Spring 2015
Computational Creativity (CS 4803 – UG Section, CS 8803 - Graduate Section)
Ashok Goel

Class Schedule

This is a preliminary day-by-day schedule for our class.
The instructor will update the schedule on a weekly basis.
All readings will be available on the T-square site for the class.

The reading in italics for any topic is the primary article for that topic.
We expect that all students will read the primary article.
The quiz on any topic will pertain only to the primary reading.

We expect the presenter on any topic to also read the supplementary readings on the topic.

Date	*Readings, videos, deliverables*
Jan. 6	Introduction to Computational Creativity Videos to watch in class: Video 1 - IBM Watson (http://www.youtube.com/watch?v=WFR3lOm_xhE) Video 2 - Painting Fool (http://www.youtube.com/watch?v=qe5jLirwmV4) Video 3 - Robot Musicians (http://www.youtube.com/watch?v=VscnR6F20yc) Introduction to the class
Jan. 8	Topic: Case Study in Computational Creativity: IBM's Watson – 1 Papers: Building Watson *Ferrucci* et al. Accompanying video to watch before class: https://www.youtube.com/watch?v=3G2H3DZ8rNc&list=PL3iKLMXW18Sp_w5ynmfK4mFUcO8WQICMe&index=14 Group discussion Video to watch in class: Musical Stairs https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=youtube%20musical%20stairs

Jan. 13	Topic: General Creativity Papers*: Csikszentmihalyi (Flow of Creativity),* Csikszentmihalyi 2,3,4 Accompanying video to watch before class: https://www.youtube.com/watch?v=W9jaOsxjS1E&index=2&list=PLYnvMG2KnNYACoMfKM-ewZUIT7npBYkTD Group exercise Video to watch in class – Marshmallow Challenge https://www.youtube.com/watch?v=H0_yKBitO8M
Jan. 15	Biologically Inspired Design *Benyus*, Goel Video to watch before class: https://www.youtube.com/watch?v=k_GFq12w5WU Collaborative Project begins Design Study Library Accompanying paper: Goel et al. AIEDAM Video to watch in class: Where Do Ideas Come From: https://www.youtube.com/watch?v=NugRZGDbPFU&feature=youtube
Jan. 20	Creativity in Design Papers: *Dorst&Cross*, Schon
Jan. 22	Creativity in Modeling *Nersessian (2002),* Dunbar
Jan. 27	Methods for Studying Creativity *Cross,* V.Goel
Jan. 29	Measures of Creativity *Shah et al.* Project Deliverable - 1
Feb. 3	Entrepreneurship in Computational Creativity Guest Lecture by Keith McGreggor)
Feb. 5	IBM Watson Hackathon – 1
Feb. 10	IBM Watson Hackathon – 2 Assignment -1
Feb. 12	IBM Watson Hackathon – 3 Assignment -2

Feb. 17	Georgia Tech classes before 11 am cancelled because of weather
Feb. 19	Case Study in Computational Creativity: IBM's Watson – 1 Paper -1 *Wang et al. – Relation Extraction in DeepQA* *Gondek et al. – Merging Answers in DeepQA* *(Under Case Study – IBM Watson)*
Feb. 24	Information-Processing Theories of Creativity *Boden* *(Under IP Theories of Creaivity)*
Feb 26	Georgia Tech classes before 11 am cancelled because of weather
Mar. 3	Knowledge Representation *Markman Ch. 1*, Gaerdenfors, Minsky Information-Processing Theories of Creativity *McCorduck* *(Under IP Theories of Creaivity)*
Mar. 5	Analogical Thinking *Gentner*, Holyoak & Thagard
Mar. 10	Visual Thinking *Larkin & Simon,* Glasgow & Papadias
Mar. 12	Conceptual Thinking *Fauconnier & Turner,* Lakoff & Johnson
Mar. 24	IP Theories of Creativity in Modeling *Darden,* Clement
Mar. 26	IP Theories of Creativity in Design *Gero,* Goel
Mar. 31	IP Theories of Team Creativity *Fischer,* Maher
Apr. 2	Interactive Tools for Creativity in Design *Szykman et al.,* Goel et al. Interactive Tools for Creativity in Design Project Deliverable – 3 *Gross & Do,* Yaner & Goel

Apr. 7	Group Creativity *Sarmiento & Stahl* Team Creativity *Stempfle & Badke-Schuab*
Apr. 9	Interactive Tools for Learning about Modeling *Biswas et al.,* Vattam et al.
Apr. 14	Autonomous Systems for Creative Modeling Project Deliverable – 4 *Davies, Goel & Yaner 2008,* Yaner & Goel 2006
Apr. 16	Autonomous Systems for Creative Design *Goel & Bhatta 2004,* Bhatta & Goel

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March 30, 2015

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