Ranking system picks Final Four, champion

Megan McRainey
Communications & Marketing

Sports professionals and fans get pretty emotional about their picks for the NCAA basketball tournament each year, and that emotion often clouds their judgment. But three Tech engineering professors have created a computer ranking system that consistently predicts NCAA basketball rankings more accurately than the Associated Press poll of sportswriters and the ESPN/USA Today poll of coaches, formulas (the Ratings Percentage Index), other computer models (the Massey ratings and the Sagarin ratings) and even the tournament seeds themselves.

LRMC (Logistic Regression Markov Chain) is a college basketball rankings system designed to use only basic scoreboard data, including which teams played, which team had home court advantage and the margin of victory. It was originally designed by Joel Sokol and Paul Kvam and has been maintained and improved by Sokol and George Nemhauser, all three optimization and statistics professors in the Stewart School of Industrial and Systems Engineering.

After correctly picking all four of this year’s finalists (and Kansas as this year’s champion), the LRMC method has now identified 30 of the last 36 Final Four participants (83 percent accuracy over the past nine years of NCAA tournaments) as one of the top two teams in their region. Over the same nine-year stretch, the seedings and polls of Institute award–winners, Luncheon. For a complete list of Institute award–winners, see page 3.

When the Whistle Blows...

There is nothing that can replace the joy that a loved one or cherished friend brings to our lives. Each year the Georgia Tech community is deeply saddened by the loss of members of our own community.

On April 17, we will honor the memory of each student, faculty and staff member who has died in the last year. Join us as we pay tribute to these individuals who have touched our lives and contributed to our community.

Thursday, April 17, 2007 6:00 P.M. Tech Tower Lawn*

www.whenthewhistleblows.gatech.edu

*Rain Location: Alumni House

Budget finalized, awaits signature

Robert Nesmith
Communications & Marketing

The 40th and final day of the state’s legislative session ended late, as is typically the case each year, with the passing of the state’s fiscal year 2009 (FY09) budget.

On April 4, the Georgia General Assembly worked out the differences in the budgets proposed by the House and Senate on several funding proposals affecting the University System of Georgia (USG) in general and the Institute in particular. Initially, the governor proposes a state-wide budget, which goes before the House and then the Senate. The General Assembly must then reconcile the two budgets into one, which is then returned to the governor for signing, Gov. Sonny Perdue, who has line-item veto authority, has until May 14 to sign the budget. Included in the FY09 budget for the university system is a 2.5 percent salary increase for Institute of Technology.
increase for state employees, $60 million for maintenance, repair and renovation (MR&R) of facilities and $115 million for “full funding of the formula,” to meet basic daily operational needs on the 35 USG campuses.

Specifically for Tech, the final budget included $10 million in funding for the design and site preparation of the Innovative Learning Resource (ILRC), $6.4 million for the renovation of the Hinman Building and $4.4 million for debt service adjustment related to the transfer of the Olympic dorms from Georgia State University.

Nominated to be the common lab space for all freshmen and sophomore students, the ILRC will also offer tutoring and other services in one location. For the next fiscal year, $10 million will allow the Institute to get the project under way. The $85 million facility includes $25 million in non-state and private funding. The remaining construction funding will be a priority item for the Institute for FY2010.

"By placing $10 million in the FY2009 budget for the ILRC, both chambers of the General Assembly acknowledged the importance of this project," said Betsy Jackson, assistant director of Government Relations. "In meetings between (Government Relations Director) Dene Sheheane, President Clough and legislative leaders, it is apparent our elected officials are fully aware of the significance of this facility."

The Hinman Building renovation is projected to offer an additional 14,500 square feet of student and classroom space, 3,700 square feet of faculty office space and 6,620 square feet of research space for the College of Architecture. Located on Cherry Street, Hinman was the first research building, built in 1939 through the War Profits Act. This funding was included in the budgets of both the governor and the General Assembly.

"We at Georgia Tech respect fact that Gov. Perdue is asked to make many difficult decisions regarding legislation and budget priorities," Sheheane said. "We are grateful for his continuing support of Tech. We are very appreciative of the efforts of both the House and Senate on behalf of the Institute and their genuine concern for all education matters coming before the legislature."

LRMCI d' from page 1

have correctly identified only 25, and the RPI identified 21.

LRMC predicted Kansas as champion, despite Davidson University of North Carolina, University of California Los Angeles and Memphis being the top three ranked teams by most systems.

"As fans, we only get to see most tournament teams two or three times at most during the season, so our gut feelings about a team are really colored by how well or poorly they played the few times we've been watching," said Solon. "On the other hand, our system objectively measures each team's performance in every game it plays, and mathematically balances all of those outcomes to determine an overall ranking."

