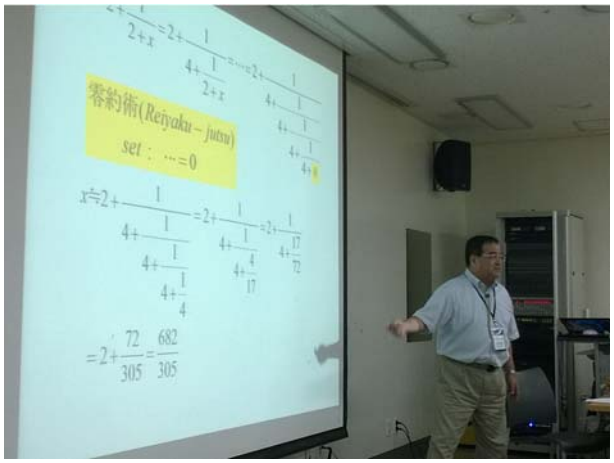
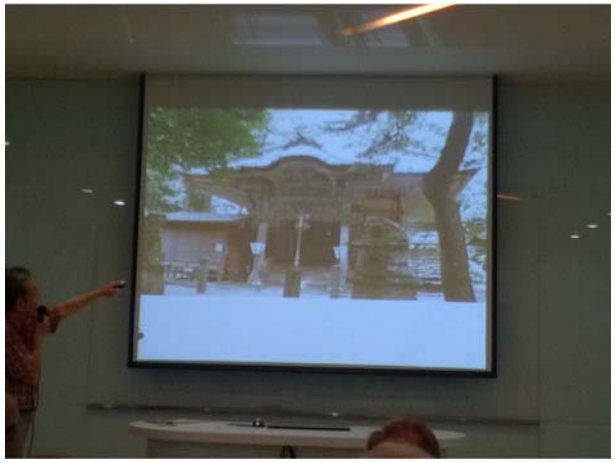
BRIDGES
L 2014
Stripey Squares


零約術(Reiyaku-jutsu)
set : ...=0

Feb. 15 2014 Completed

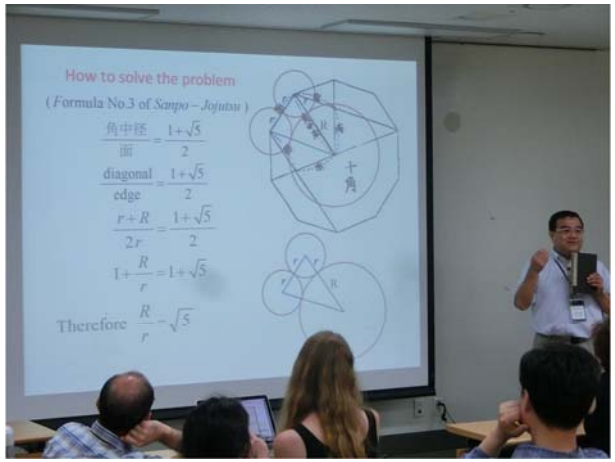
数学とその
周辺



Mathematical Beadwork
Aichi Prefectural
Kasugai-Higashi Senior High School
堀部 和経
URL http://horibe.jp

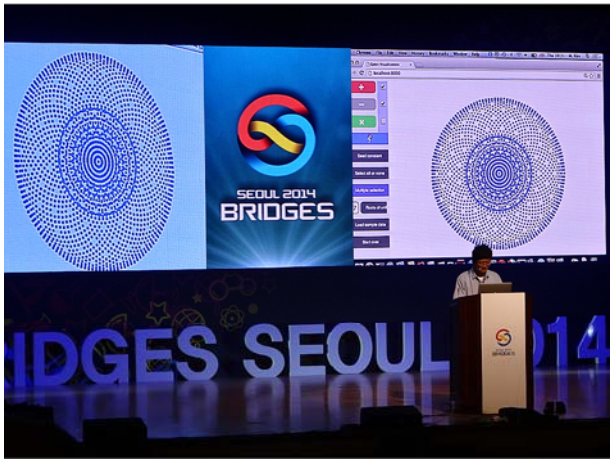
算 額
SAN GAKU
Traditional
Japanese Geometry.
SANGAKU.

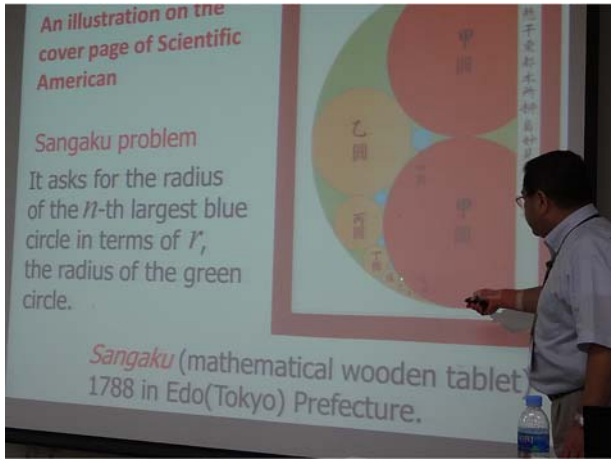
두부김치볶음
오징어 볶음


How to solve the problem
(Formula No.3 of Sanpo – Jojutsu)
角中径 / 面 = (1+√5)/2
diagonal / edge = (1+√5)/2
(r+R)/2r = (1+√5)/2
1+R/r = 1+√5
Therefore R/r = √5

ion 1 Chair
카를로 H. 세퀸
캘리포니아 대학교 버클리 캠퍼스
컴퓨터공학과 교수
Prof. Carlo H. Séquin
Electrical Engineering and
Computer Sciences
UC Berkeley
SEOUL 2014
BRIDGES

