Pictures at QRS 2015

Day 3 (August 5)


Example
To find the roots of the following polynomial
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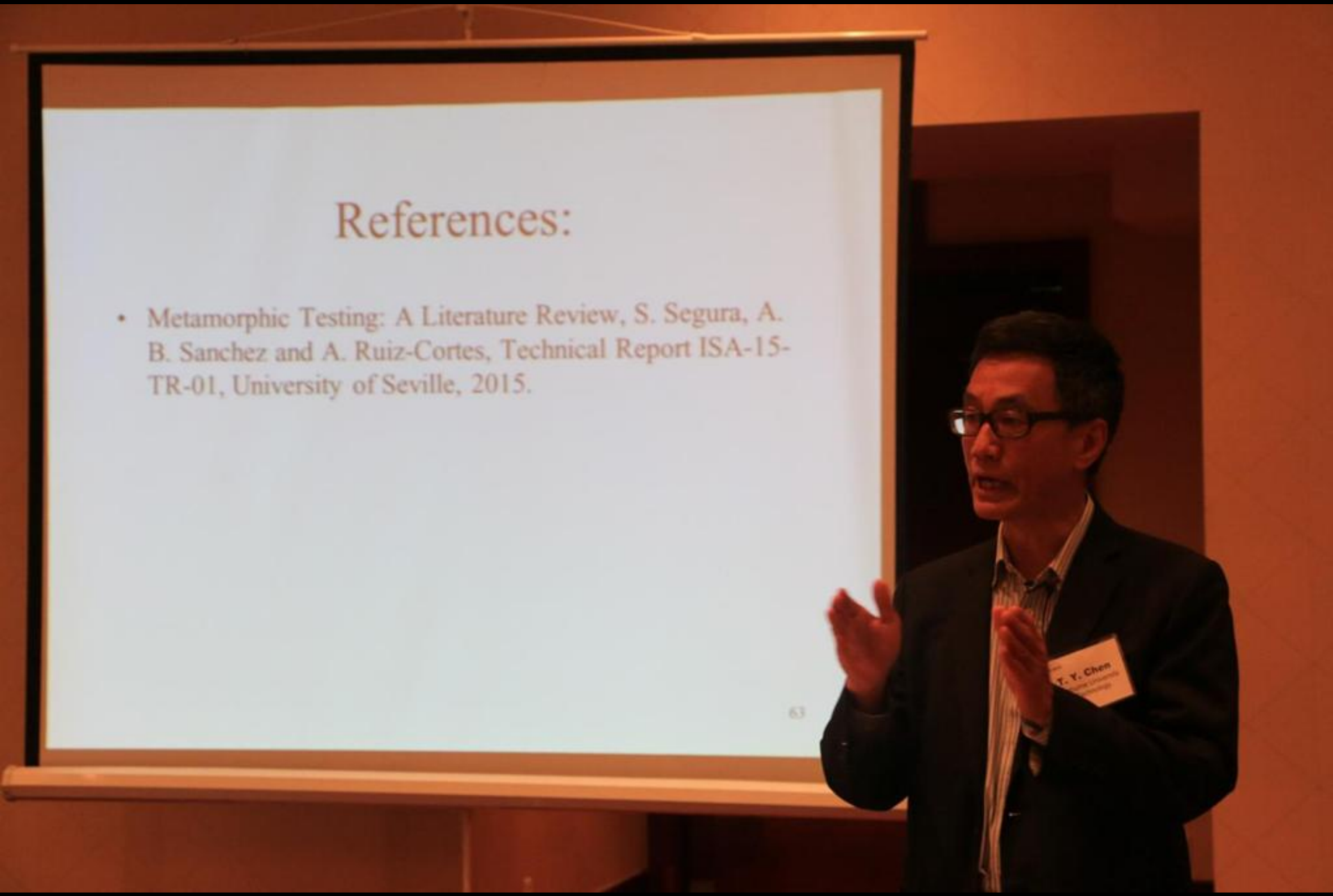
Example
• sin function
in(0°)=0
n(30°)=0.5
ppose the program returns:
(29.8°)=0.51234 incorrect
8°)=0.49876 correct?


