW,  
BRATISLAVA, MILLAU, STANFORD ...)

ORGANIZATION OF COURSES AND  
LECTURES OF FIELD EXPERTS

GRADBENIJADA, SPRING FACULTY PICNIC ...



## HOW STRONG IS THE BRIDGE?

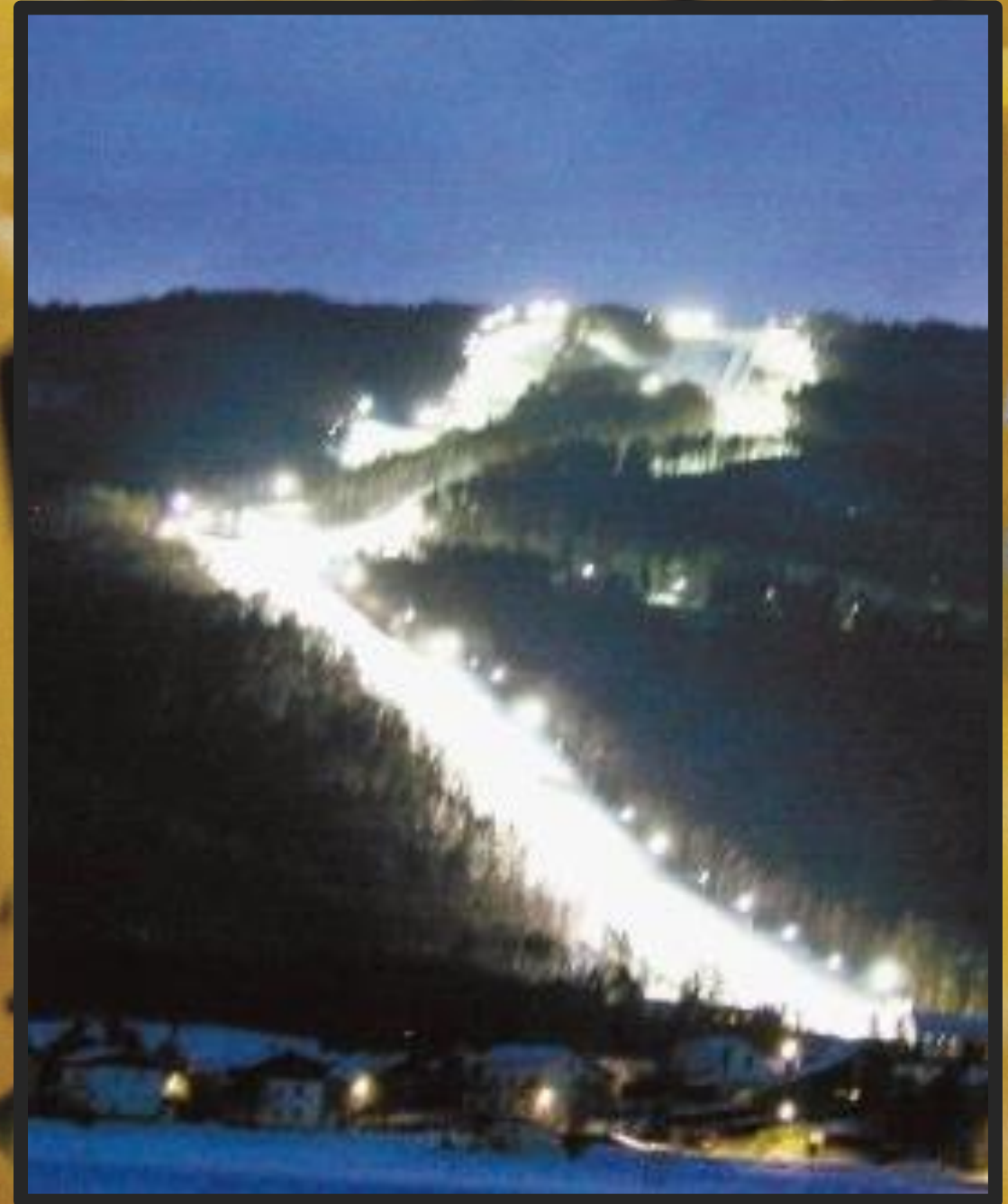
- MARIBOR IS THE SECOND-LARGEST CITY IN SLOVENIA
- IT IS LOCATED IN THE NORTHEAST OF THE COUNTRY
- RIVER DRAVA FLOWS THROUGH THE CITY
- HOME TO THE OLDEST GRAPEVINE IN THE WORLD ( MORE THAN 400 YEARS OLD )
- HOMETOWN OF NK MARIBOR, A SLOVENIAN FOOTBALL TEAM PARTICIPATED IN THE UEFA EUROPA LEAGUE IN THE PAST 3 SEASONS
- WOMEN'S SLALOM AND GIANT SLALOM RACES FOR THE ALPINE SKIING WORLD CUP IS TAKING PLACE ON THE MOUNTAIN RANGE KNOWN AS POHORJE, WHICH IS MARIBOR'S MOST VISITED TOURIST PLACE
- EVERY JUNE THE TWO-WEEK FESTIVAL LENT IS HELD, WITH HUNDREDS OF MUSICAL, THEATRICAL AND OTHER EVENTS

