

Computer Science  
Graduate Research Orientation

**Creativity ...and...**  
**Communicating with the Community**

FL320: 11-12: September 29, 2015

Discussion Leader: Prof. David C. Brown

**Part 1: Being Creative**

**Part 2: Publishing and Presenting**

## Part 1: Being Creative

### What is creativity?

- a judgment
- not binary: from **c** to **C**
- scope of comparison
  - people & time
  - Extremes: P and H
- need for knowledge
- exploratory vs. transformational
- process vs product vs people

## How to become creative?

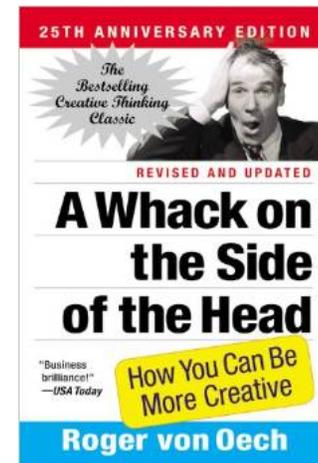
- generate lots of ideas! (e.g., brainstorm)
- being an expert is necessary
  - preparation phase
  - being an expert is a trap
- understand what's known and “map” it
  - look for holes (not known / not investigated)
  - look for boundaries
  - look for unfinished work (see opportunities)

## How to become creative? continued

- know the rules then try to change them
  - relax constraints
  - try “what if...?”
- find unsatisfied needs
- tackle the impossible (blue sky research)
- combine ideas (e.g., bridge + wings)
- use analogy
  - find something else that is similar
  - then borrow from it

## How to become creative? continued

- reap failure (why, how, when, where, fix)
- diverge then converge
- be open to new ideas and be curious
- allow yourself time to relax, do other things, doodle, & free associate
- incubation phase
- get sleep and exercise
- “A Whack On the Side of the Head”



Any quick questions?

## Part 2: Publishing and Presenting

### Expectations?

- 1-2+ journal articles per PhD
- 1-2+ conference papers per MS
- attend conferences and workshops
- workshops vs. conferences

## Side-effects?

- resume fodder
- citations
  - Note: Google Scholar
- reputation & visibility
- possible invitations to present or be a reviewer

## How to Publish?

- submit, revise, submit, revise, ...
- conference/journal rankings
  - pick appropriate level
- submission date (acts as goal)
  - conferences; journal special issues
- submission format (e.g., 2 column; references)
  - often needs to be camera ready (template)
- good writing + clear structure
- the points and contributions must be clear
- relevant and current references

## How to Publish? continued

- submission usually electronic
- usually 2-5 reviews
- take review comments seriously
- respond to reviewers sensibly
- single blind & double blind (bias)
- journal schedule (2 months to 2 years)
- submit, ackn., reviews, revise/reject, revisions, resubmit, (revisions), decision, proofs, published

## How to Present?

- content first, slides second
- Good guidelines
  - 1-2 points per slide
  - 2 minutes per slide
- it is a story
- prefer figures/pictures to text
- limit text on slide
- large and visible (18 pt minimum!)
- TED blog: “10 tips on how to make slides that communicate your idea”

## How to Present? continued

- do not read your presentation
- practice, practice, practice
- finish on time
- prepare extra material for questions
- Don't get trapped behind the podium
  - microphone
- talk to the back of the room
- allow for questions at the end

Any questions?