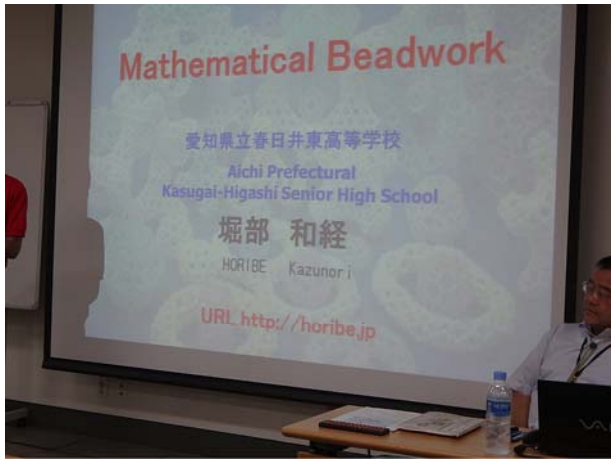
축사 Congratulatory Speech

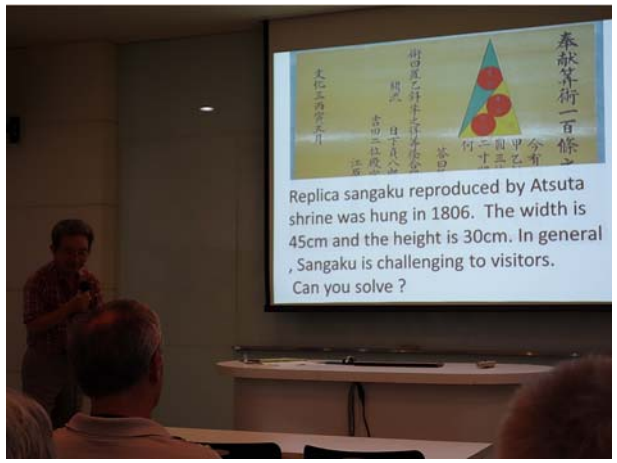

SEOUL 2014
BRIDGES


An illustration on the
cover page of Scientific
American
Sangaku problem
It asks for the radius
of the n-th largest blue
circle in terms of r,
the radius of the green
circle.
Sangaku (mathematical wooden tablet)
1788 in Edo(Tokyo) Prefecture.

12
tan(45°)
0010(2)
9
3
16
2
과학의 달
6.9
X²=3²+4²
6
창조홀(중회의실)
Creation Hall
(Medium Conference Hall)

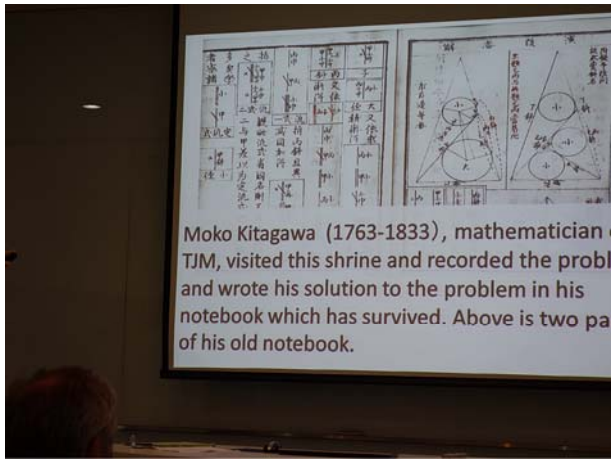
산술 대칭
Arithmetic Symmetry
김 민 형
옥스퍼드 대학교
Prof. Minhyong Kim
University of Oxford
SEOUL 2014
BRIDGES


Mathematical Beadwork
愛知県立春日井東高等学校
Aichi Prefectural
Kasugai-Higashi Senior High School
堀部 和経
HORIBE Kazunori
URL http://horibe.jp


奉献算術一百條
Replica sangaku reproduced by Atsuta shrine was hung in 1806. The width is 45cm and the height is 30cm. In general, Sangaku is challenging to visitors.
Can you solve ?

日本で最大級の算額
納奉
Large size Sangaku :
453c
, in Yamagata.

How much money was need for this exhibition ?


Moko Kitagawa (1763-1833), mathematician
TJM, visited this shrine and recorded the probl
and wrote his solution to the problem in his
notebook which has survived. Above is two pa
of his old notebook.

BRIDGES SE 2014