MOOC is a course!

Tsinghua Univ

Yuchun Ma

MOOC 慕课

Massive

Open

Online

Course

MOOC 慕课

Massive

TsinghuaX

课程开始时间 - 2014年10月16日 00:00 UTC

60240013x Combinatorial Mathematics

查看课程

电子邮件设置 未注册

Course

TSINGHUA
-1911-
UNIVERSITY

在职员界面查看更新

课程动态 & 新闻

DECEMBER 8, 2014

Polya Counting Part II

The second part of Polya Theorem has been published as well as the homework, please take your time.

And please pay attention. The deadline for the homework of this session would be December 22.

Our final evaluation would begin around this Friday with more than 1 week duration. :-)

课程讲义

Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8

Talking About Combinatorial Mathematics

What's Combinatorial Mathematics

The Most Ingenious Arrangement - Magic Square
QUIZ 到期日2014年10月30日 23:30 UTC

Suffering Parchment Roll
QUIZ 到期日2014年10月30日 23:30 UTC

Is Your Phone Password Safe
QUIZ 到期日2014年10月30日 23:30 UTC

Brute-force Enumaration OR Abstract Conversion
QUIZ 到期日2014年10月30日 23:30 UTC

Homework 1
HOMEWORK 到期日2014年10月30日 23:30 UTC

Demo Of Week 1

TALKING ABOUT COMBINATORIAL MATHEMATICS

您最近在Brute-force Enumaration OR Abstract Conversion。如果您已经完成此章节，请选择左侧的另一个章节。

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Demo Of Week 1
Video1
quiz
Video2
Video3
Video4
Forum
A PROBLEM CAUSED BY THE WORLD CUP
0:00 / 2:12
速度 1.0x
CC
how to do well in combinatorics.
Essentially, the problem of how to count well.
Everyone knows the fundamental concept behind counting.
We simply count one by one.
In computing, there is a rather more elegant term for this:
enumeration - to highlight its enumerative nature,

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Final Exam

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Final Exam

Your course which is put online

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荣誉证书
HONOR CODE CERTIFICATE

xuetangX.com 学堂在线

清华大学 Tsinghua University

马昱春 MA Yuchun

顺利完成 60240013X 组合数学 课程的学习，并获得通过。
该课程由清华大学提供，授权学堂在线平台运营。
successfully completed and received a passing grade in
60240013X Combinatorics
a course of study offered and authorized by Tsinghua University.

清华大学计算机系 系主任 Head of Department of Computer Science & Technology, Tsinghua University 吴建平

清华大学计算机系 副教授 Associate Professor, Department of Computer Science & Technology, Tsinghua University 马昱春

清华大学在线教育办公室 主任 Director of Online Education Office, Tsinghua University 聂风华

发证日期 | Date of Issue
2014年6月26日 June 26,2014
验证地址 | Verify the authenticity of this certificate at
http://www.xuetangx.com/check_credential/07ef0d67b8295898311b11e3e574b95

Final Exam

Universities involved in Online education

2008

MOOCs origined from US and Canada universities

Universities involved in Online education

2008

2011

Standford: Sebastian Thrun and Peter Norvig “AI”

Around 160000 learners from 190 countries

Jan. 2012

UDACITY

Universities involved in Online education

2008

2011

Stanford Andrew Ng "Machine learning"

Jan. 2012

UDACITY

Universities involved in Online education

2008

2011

Stanford Andrew Ng "Machine learning"

