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Microsoft Research Asia
Faculty Summit 2012



Making the Transition from Industry Lab to Academia

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Background

- B.B.A, Information Management, National Taiwan University
- MS and Ph.D., Computer Science & Engineering, University of Michigan, Ann Arbor
 - Advisor: Prof. Jason Flinn
 - Thesis title: Replication-based Cyber Foragnig and Automated Configuration Management
- Two years of industry research experience at NEC Labs America in Princeton, New Jersey
- Assistant professor at NTU CSIE since August 2010



Current research projects

- Cloud computing
 - Performance prediction, debugging, and service selection for clients
 - Dynamically pulling cloud resources to cloud burst tasks
 - Pricing: collaboration with professors from business school
- Mobile computing
 - Leverage everyday smart phones for bike tracking
 - Performance debugging for smart phones



Outline

- Things that I find useful
 - New faculty orientation
 - Reduced course workload
 - Startup funding
 - Funding support from colleagues
 - Mentoring
- Things that caught me by surprise
 - Managing budget
 - How to be an advisor
 - How to be a teacher
 - Building connections with industry



New faculty orientation

- Three-day retreat at NTU experimental forest
 - Organized by NTU Center for teaching and learning development
- Goals:
 - Familiarize new faculty members with teaching and funding resources on campus
 - Connect with senior faculty members and fellow newbies





Reduced course load

- In Taiwan, Ministry of Education requires a teaching load of at least 9 credit per semester
- College considers advising students as teaching load
 - On average, three courses each year
- Our department: reduced course load for first year to 2





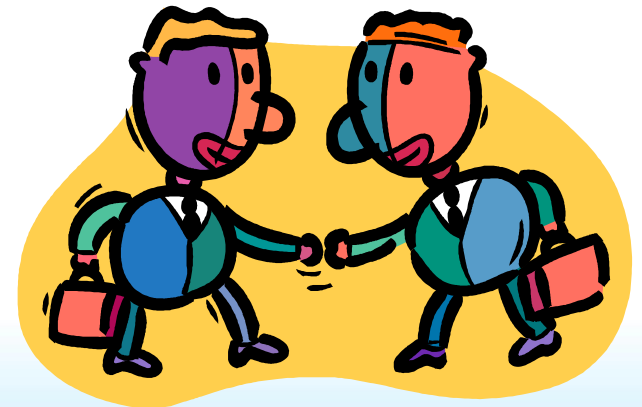
Startup funding

- Internal funding: university, college, and department
- National Science Foundation (similar to NSF) provides a rolling based proposal review for startup proposals



Collaboration with colleagues

- Our department: senior faculty members invite us to collaborate in joint proposals and projects
 - Additional funding
 - Great opportunity to find collaborators
 - Showcase research
 - Make connections with industry





Importance of mentoring

- Having mentors provides tremendous help
- University offers mentoring program
- Informal ways to connect to senior faculty members





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Managing funding

- Accounting and procurement process is more complicated than expected. e.g.,
 - The process of filing expenses
 - The process to purchase special equipment
 - Inflexibility in how money can be spent
- Solutions:
 - Having an assistant is tremendous help
 - Plan ahead in purchasing equipment





Being an advisor

- Being a faculty is more like a manager (even though we are hired based on research results)
 - Hire the best people
 - Find resources
 - Manage budget
- Most challenging: how to build up a team?
 - Effective recruiting
 - Mentoring, training, and motivating students
 - Adjusting to cultural differences





Being a teacher

- It takes longer than expected to develop a new class
 - Lecture material
 - Homework assignments
 - Exam questions
- Finding effective ways to teach
 - Students do fall asleep in class
 - Students know more (or less) than your expectation



Building connections with industry

- Validating research results is important
- Finding interesting problems in real world
- Sending students for internship to build collaboration



Acknowledgement

- Great gratitude for this opportunity to share my experience
 - Thank you Lolan Song, Xin Ma, and Heidi Fu
- My colleagues who have been great mentors and friends
- Support from the department, college, and university

Thank you!