LRMC seems to have a particular knack for predicting good bubble teams and identifying the top teams. The system correctly identified several over-ranked and under-ranked teams as potential upsets. First-round losers Drake (6th seed, LRMC #5), Vanderbilt (4th seed, LRMC #6), and Connecticut (4th seed, LRMC #2) were all picked by LRMC as significantly overrated teams. However, teams like West Virginia (7th seed, LRMC No. 17), which defeated second-seeded Duke, and Kansas State (11th seed, LRMC No. 19), which defeated sixth-seeded USC, were correctly identified by LRMC as under-rated teams that could pull off one or more upsets. But LRMC isn't perfect—it picked first-round upset Clemson as under-rated and Davidson wasn't identified as under-rated by any major ranking group, including LRMC. LRMC differs from other computer rankings systems in two important ways. When determining the value of home court advantage, LRMC considers how much playing at home helps a team win rather than how many points playing on a home court is worth. Researchers have also been able to show that very close games are often "toss-ups," meaning the better team barely wins more than half the time."

For more information...

Enterprise Innovation Institute
www.innovate.gatech.edu

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2008 Faculty/Staff Honors

During last week’s Faculty/Staff Honors Luncheon, Georgia Tech community members were recognized for their excellence in performance, teaching, mentoring and research. In addition, the Institute honored 171 colleagues for 10 years of service and celebrated the 25th anniversaries of 65 faculty and staff members (right). The Whistle extends its congratulations to these honorees.

2007 Staff Tuition Reimbursement Assistance Program (STRAP) graduates
Antonia English, Facilities
Michelle L. Graham, Management
Angela Greene, Chemistry and Biochemistry
Kisha M. Grimes, Athletic Association
Maria Z. Hughes, International Education
Shella M. Richardson, Library and Information Center
Samuel Strickland, Information Technology
Meka S. Wimberly, Human Resources

Don Bratcher Human Relations Award
Thomas H. Crawford, associate professor, Literature, Communication and Culture

Administrative Service Award
Law E. Lahm, director of Information Technology Services, Mathematics/Sciences

Georgia Tech Chapter Sigma Xi Awards
Young Faculty Awards
Nico F. Deicke, assistant professor, Mechanical Engineering
Sankar Nair, assistant professor, Chemical and Biomolecular Engineering

Faculty Best Paper Awards
Zeng Lin Wang, Regents’ Professor, and Xudong Wang, research scientist, Materials Science and Engineering
Cheng Zhu, Regents’ Professor, and Veronika Zamihyna, research scientist, Biomedical Engineering

Sustained Research Award
Suresh K. Shriraman, professor, Mechanical Engineering

Faculty Research Awards
Outstanding Doctoral Thesis Advisor
Gregory D. Abowd, Distinguished Professor, Interactive Computing

Outstanding Achievement in Research Program Development
W. Alan Doolittle, associate professor, Electrical and Computer Engineering

Outstanding Faculty Research Author
Jean-Luc Breda, Professor and Chair in Molecular Design and Georgia Research Alliance, Eminent Scholar, Chemistry and Biochemistry
John Krieger, Kranzberg Professor, History, Technology and Society

Outstanding Faculty Leadership for the Development of Graduate Research Assistants
Ali Adibi, associate professor, Electrical and Computer Engineering

ANAK Award
Mary Peak, academic professional, Chemistry and Biochemistry

Outstanding Staff Performance Awards
Adam Arrowood, research scientist, Information Technology
Debra K. Dorsey, Aquatics manager, Campus Recreation Center
Keryon C. Gilstrap, financial manager, Chemistry and Biochemistry
Renita L. Washington, academic advisor, Materials Science and Engineering
Louis W. Zehner, manager, Business Services, Information Technology

CETL/BP Junior Faculty Teaching Excellence Awards
Michael F. Hunter, assistant professor, Civil and Environmental Engineering
Hang Lu, assistant professor, Chemical and Biomedical Engineering
Valeria Toller Milam, assistant professor, Materials Science and Engineering

Education Partnership Awards
Faculty
Samuel Graham Jr., associate professor, Mechanical Engineering
Student
Adam P. Christiansen, doctoral candidate, Mechanical Engineering
K-12 Teacher Award
Doug Edwards, magnet coordinator and science teacher, Westlake High School

Academic Advisor Awards Committee
Outstanding Undergraduate Academic Advising Staff
J. Paul Finneman, academic advisor, Biomedical Engineering
Faculty
Jennifer K. Leavey, senior academic professional, Biology