References:
• Metamorphic Testing: A Literature Review, S. Segura, A. B. Sanchez and A. Ruiz-Cortes, Technical Report ISA-15-TR-01, University of Seville, 2015.
63
T. Y. Chen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Swinburne University
of Technology


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ting: A Literature Review, S. Se
Ruiz-Cortes, Technical Report
of Seville, 2015.


References
Literature Re
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Steve Yau
Arizona State
University


EXIT


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EXIT


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Security
Major security issues and
for IoT?
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What is IoT? From th
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What is IoT?
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for IoT?
S.S. Yau


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JTC 1 N 12651 - Text for
— Internet of Things —
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Opening Statement
A Network of Things (NoT) employs a mixture of sensing
communication, computation.
A Network of Things (NoT) leads to actionable decisions
predictions. Things may be private or public. Things may
or homegrown.
A Network of Things (NoT) is only one example of a dist
computing system.
The 'so-called' Internet of Things (IoT) is one type of a N
exist.
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PURDUE
Department of Computer Science
IoT – Big Data Data from EveryWhere and from EveryThing
Today we have technologies for
• Acquiring and sensing data
• Transmitting data
• Storing, managing and aggregating data data
• Performing analytics on data
INTERNET OF THINGS
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PURDUE
IoT – Big Data Data from
EveryWhere and from EveryThing
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Privacy Risks
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PURDUE
Can security and
reconcil
And if so which are t
techniques that
reconciliation
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Musings on the Four Horse
the Apocalypse and I
Tim Grance
grance@nist.gov
Computer Security Division
Information Technology Laboratory
National Institute of Standards and Technology


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Karthik
Pattabiraman
University of British
Columbia


EXIT


Security i
Protecting client
Cloud servers c
Honest but cur
No intentio
Semi-honest
No intentio
Malicious
Intention t
Outsourced d
Encrypted da
Huge overh
Decrypting
msi


