

Fast predicts NFL coaching success



In an article titled “You want winners? Here’s a formula,” ESPN.com recently featured work by Andrew Fast (PhD ’10) analyzing the social network among professional football coaches. The work originally appeared at the AAAI Fall Symposium in 2006.

In the NFL, organizations look to hire head coaches who will consistently produce winning teams, says Fast, a New England Patriots fan. Hiring decisions are based, in part, on the “coaching trees” of the candidates.

A coaching tree captures the lineage of a particular coach; a “protégé” coach who has worked under successful “mentor” coaches is likely to be successful also.

Fast examined every head and assistant coach in the NFL from 1920 through 2007 to identify characteristics of successful coaches. One conclusion he reached is that championship coaches tend to have fewer mentor coaches than non-championship coaches. This implies that talented coaching candidates either quickly rise to head coaching positions or work under successful head coaches for long periods of time. In addition, Fast uses Relational Probability Tree (RPT) models developed in the Knowledge Discovery Laboratory to predict future playoff success using the coaching tree of a head coach. These models show that the experiences of both the head and assistant coaches are valuable for predicting playoff teams, and the coaching network alone can be used to make accurate preseason predictions for which teams will make the playoffs.

“After the 2005 season, there were a lot of articles in the press about how teams used the coaching network to make hiring decisions,” says Fast. “I wanted to test whether or not

John Cavazos (Ph.D. ’05), Assistant Professor in the Department of Computer and Information Sciences at the University of Delaware, was selected a recipient of the prestigious National Science Foundation Faculty Early Career Development Award. With his CAREER project, he will develop adaptive compilers for multi-core computer environments, freeing software developers from laborious and time-consuming hand-tuning of compilers and helping machines make fuller use of their performance capabilities.

Matthew Cornell (M.S.’91), published his time management guide to daily planning, “Where the !@#% did my day go? The ultimate guide to making every day a great workday.” This is his second publication, and joins his popular “You Did WHAT? 99 Playful experiments to live a healthier and happier life.” More at matthewcornell.org.

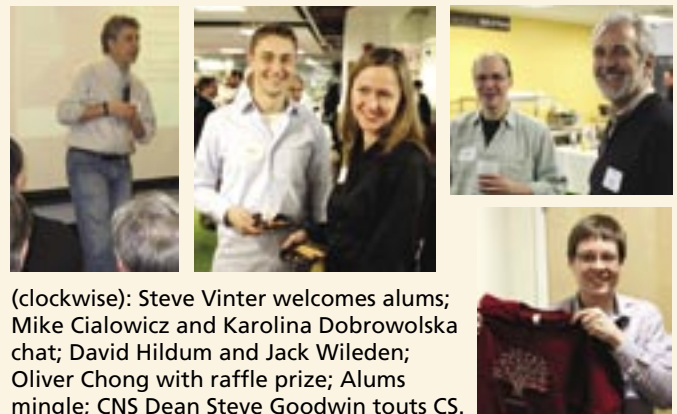
Adam Williams (M.S. ’09) is the creator of the *Christmas Gifts List* application for the iPhone and iPod Touch that helps holiday shoppers create shopping lists and budgets. His App has been ranked 15th on the Top Paid Apps list at the iTunes App Store. Williams is President of Adamcode.com, a company founded in 2008 in Amherst, MA. Another of Williams’ Apps, *Spend*, a personal budget manager, was one of the 500 applications available in the iTunes App Store on its opening day and became one of the Top 20 finance apps.

that was a good idea. I already had access to the tools, so I started gathering data, doing the analysis, and everything started to snowball from there.”

Fast, advised by Associate Professor David Jensen while at UMass Amherst, is now a Research Scientist at Elder Research Inc., a data mining consulting firm.

CS alum social held in Boston

On March 4, 2010, the department hosted a social gathering for UMass Amherst CS alums at Google’s Cambridge, MA facility. With over 100 people registered, the night was a great opportunity for our guests to talk with CS faculty, to reminisce with old friends, and to make new connections. CS Assistant Professor Kevin Fu, *Technology Review’s* 2009 Innovator of the Year, gave a captivating presentation on his work, “Security and Privacy for Pervasive, Wireless Healthcare.” The department hopes that the alum social will be an annual event in the Boston area, with additional events held on the west coast. More photos at www.cs.umass.edu/alumsocial2010.



