

# The Road to a Ph.D.

Dr. Hui Xiong  
Rutgers University

THE STATE UNIVERSITY OF NEW JERSEY  
**RUTGERS**

## Positive Life Objective: Aim High

- “取法乎上，得乎其中”
- “取法乎中，得乎其下”
- “取法乎下，得乎其无”
  
- Aim high
- Tough road ahead



## Interest

- What is your interest?
- Apathy- Lack of Incentive/Rewards
- Interest → Passion → Confidence → Success

## Confidence

- Reasonable/Doable Tasks
  - Always pick your fight carefully
- Be proud of yourself
  - Celebrate every small achievement



**Extreme Confidence**

## Attitude

- Learn to do things with constraints
  - Change things that you can change
  - Get used to things that you can not change
  - Have the wisdom to judge what you can change and what you can not change.



## Courage

- What is the worst-case scenario?
- Can you deal with the worst-case scenario?
- Learn from your failures

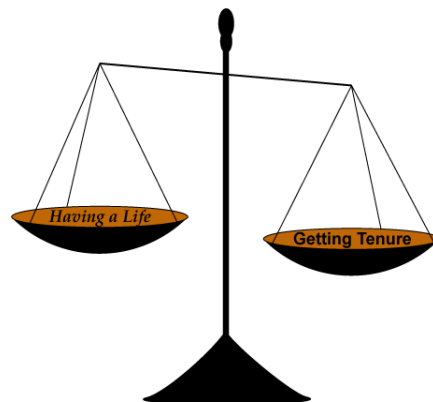


## Patience, Persistence and Perspiration

- Make a promise and keep your promise
- Challenge yourself



## Be Balanced – Life and Work



## Be Balanced - Skills

- Research Skills
- Communication Skills
- Organization Skills
- Management Skills
- Marketing Skills



## Balance ≠ Mediocre

- Be first-rate, not second-rate.
- Identify your weakness and make a change on that.



## Communication Skills

- Written
  - Research Articles
  - Dissertation
- Oral
  - Dissertation Defense
  - Conference Presentation

If you are incapable of communicating, your results will be limited to what you can accomplish alone and your career growth will be limited, both in industry and academia.

## Active Listening

- Encourage
- Question
- Restate
- Reflect
- Summarize
- Validate

## Making Active Listening Work

- Be authentic.
- Be energetic and focused.
- Be aware of your internal voice.
- Avoid assumptions.
- Empathize.
- Watch nonverbal behaviors.
- Do not interrupt, offer advice, or make suggestions.

## In a learning conversation, you:

- Try to understand what has happened from the other person's point of view.
- Explain your point of view.
- Share and understand feelings
- Work together to manage the problem in the future.

## Communicating Clearly

Do:

- Start with what matters most.
- Speak directly.
- Acknowledge different perspectives; use “and.”

Don't:

- Be too simplistic.
- Present your conclusions as truth.
- Use “always” and “never.”

## Problem Solving

- Set the stage: purpose of meeting, ground rules.
- Begin with the Third Story.
- Listen to the other person's perspective.
- Communicate clearly.
- Define the problem.
- Brainstorm options.
- Evaluate options.
- Develop a solution.



## Telling the Third-party Story

- neutral description of the situation acknowledging differences between your perspectives, with no judgment involved.

## Conflict - *in everyday Life*

- Intrapersonal
- interpersonal
- intragroup
- intergroup
- intraorganization
- interorganization



Win/Win - Conflict can be healthy when it brings out new ideas & relationships

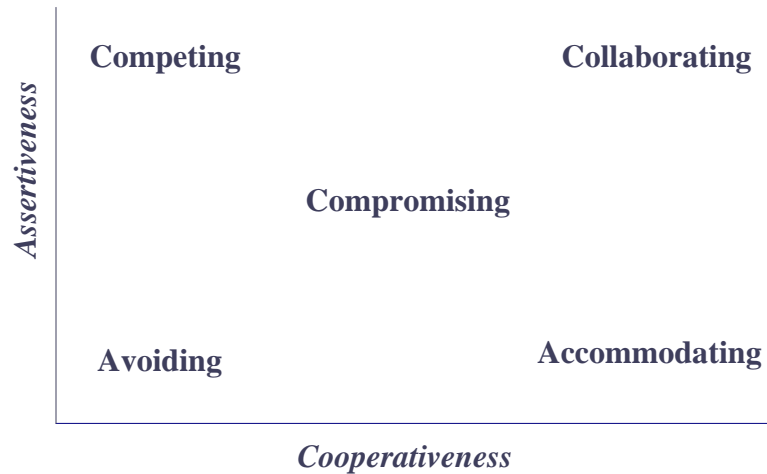
Win/Lose - distrust, anger, withdrawal

## Conflict Management

- *Competing*-assert your position w/o opposing view points
- *Avoiding*-stall, ignore, sense of timing
- *Collaborating*-fully satisfying both sides (relationship is important)
- *Accommodating*-forgoing (your) concerns (selfless)
- *Compromising*-negotiating, finding middle ground