Jan. 2012

UDACITY

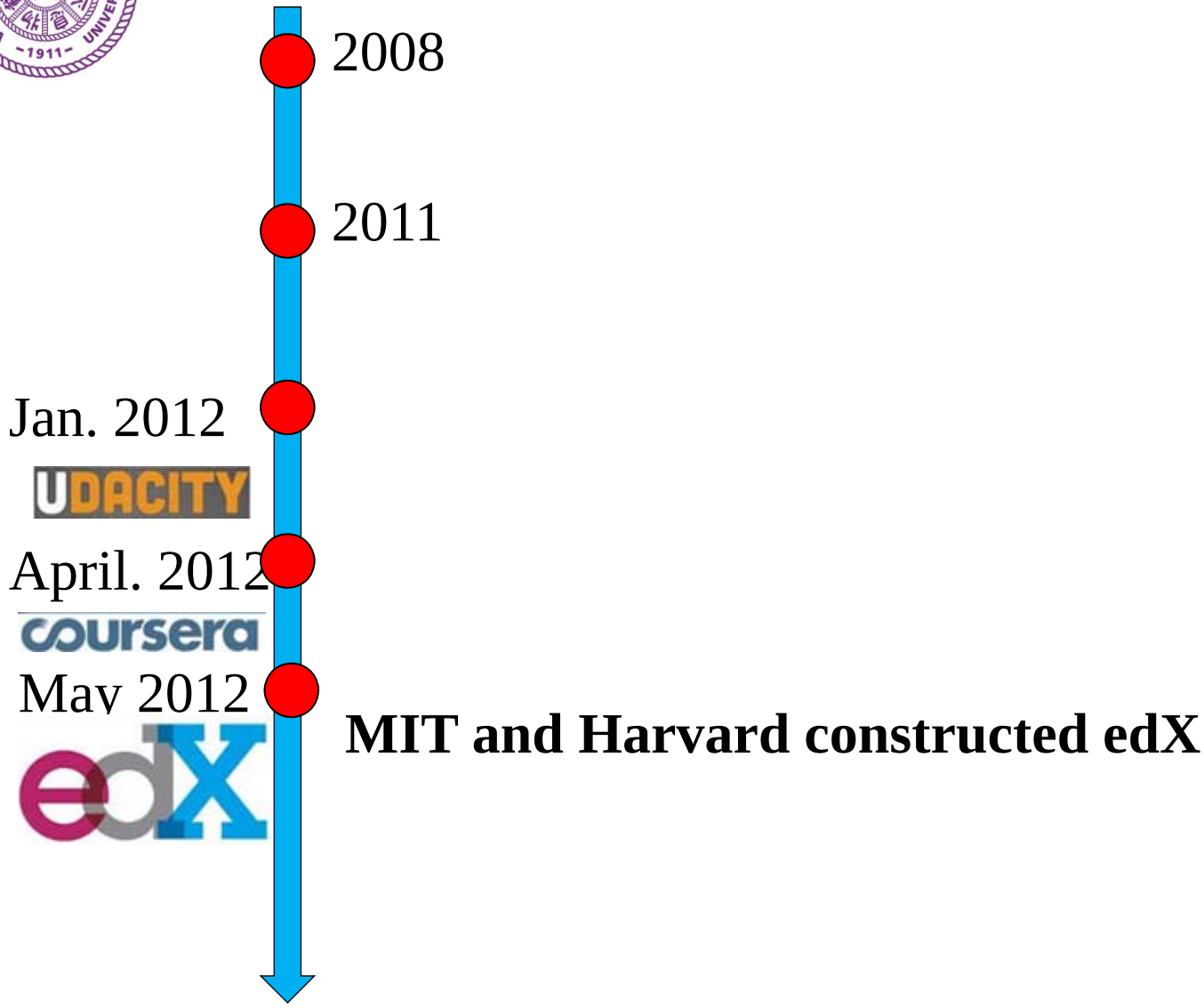
April. 2012

Prof. Ng and Prof. Daphne Koller started Coursera

coursera

May 2012

Universities involved in Online education



Universities involved in Online education

2008

2011

Jan. 2012

April. 2012

May 2012

June 2013

XuetangX by Tsinghua

MOOC is coming !

The traditional course is not suit for online course

Why they want to learn MOOC?