(clockwise): Steve Vinter welcomes alums; Mike Cialowicz and Karolina Dobrowolska chat; David Hildum and Jack Wileden; Oliver Chong with raffle prize; Alums mingle; CNS Dean Steve Goodwin touts CS.



Alums and students feted at awards ceremony

On Friday evening, April 30, 2010, alums, students, faculty, friends, and family filled the campus' Marriott Center for the department's Second Annual Outstanding Achievement and Advocacy (OAA) Awards Banquet. Earlier that day, the department hosted a poster session showcasing the research activities within the department and a round-table discussion at which the OAA recipients discussed their careers and reflected on their time at UMass Amherst.

The OAA event was established in 2009 to recognize the outstanding accomplishments of students and graduates of the department's degree programs, and to acknowledge the support of important friends of the department.

Department Chair Andrew Barto and Steve Goodwin, Dean of the College of Natural Sciences, welcomed the attendees and gave overviews of the department and the college."

Professor Leon J. Osterweil, chair of the OAA awards committee, presented awards to these 2010 OAA recipients:



Outstanding Achievement in Education:
Carla E. Brodley (Ph.D. '94), Professor, Department of Computer Science, Tufts University



Outstanding Achievement in Public Service:
Jody J. Daniels (Ph.D. '97), Director of Advanced Programs for Lockheed Martin's Advanced Technology Laboratories and a Colonel in the U.S. Army Reserves



Outstanding Achievement in Entrepreneurship:
Andrew J. Singer (Ph.D. '79), Chief Scientist of Edison Labs LLC; previously CEO and CTO of Rapport Incorporated



Outstanding Achievement by a Young Alum:
Sanjay Tandon (B.S. '01), founder and CEO of Paramount Defenses Inc.



Outstanding Support for the Department:
Sidney Topol (Physics B.S. '47), President of The Topol Group, and founder of the Massachusetts Telecommunications Council



Outstanding Achievement in Management:
Steve Vinter (Ph.D. '85), Engineering Director at Google, Inc.



Outstanding Achievement in Research:
Alexander L. Wolf (Ph.D. '85), Professor, Department of Computing, Imperial College London

The award citations and more details on the careers of the OAA award recipients, along with photos of the event, are posted at www.cs.umass.edu/oa2010.

During the evening's celebration, current students and recent alums were also recognized. The undergraduate and graduate awards were generously sponsored by Yahoo!, a member of the Department's Industrial Affiliates Program. Professor Robbie Moll, Department Associate Chair, presented the following Outstanding Undergraduate Awards to students in this year's graduating class:

- Overall Achievement in Computer Science:

Daniel Amirault

- Achievement in Artificial Intelligence:

Carlton Henderson

- Achievement in Interdisciplinary Study: **Marisa Pacifico**

- Achievement in Multimedia: **Eric Ssebanakitta**

- Achievement in Security: **Norman Provost**

- Achievement in Software Engineering: **Meagan Day**

- Achievement in Systems: **James Gummeson**

- Achievement in Theory: **John Brattin**

Professor James Allan, Graduate Program Director, presented the following Outstanding Graduate Student Awards for 2009:

- Outstanding Doctoral Dissertation Award: **Nilanjan Banerjee**

- Outstanding Doctoral Dissertation Award: **Ting Yang**

- Outstanding Synthesis Project Award: **Devesh Agrawal**

- Outstanding Synthesis Project Award: **Daniel Menasche**

- Outstanding Teaching Assistant Award: **Phillip Kirlin**

- Outstanding Teaching Assistant Award: **James Partan**

"The department was delighted to, once again this year, recognize the outstanding achievements both of alums and friends who have gone on to great distinction, and of graduating students who are positioned to follow their footsteps in the future," says Osterweil. "The events of the day, climaxed by the Awards Banquet, served to remind us yet again of the importance of our education and research mission and to strengthen our commitment to it."

The department would like to thank all those who participated in these successful events. We look forward to seeing more alums at next year's event.

Nominate a fellow alum

Nominations are now being accepted for the 2011 Outstanding Achievement and Advocacy Awards.

Nominations should be sent by email to Leanne Leclerc (leclerc@cs.umass.edu) and should consist of:

- The name, title, email, phone number and organizational affiliation of the nominee,
- The name(s), email(s), and phone number(s) of the nominator(s),
- A brief biography summarizing the nominee's career (no more than one page),
- A statement of the nominee's outstanding achievements in the award category,
- A very brief (no more than 25 word) suggested citation to be written on the OAA winner's award plaque.