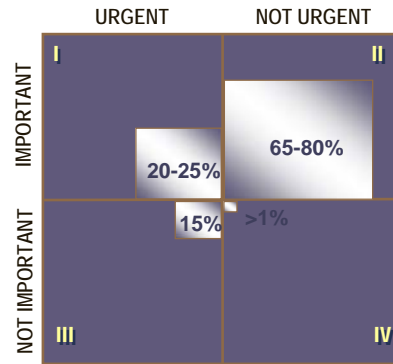
**Do Not Over Use Anyone**

## Conflict Management Styles



## Time Management

- Objective
  - Short Term
  - Long Term
- Plan
  - Context Switch
- Focus
- Benefit
  - Eliminates stress, chaos, confusion



## Learn to Say “No”

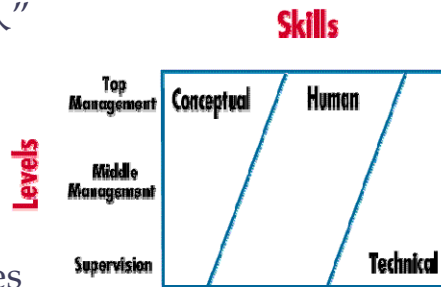
- Your highest priorities?
- Have the courage to say “No”.
- Say “No” in a tactful way.



“This sounds like a wonderful project, a really worthy undertaking. I appreciate so much your inviting me to be a part of it. I feel honored by it. For a number of reasons, I won’t be participating myself, but I want you to know how much I appreciate your invitation.”

## Management Skills

- “己所不欲, 勿施于人”
- Be a team player
- Be considerate
- Put yourself in someone else’s shoes



**Skill Distribution at Various Management Levels**

## Marketing Skills

- Hard Power: Compelling, thoughtful, well-written articles are a timeless advertisement.
- Soft Power: Ability to put everyone in a win-win situation.
  - Explains to others what you have done in ways that are also helpful to them.



## Leadership versus Management

- Management is doing the things right
- Leadership is doing the right things



## Successful Career Life's Three Stages

- Young Adult
  - Work for successful people
- Middle Age
  - Collaborate with successful people
- Old Age
  - Successful people work for you

## Building and Maintaining Relationships

- Understanding the Individual
- Attending to the Little Things
  - Little kindness and courtesies are very important
- Keeping Commitments
- Clarifying Expectations
  - Get all the expectations out on the table
- Showing Personal Integrity
  - Treat everyone by the same set of principles
- Apologizing Sincerely When it is Necessary
  - Must be sincere, and must be perceived

## Thinking About Change

- Life is hard!!
  - Hard to find a job
  - Hard to maintain a job
- Long term success depends not on your knowledge of a specific technology,
- It depends on your ability to **THINK**, to **SOLVE PROBLEMS**, and to use technology to **HELP** your organization **ACHIEVES** its goals and objectives.

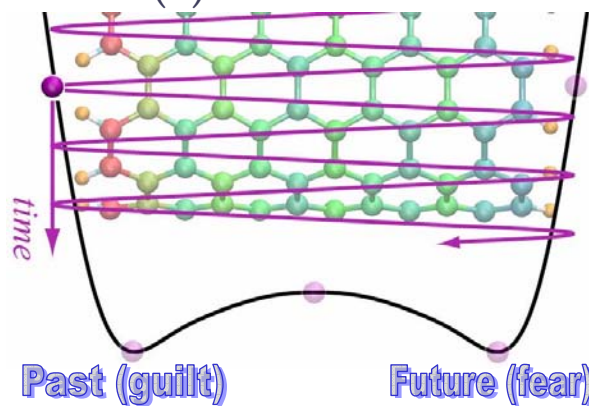


## Case Study - How to Recover from overwhelm

- I am dealing with **overwhelm**
- consequences:
  - Depression
  - Stalled career progress
  - Interpersonal messes



## Case Study - How to Recover from overwhelm (2)



Get control of your emotions, and regain your ability to take actions!

## Case Study - How to Recover from overwhelm (3)

- Step One – Stop and get some fresh air
  - bring your focus quickly back to the moment.