## ABOUT THE CITY



# HOW STRONG IS THE BRIDGE?

# ABOUT THE CITY



# HOW STRONG IS THE BRIDGE?

# DESCRIPTION

## COMPETITION HOW STRONG IS THE BRIDGE?

PARTICIPANTS IN YEARS 2010, 2011, 2012 AND 2013 WERE CIVIL ENGINEERING STUDENTS FROM GRAZ (AUSTRIA), CLUJ (ROMANIA), NOVI SAD (SERBIA), LJUBLJANA AND MARIBOR (SLOVENIA)

## TASK

IN THREE DAYS TEAM SHOULD DESIGN AND BUILD OPTIMAL BRIDGE FROM SPAGHETTI, WHICH TRANSFERS THE GREATEST POSSIBLE LOAD.





# HOW STRONG IS THE BRIDGE?

# DESCRIPTION

## MATERIAL FOR THE CONTEST

- PRIMARY MATERIAL-SPAGHETTI BARILLA NO. 7
- GLUE FOR CONTACTS BETWEEN SPAGHETTI ( USAGE OF GLUE GUNS)
- OTHER TOOLS - ALPHA KNIFE...
- IT IS ALLOWED TO USE LAPTOP FOR STRUCTURAL ANALYSIS,DEFINING BRIDGE CONSTRUCTION AND PRESENTATIONS



## HOW STRONG IS THE BRIDGE?

## DESCRIPTION

### BASIC RULES OF THE CONTEST

AFTER A REGISTRATION, TWO WEEKS BEFORE THE CONTEST, TEAMS WILL RECEIVE EXACT INSTRUCTIONS FOR – MAXIMUM WEIGHT, HEIGHT AND STATIC SYSTEM OF BRIDGE.

WITH THESE INSTRUCTIONS TEAMS SHOULD MAKE THEIR DESIGNS AND IDEAS FOR THE BRIDGE BEFORE CONTEST ITSELF.

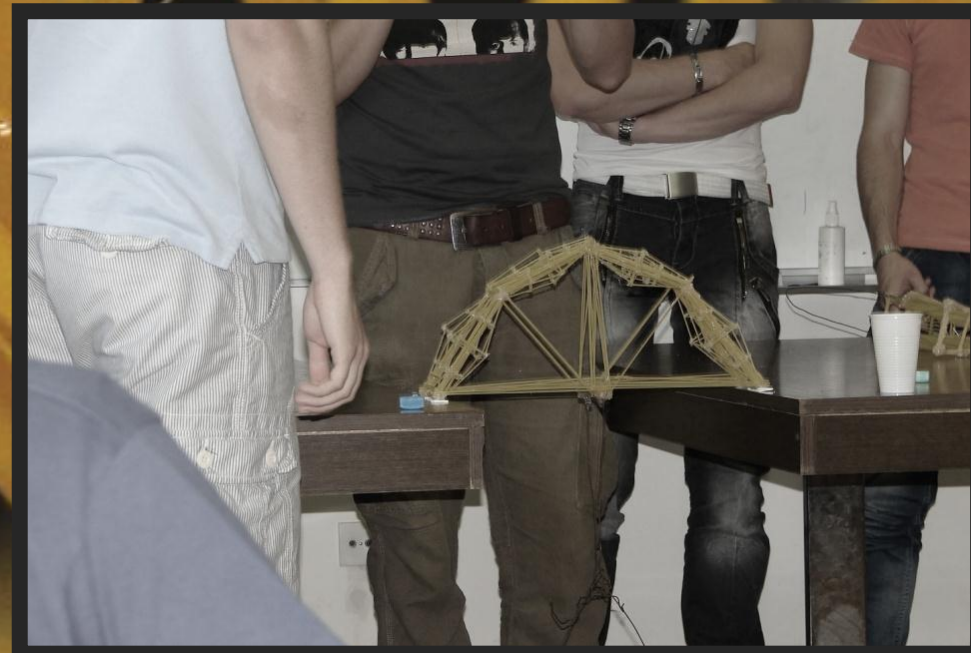
THE BRIDGE WITH MAXIMUM LOAD CAPACITY WILL WIN.

OTHER CATEGORY IN CONTEST IS THE BEST ARCHITECTURE AND DESIGN OF THE BRIDGE (estimated by audience present on the last day of contest)