Security in Cloud Computing
Protecting client's input data is a challenge
Cloud servers can be:
Honest but curious
No intention to harm the client but tries to know clien
Semi-honest
No intention to harm, but wants to keep the copy of
Malicious
Intention to harm the client.
Outsourced data are usually encrypted by the client
Encrypted data are not good for cloud processing
Huge overhead (e.g., fully homomorphic encryption)
Decrypting the data before processing by the cloud is
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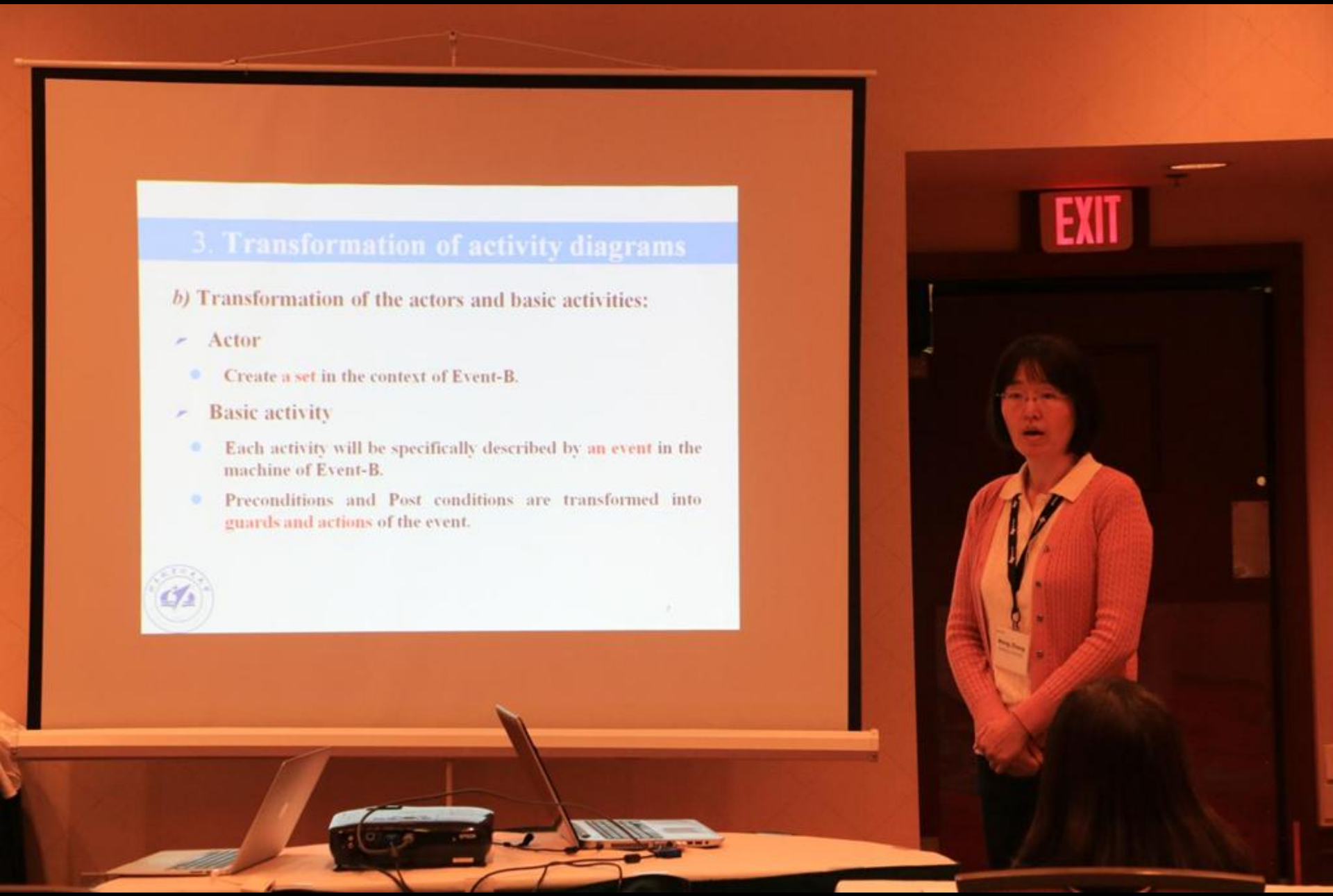
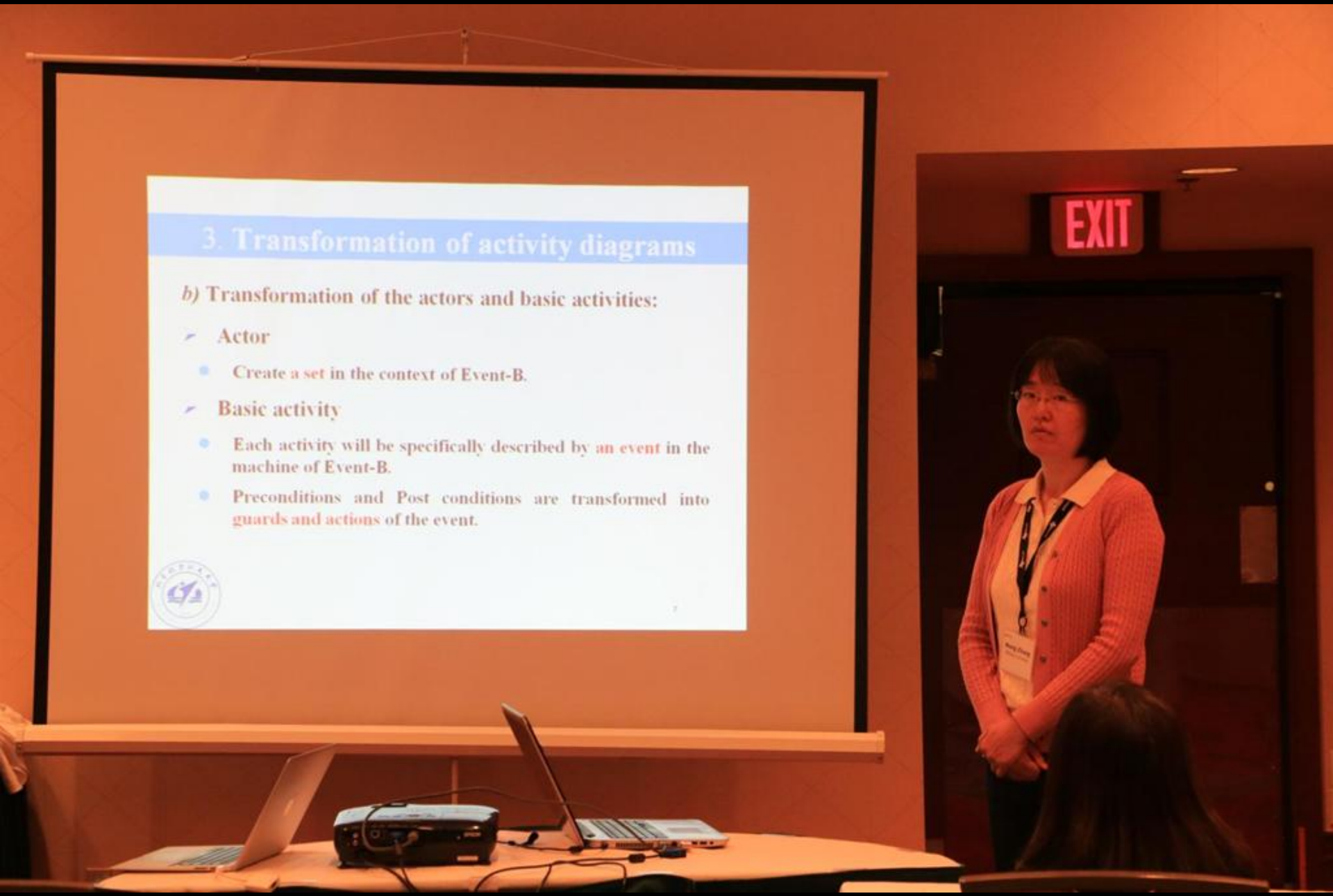
msi