## Case Study - How to Recover from overwhelm (4)



- Step Two – Slow down your paces
  - Slow down, then you move faster
  - Leads to the feeling that you have more time
  - Relax yourself



## Case Study - How to Recover from overwhelm (5)

- Step Three: complete a task
  - Randomly choose a task (you like to do) from your immediate task lists and do it
  - Feel the victory
  - Engage your mind in work

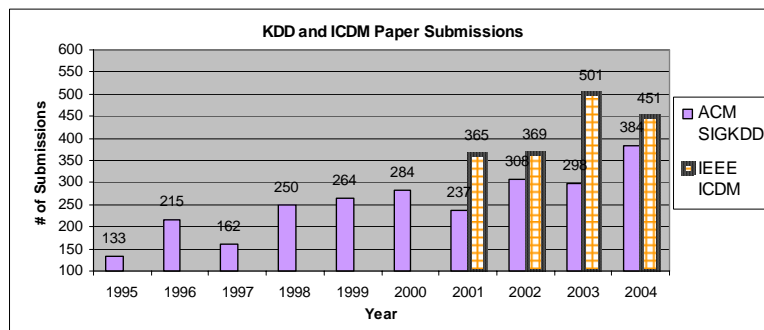


## Case Study - How to Recover from overwhelm (6)

- Assorted methods to stabilize
  - Make a list of everything you have to do
  - Clear your workspace
  - Find a 10% solution
    - make small adjustments so that you can get back in control
  - Face up to the situation that you miss some BIG deadlines

# Publication Strategies

## ACM KDD vs. IEEE ICDM



## TKDE Submission Numbers and Acceptance Rate

Year	# of Submissions	Acceptance Rate
1998	219 – Regular	34.20%
1999	188 – Regular	39.90%
2000	195 – Regular	34.40%
2001	294 – Regular	25.50%
2002	233	24.00%
2003	355	26.40%
2004	528	20.10%
2005	480 (by Oct 14)	< 20%

## Why Publish?

- To communicate new findings
  - Work is never finished until it is documented
- To let the community know about your work
  - Recognition/Visibility
  - Collaborations
- To get useful feedback from peers
- To strength your/your colleagues CV
  - Maximize your job opportunity

## Publish with Whom ?

- Work for successful people.
  - Your Advisors
  - Famous People in the Community
- Collaborate with highly motivated peers
  - Your former classmates
  - Students in the same lab

## Where to publish?

- International Journals.
  - More long-term impact
  - (much) deeper reviews
  - More space means more content
  - More highly rated by promotion committees
  - Long cycle (except special issues)
- International Conferences
  - Faster process
  - Selection of best papers for journals
  - Immediate community awareness

## Paper Submission

- Conferences.
  - Call-for-paper (CFP)
  - Program Committees
  - History Records
- Journals.
  - Associate Editors
  - History Records

## Reader Awareness

- Identify the background of the reviewers
- Think as a reviewer
  - is the paper interesting?
  - what's the research contributions?
  - is the paper relevant?
  - will you accept the paper?
- Do not over-claim your work!!!

## The Paper Life Cycle



## Paper Writing

- to convince reviewers of significance
  - State research motivation clearly
  - [Good Application Examples]
  - Discuss why your result is significant

## Paper Writing

- to convince reviewers of paper originality
  - Specify objectives & contribution carefully
  - [abstract, introduction, conclusion]
  - Present related works carefully
  - Compare your approaches carefully

## Paper Writing

- To convince reader of soundness ...
  - make paper technically readable, verifiable for experiment-based research papers.
- Describe the experimental method carefully so that it can be assessed & replayed

## Paper Writing

- To allow replicability
  - Provide sufficient technical details (possibly with reference to further details in a report available on the web)

## Paper Writing

- To convince reader of good presentation
  - high cohesion: one paper, one result
  - don't try to say too much, but don't try to say too little.
  - self-contained paper
  - put anything needed to understand results
- **Avoid: if you cannot convince people, just confuse them.**



## A few typical comment patterns

- “the objectives are unclear”
- “too little beef”
- “the authors seem to ignore ...”
- “the paper fails to deliver what is promises”
- “unsubstantiated claims”
- “premature...”
- “the paper provides little evidence that the results do apply in real settings”
- “evaluation is weak”
- “rambling discussion...”
- [to editor/PC:] “boring”, “unexciting”

## When to submit?

- Refrain from submitting half-baked ideas

## Summary of Publication Strategies

- Publish
  - good work
  - in good journals & conferences
  - with good people
  - at good time
- Weak papers may damage your reputation.
- Be a good reviewer.
  - If you can criticize a paper, you know how to write a good paper.

*Thank You!*



Professor Hui Xiong at Rutgers  
<http://datamining.rutgers.edu>