# HOW STRONG IS THE BRIDGE?

# HISTORY

## HOW STRONG IS THE BRIDGE 2010



# HOW STRONG IS THE BRIDGE?

# HISTORY

## HOW STRONG IS THE BRIDGE 2011



# HOW STRONG IS THE BRIDGE?

# HISTORY

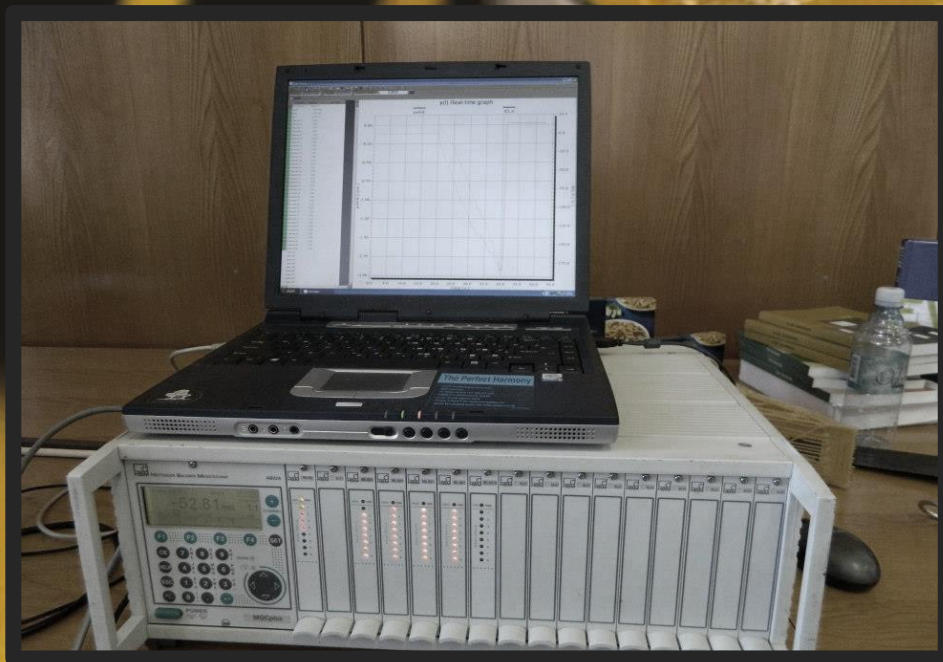
## HOW STRONG IS THE BRIDGE 2012



# HOW STRONG IS THE BRIDGE?

# HISTORY

## HOW STRONG IS THE BRIDGE 2013



# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## BASIC RULES OF THE CONTEST

AFTER A REGISTRATION, TWO WEEKS BEFORE THE CONTEST, TEAMS WILL RECEIVE EXACT INSTRUCTIONS (MAXIMUM WEIGHT, HEIGHT AND STATIC SYSTEM OF BRIDGE) AND SCHEDULE OF THE CONTEST.

WITH THESE INSTRUCTIONS TEAMS SHOULD MAKE THEIR DESIGNS AND IDEAS FOR THE BRIDGE BEFORE THE CONTEST ITSELF.

THE BRIDGE WITH MAXIMUM LOAD CAPACITY WILL WIN.



22. – 24.  
APR 2014

# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## ORGANIZER PROVIDES

MATERIAL FOR THE CONTEST – SPAGHETTI, GLUE GUNS, ALPHA KNIFES...

SNACKS AND BEVERAGES DURING THE CONTEST

LUNCHESES, DINNERS AND PARTIES

2 DAYS ACCOMODATION "BED AND BREAKFAST"

VARIOUS BANQUETS

NEW PRACTICAL KNOWLEDGES

REGISTRATION FEE: max. 100€ PER A TEAM

(the registration fee depends on number of teams and it can be lower than 100€)



22. – 24.  
APR 2014



# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## CONTEST REWARDS

- WELCOME PACKAGES AND SOUVENIRS FOR EVERYBODY

- TECHNICAL LITERATURE IN ENGLISH LANGUAGE FOR THE CONSTRUCTION INDUSTRY - EUROCODE

- CONSOLATION PRIZES

- 1<sup>st</sup>. PRIZE 3x TABLET COMPUTERS FOR CONTESTANTS



22. - 24.  
APR 2014

# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## REQUIRED KNOWLEDGE

KNOWLEDGE ABOUT STRUCTURES,  
ENGINEERING THINKING AND JUDGMENT

INTERPRETATING KEY INFORMATIONS  
FOR SEIZING AND DETERMINING THE  
MAXIMUM FORCE BEFORE BREAK

INNOVATIVE IDEAS AND MANUAL  
DEXTERITY OF CONTESTANTS



22. - 24.  
APR 2014

# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## SCHEDULE OF THE CONTEST

1. APRIL 2014

DEADLINE FOR REGISTRATION

8. APRIL 2014

TEAMS WILL RECEIVE THE INSTRUCTIONS  
FOR THE CONTEST

22. – 24. APRIL

HOW STRONG IS THE BRIDGE CONTEST



22. – 24.  
APR 2014

# HOW STRONG IS THE BRIDGE?

AJKTM 2014

## NUMBER OF CONTESTANTS

THE TEAM CAN BE CONSISTED OF A 3  
CONTESTANTS AND ONE REPRESENTATIVE

## DEADLINE FOR REGISTRATION:

REGISTER UNTIL:

6.4.2014

REGISTER ON EMAIL:

[gregor.trlep@gmail.com](mailto:gregor.trlep@gmail.com) or

[mitja.beber@gmail.com](mailto:mitja.beber@gmail.com)



22. – 24.  
APR 2014