Open Source Software & Services - Accelerating Innovation
• Freeware and Open Source Software (FOSS)
◦ Freeware: Software with only binary code
◦ Open Source: Software with binary as well as source code
◦ When combined: Free and Open Source Software or simply FOS
◦ Free APIs and Data Services: Google maps, Facebook etc.
• What is considered FOSS at SAP?
◦ Any non-SAP software that is delivered/shipped/made available
◦ Adheres to the applicable licenses (or obligations in their absen
◦ With no "licensing" cost (in general)
• Why FOSS are used (contributed) by SAP?
◦ Accelerate innovation and achieve revenue goals
◦ Support and complement SAP' products/solutions portfolio
◦ Increase development productivity (reduce development costs)
◦ Community participation and increase reputation


Critical Nodes Evaluation in Large-Scale Software
based on Static Structure and Runtime Information


Qian Ye


3. Transformation of activity diagrams
b) Transformation of the actors and basic activities:
Actor
Create a set in the context of Event-B.
Basic activity
Each activity will be specifically described by an event in the machine of Event-B.
Preconditions and Post conditions are transformed into guards and actions of the event.
EXIT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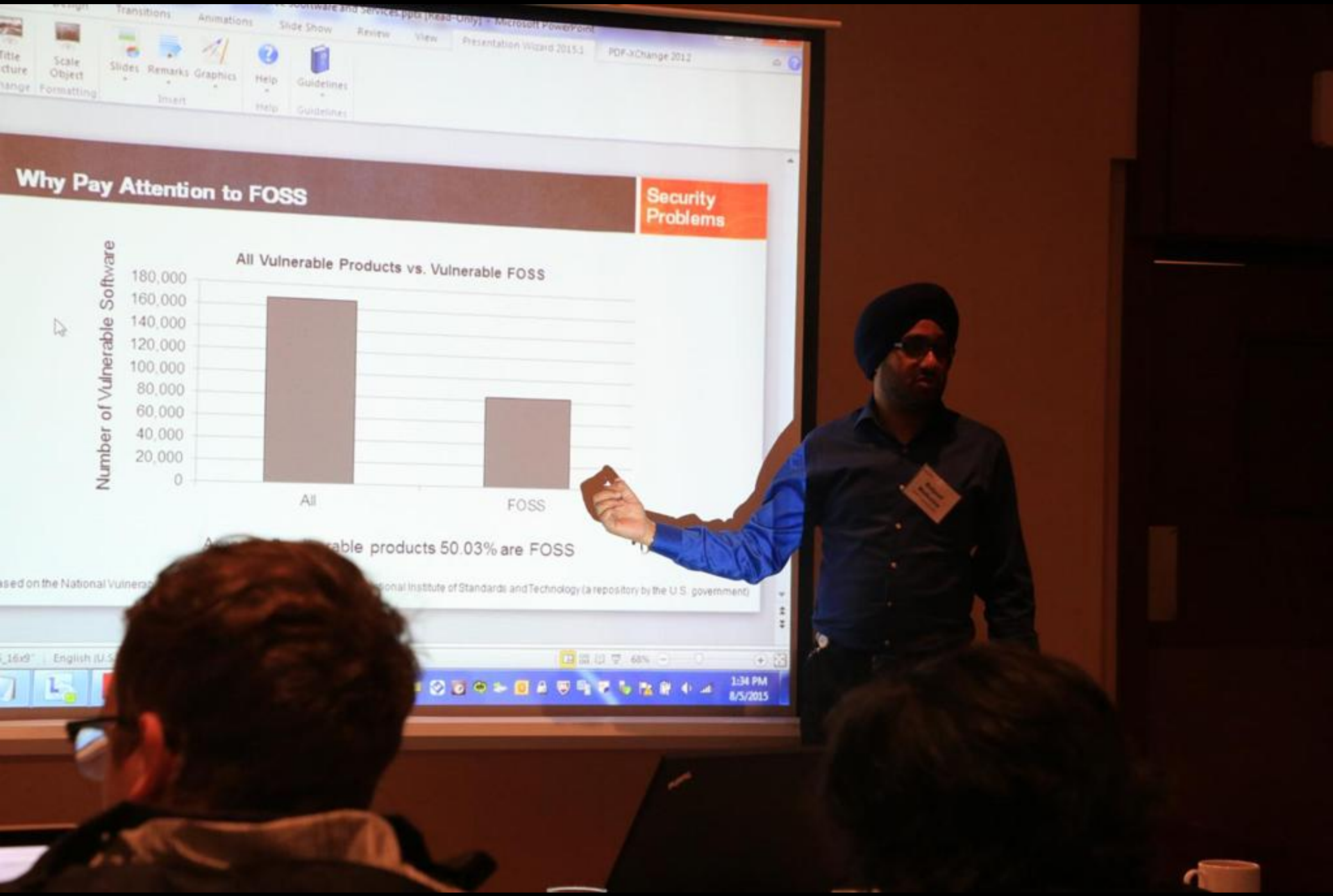
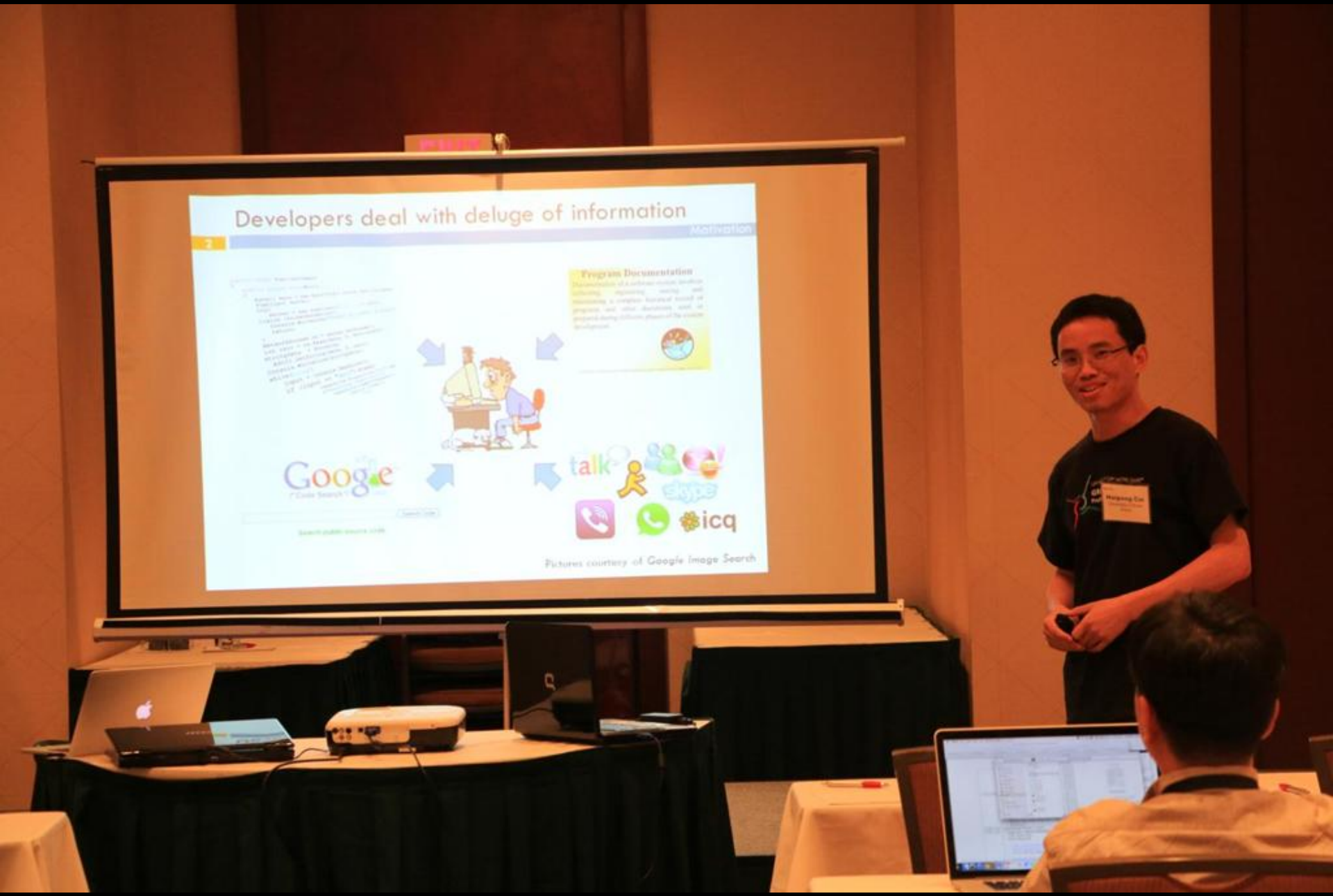
EXIT


