



Microsoft Research Asia
Faculty Summit 2010

Day 2: Wrap-Up Session



Summary of Breakout Session on Finding, Keeping and Nurturing Talent: The Key to Success

Baining Guo,

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and

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University of Science and Technology of China



Schedule

- Welcome Speech
 - Lolan Song, Senior Director of University Relations, Microsoft Research Asia
- Requests from customers, and our efforts and plans to the requests
 - HyunWook Park, Head of EE Department, KAIST
- Recruiting, Cultivating, and Retaining Talented Academic Researchers: The Case of the Computer Science and Engineering Department at the Hong Kong University of Science and Technology
 - Mounir Hamdi, Head of CSE Department, HKUST
- Reducing Talent Gaps
 - Xiaoning Ling, CEO, X-Gainian Foundation
- Experience in Teach Advanced Software Engineering
 - Xin Zou, Principal Development Manager, Microsoft Research Asia
- Panel Discussion
 - Chair: Baining Guo, Assistant Managing Director, Microsoft Research Asia
 - Panelists: Sadaoki Furui, Tokyo Institute of Technology; John Hopcroft, Cornell University; Seung-won Hwang, POSTECH; Weiping Li, USTC



Opening Presentation

- Topic:
 - Why MSRA is committed to talent fostering
- Presenter:
 - Lolan Song, Senior Director of University Relations, Microsoft Research Asia
- Main Points:
 - Nature of MSRA
 - Importance of talent pipeline
 - Social responsibilities
 - Talent programs at MSRA

Presentation 1

- Topic:
 - Requests from customers, and our efforts and plans to the requests
- Presenter:
 - HyunWook Park, Head of EE Department, KAIST
- Main Points:
 - Department of Electrical Engineering
 - Small innovation in a department
 - Graduate School of Culture Technology
 - Interdisciplinary school
 - Renaissance Ph.D. Program
 - Small innovation in a university
 - KAIST Imagineering Institute (plan)
 - Large innovation in a university

Presentation 2

- Topic:
 - Recruiting, Cultivating, and Retaining Talented Academic Researchers: The Case of the CSE Department at HKUST
- Presenter:
 - Mounir Hamdi, Head of CSE Department, HKUST
- Main Points:
 - Introduction of the department: a success
 - Recruiting: advertising, selection, compensation
 - Nurturing: supportive, promote quality
 - Retaining: environment, policies, transparency

Presentation 3

- Topic:
 - Reducing Talent Gaps
- Presenter:
 - Xiaoning Ling, CEO, X-Gainian Foundation
- Main Points:
 - From Research Talent Requirement to Assessment of Talent Gap
 - The Crisis: We are NOT meeting the needs of fast-moving industries!
 - An Innovative Learning-by-doing Curriculum Experiment at Hunan University, Software School
 - X-Gainian – An experiment on a new approach for talent training

Presentation 4

- Topic:
 - Experience in Teaching Advanced Software Engineering
- Presenter:
 - Xin Zou, Principal Development Manager, Microsoft Research Asia
- Main Points:
 - Gap
 - Academic: close-book exam, no questions allowed, work individually, no feedback except a score.
 - Industry: open-book environment, interaction with customer is crucial, work as a team, feedback comes in multiple ways
 - Bring industrial requirement and best practice into classroom
 - Trainer-Trainee relation
 - Extensive reading, blogging
 - Award top performers
 - Real projects and customers
 - Focus on 1-1 collaboration
 - Focus on recent & industrial SE practices
 - Encouraging feedback

Panel Discussion

- CS Education at Tokyo Tech
 - Sadaoki Furui, Professor, Tokyo Institute of Technology, Department of Computer Science
 - Features and Problems
- Growing Talent (Given on October 18)
 - John Hopcroft, Professor, Cornell University
 - Research model and teaching in the US; Recommendations for Asia Pacific
 - Spotting and mentoring talent; How to get started in research
- Talent Fostering: A Panda's Perspective
 - Seung-won Hwang, Assistant Professor, POSTECH, Korea
 - Things a young professor wishes to have learned 5 yrs ago
- Can “Innovative Thinking” Be Taught?
 - Weiping Li, Professor, University of Science and Technology of China
 - Have the courage and skill to challenge and, at the same time, respect authority
- Open Floor Discussion
 - Whose problem is it to have more innovative and creative education?
 - Any MS programs for younger students in elementary schools & middle schools?
 - If you have children, do you want them to enter CS related areas and why?
 - Did we produce too many CS students over the market demands?

Conclusions

- There are more questions than answers
- There is a great need for innovative and creative students
- There are good examples of innovative and creative educational programs, but it is not clear how to duplicate the success in a large scale
- Create an environment for innovation and creativity is the key, but it is not clear what kind of environment it should be and how to create it
- It is important to inspire innovative and creative thinking in young kids (K-12), but it is not clear what we can do

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Mobile Sensing

Session Chair:

Jacky Shen, Microsoft Research Asia



Mobile Sensing

- Keynote Speech + Shotgun Session
- 12 professors to share research result in Japan, China Mainland, Taiwan and Korea.
- Announced SensorWeb Services in AP region.

Applications



Conclusion

- Mobile Sensing is Everywhere!
- Mobile Sensing is promising direction!
- There are many challenges...

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Natural User Interaction: Exploring Future Computer Interfaces Today

Session Chair: Frank Soong, Microsoft Research Asia

Presenter: James Landay, University of Washington



NUI Panel Discussion Summary

- Applications: learning, exercising, aging, care, smart agent, gaming, chatting...
- Input: handwriting, face, hand, body, gestures, speech, music, bio signals
 - Input sensor resolution and ambient “noise”
- Output: text, image, video, audio
 - random vs sequential access
- Distribution of processing and computing
 - client vs server; raw info sensing, transmission and processing
- Human machine “dialogue” + background monitoring + inference
 - dialogue manager: user vs initiative or mixed; disambiguation
 - user intention/emotion recognition and rendering
 - intelligent agent (keep track when and what, monitor in the background)
- When technology is not perfect yet, how to find the best applications?
 - support designers & make technologies useful by non-domain experts
- Cloud and crowd leveraging
 - Cloud as the backend helper
 - Crowd to create the community and network plus feedback for refinement
- Info access, search and sharing beyond the language/culture barrier
- Create a platform for researchers to collaborate/extend