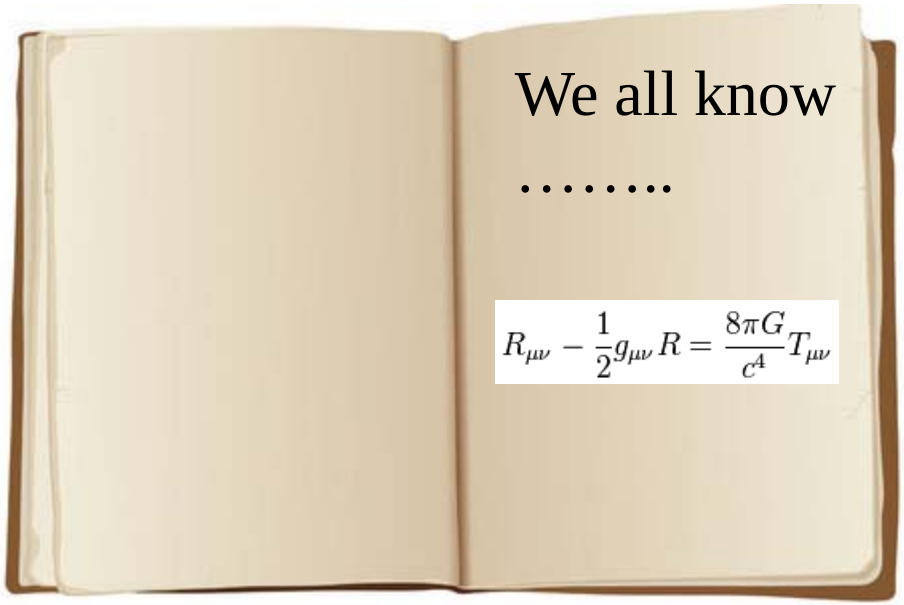
xuetangX data

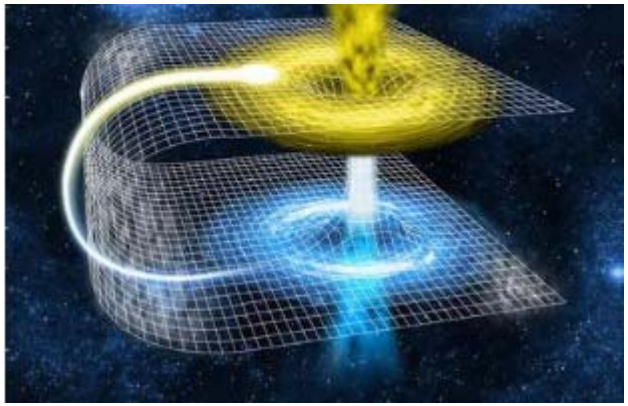
Combinatorial Mathematics is an useful class, please choose the reason you learn it:

77%

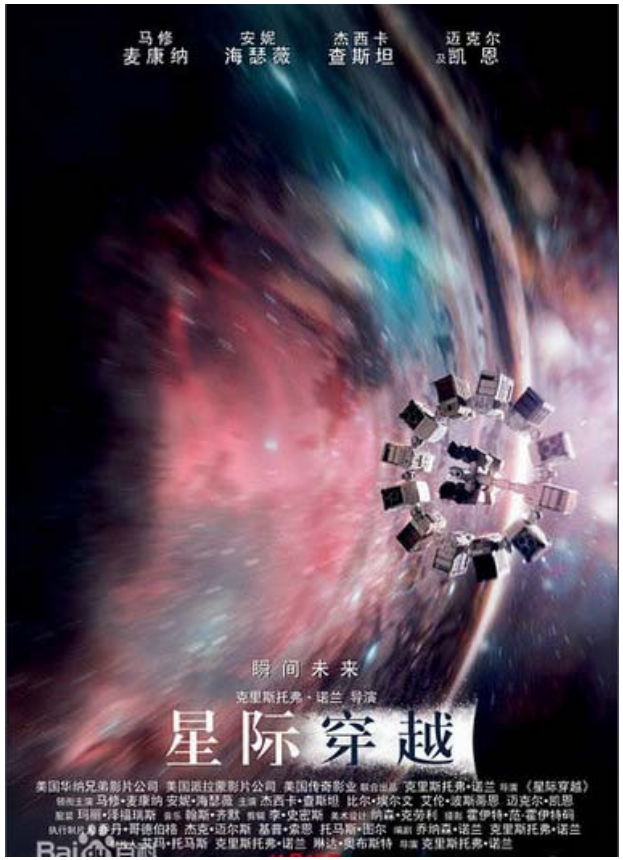
- personal interest in combinatorics
- to prepare for pre-postgraduate exams
- for the high school exams
- a required course in university
- to enter competitions in informatics
- as job interview preparation
- want to get a certificate of Tsinghua University
- curious about a MOOC taught by a female professor from Tsinghua
- else

Nice to have vs Need to have





Interstellar



Traditional Course vs MOOC

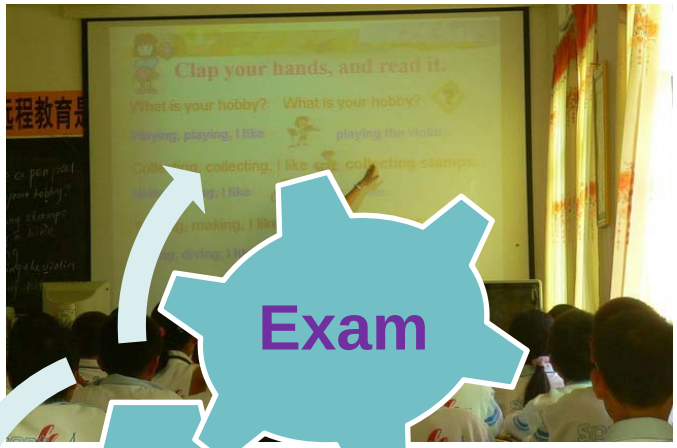
Similar Background

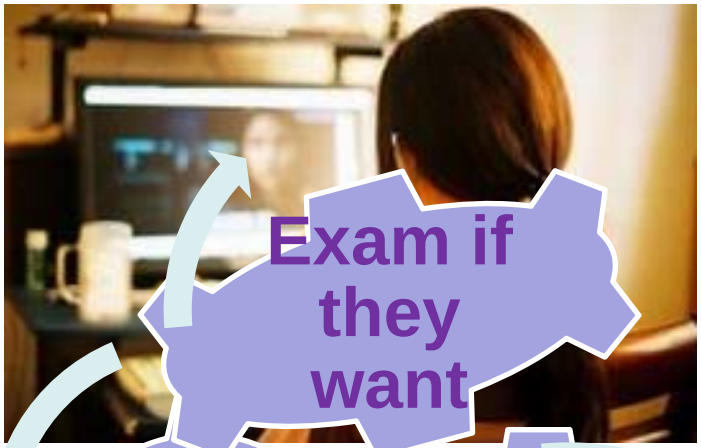
Fixed time

Different students

flexibility

Traditional Course vs MOOC





Exam

Chapter

Need to learn

Similar Background

Fixed time

Exam if they want

WEEK

No constraints just interests

Different students

flexibility

Traditional Course vs MOOC

How to teach a MOOC?