Hong Zhang
Beihang University


EXIT

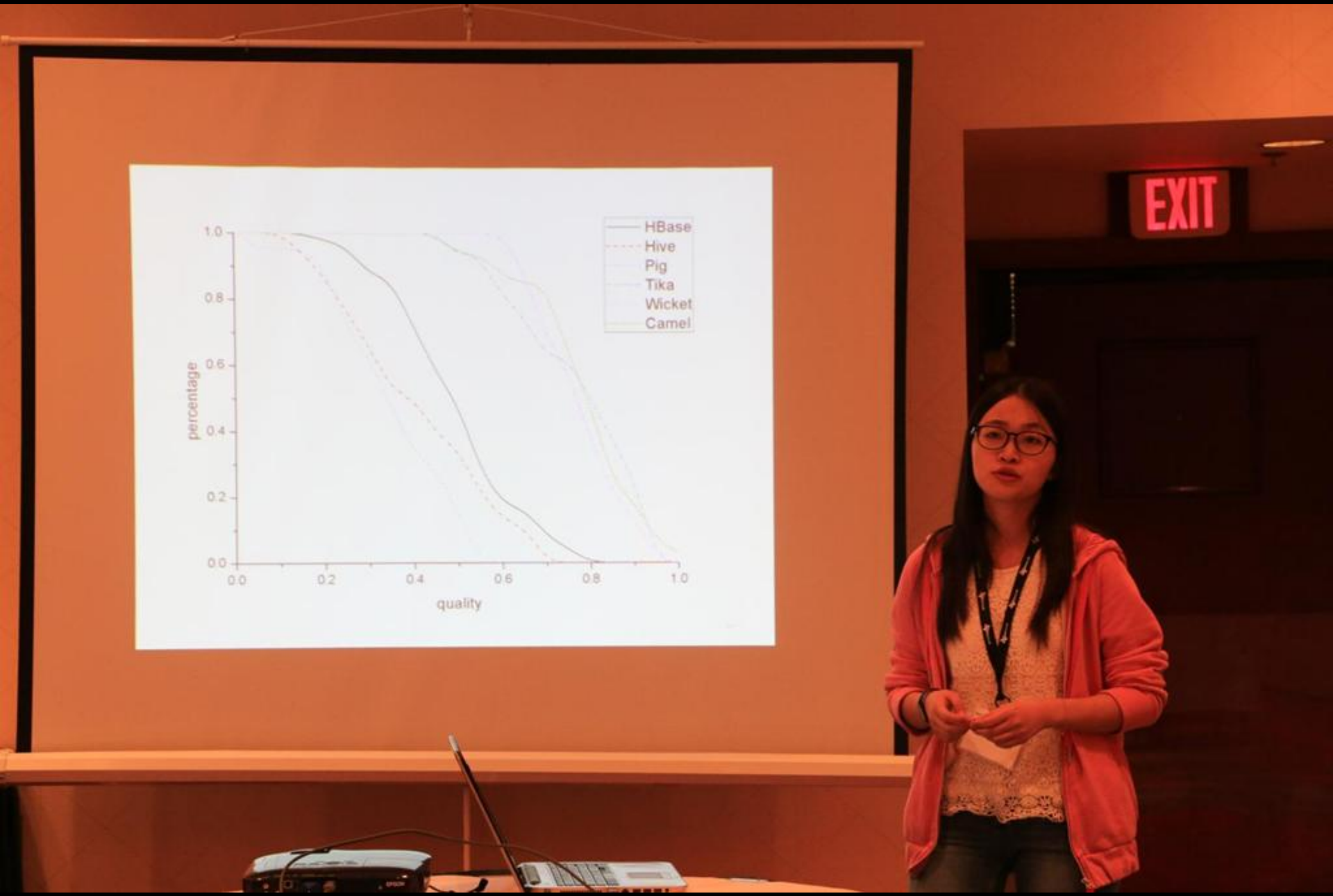

Why Pay Attention to FOSS
Security Problems
All Vulnerable Products vs. Vulnerable FOSS
Number of Vulnerable Software
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
All
FOSS
able products 50.03% are FOSS
sed on the National Vulnera
ional Institute of Standards and Technology (a repository by the U.S. government)
1:34 PM
8/5/2015

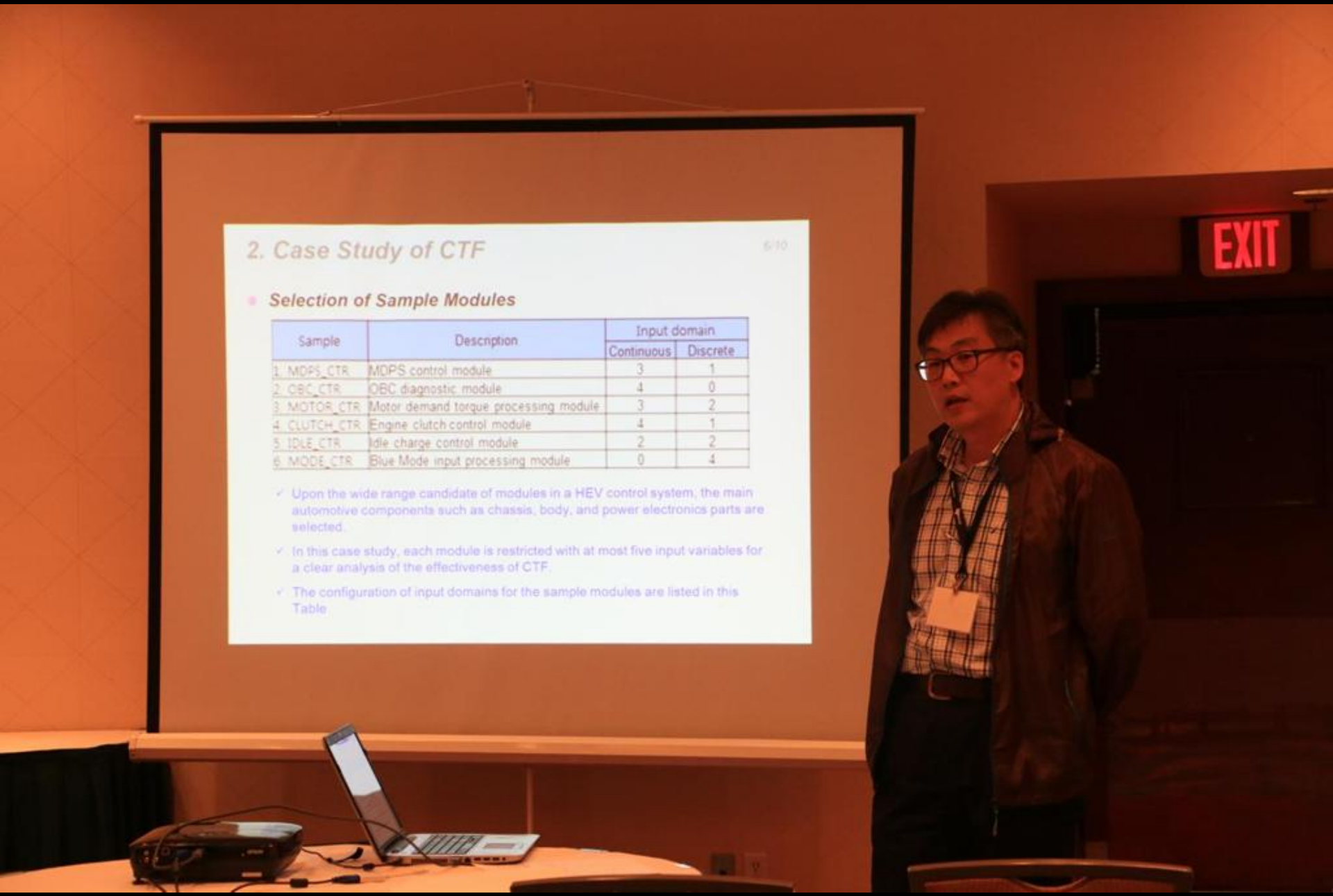

Developers deal with deluge of information
MOTIVATION
2
Program Documentation
Google
talk
skype
icq
Pictures courtesy of Google Image Search


Haipeng Cai


LDA Model Structure


Jeong So


HBase
Hive
Pig
Tika
Wicket
Camel
percentage
quality
0.0
0.2
0.4
0.6
0.8
1.0
EXIT


2. Case Study of CTF
6/10
Selection of Sample Modules
Sample
Description
Input domain
Continuous
Discrete
1_MDPS_CTR
MDPS control module
3
1
2_OBC_CTR
OBC diagnostic module
4
0
3_MOTOR_CTR
Motor demand torque processing module
3
2
4_CLUTCH_CTR
Engine clutch control module
4
1
5_IDLE_CTR
Idle charge control module
2
2
6_MODE_CTR
Blue Mode input processing module
0
4
Upon the wide range candidate of modules in a HEV control system, the main automotive components such as chassis, body, and power electronics parts are selected.
In this case study, each module is restricted with at most five input variables for a clear analysis of the effectiveness of CTF.
The configuration of input domains for the sample modules are listed in this Table.
EXIT


Theories of organizational learning
• Organization should have a culture that promotes continuous learning and fosters the exchange of experience.
• Nonaka and Takeuchi claim that knowledge is constantly converted from tacit to explicit and back again as it passes through an organization.
• Making personal knowledge available to others in the company
– It takes place continuously
– It takes place at all levels of the organization
• Individual
• Groups
• Company-wide