Make your course real

Make your course real

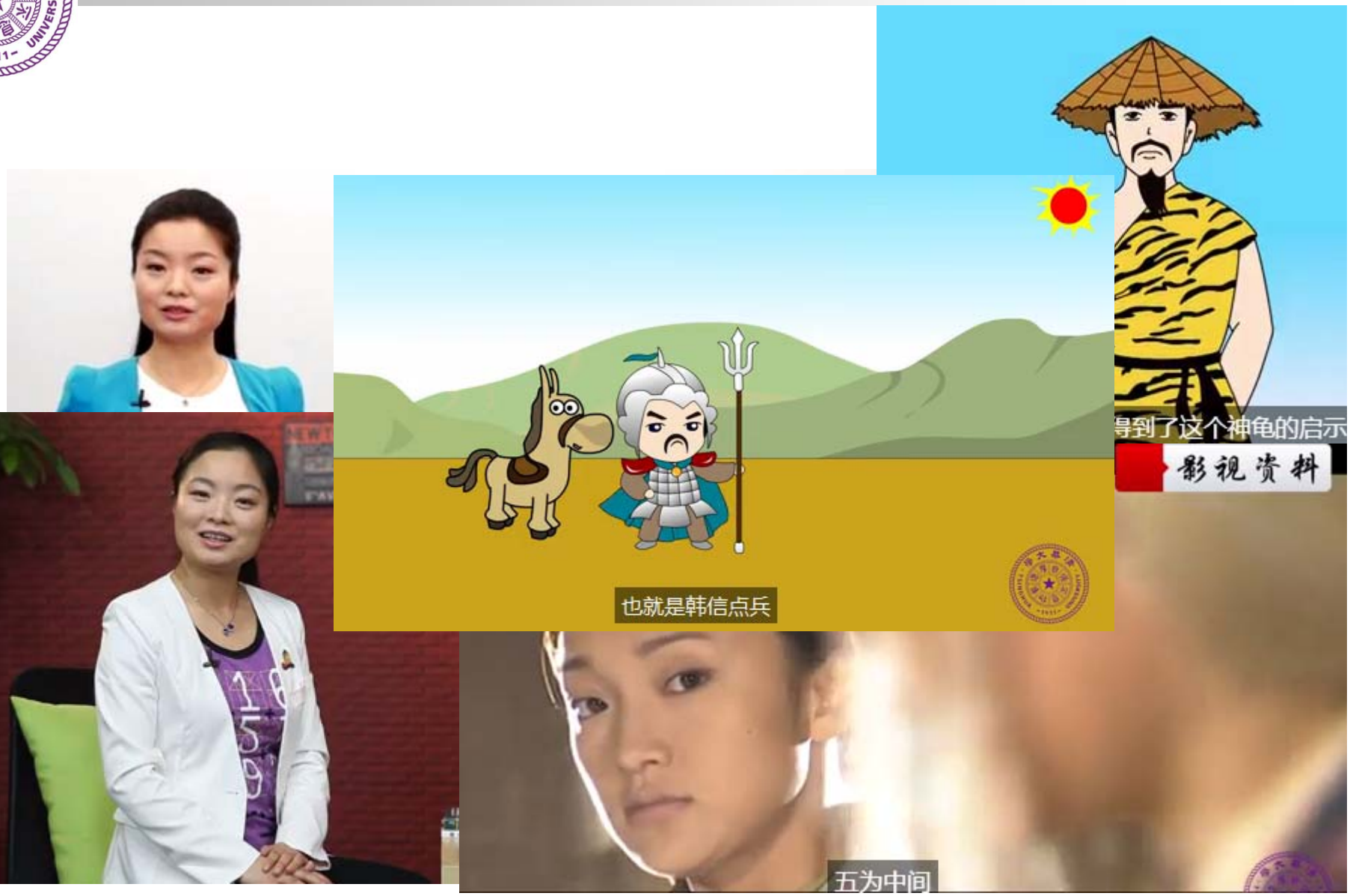
Make your course

Attractive!

Attractive!

Attractive!

Attractive!



Ideal Learning

- Learn where and when as you want
- Project-driven learning
- Question-driven learning
- Face to face
- Virtual lab
- Flipped course

MOOC is the course for learners!