Faculty/Staff Honors Committee Awards
Class of 1940 W. Hood Board Outstanding Teacher Award
Eugene E. Cormiskey, associate dean, Management

Class of 1940 W. Howard Ector Outstanding Teacher Award
Joel S. Sobel, associate professor, Industrial and Systems Engineering

Outstanding Service Award
Richard F. Burke, associate professor, Public Policy

Outstanding Professional Education Award
Mark A. Richards, principal research engineer, Electrical and Computer Engineering

Outstanding Undergraduate Research Mentor/Faculty Award
James L. Gole, professor, Physics

Class of 1934 Outstanding Innovative Use of Education Technology Award
David M. Collard, professor, Chemistry and Biochemistry

Class of 1934 Outstanding Interdisciplinary Activity Award
Andrei G. Fedorov, professor, Mechanical Engineering

Class of 1934 Distinguished Professor Award
James D. Poley, professor, Georgia Research Alliance Eminent Scholar and Stephen Fleming Chair in Telecommunications, Interactive Computing

25-year anniversaries
Robert S. Abernathy
Civil & Environmental Engineering
Jeanette L. Barnett
Budget Office
Eric N. Barnhart
Georgia Tech Research Institute
Marshe H. Barton
Georgia Tech Research Institute
DeWee F. Baxter Jr.
Information Technology
Charlene W. Bayer
Georgia Tech Research Institute
Lawrence A. Bottomley
Chemistry & Biochemistry
Lynn Boyd
Georgia Tech Research Institute
John L. Carter Jr.
Georgia Tech Foundation
Vyiwe J. Consuegra
Information Technology
Larry E. Corey
Georgia Tech Research Institute
Joy W. Daniel
Applied Physiology
Beverly A. Edwards
Information Technology
Lucy E. Evans
Georgia Tech Research Institute
David R. Fenton
Georgia Tech Research Institute
Christopher B. Fowler
Georgia Tech Research Institute
Jeffrey Gurumine
Mathematics
Elias N. Gyrisis
Electronic & Computer Engineering
Marc Gutscholke
Industrial & Systems Engineering
L. Lemar Geist
Georgia Tech Research Institute
Holly GreenLee
Enterprise Information Institute
M. Jason Gunter
Physics, Science & Technology
Evans M. Harrell II
Science
Gerald N. Hill Jr.
Athletic Association
Carol G. Hogan
Office of the President
Glenn D. Hopkins
Georgia Tech Research Institute
Jeffery S. Hein
Chemical & Biomolecular Engineering
Claudia K. Hoff
Georgia Tech Research Institute
Rose Jacobsen
Office of the President
Kevin L. Kramperman
Georgia Tech Research Institute
Daddie B. Key
Housing
Sandra G. Kirchoffer
Georgia Tech Research Institute
Kenneth J. Kneepkens
Literature, Communication & Culture
Janet A. Lehniger
Information Technology
Jan M. Lewis
Mathematics
Robert A. Laubach
Georgia Tech Research Institute
Judith Lerie
Electrical & Computer Engineering
Andre J. Lavas
Georgia Tech Research Institute
W. Michael McCracken
David L. McDowell
Mechanical Engineering
John J. Mills
Facilities
Charles W. Mulford Jr.
Management
Dennis H. Nagao
Management
Gregory H. Nobles
Office of the Provost
Daniel J. Ortiz
Architecture
Carol W. Payne
Office of the Bursar
Mark W. Pellegrini
Georgia Tech Research Institute
Kirk E. Pennyswitt
Georgia Tech Research Institute
Mindy J. Reakstaw
Georgia Tech Research Institute
Maud R. Robinson
Capital Area Accounting
Peter H. Rogers
Mechanical Engineering
David S. Sawicki
Melanie H. Scrovnic
Georgia Tech Research Institute
D. W. Senn
Georgia Tech Research Institute
Oscar Slaughter
Housing
Cheryl O. Smith
Parking & Transportation
Lillian L. Spearman
Georgia Tech Research Institute
Emmanuel C. Stamus
Athletic Association
Perry J. Stein
Facilities
Sheehan A. Thompson
Georgia Tech Research Institute
Alvia W. Turner Jr.
Electrical & Computer Engineering
Robert T. Viduya
Information Technology
Tracy V. Wallace
Georgia Tech Research Institute
Philip D. West
Georgia Tech Research Institute
Paula M. Wilcox
Georgia Tech Research Institute

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April 14, 2008
April 15
Matthew Falkenberg from Dramatech presents a brown bag discussion on “Improv is for Everyone,” from 11:30 a.m. to 1 p.m. in room 205 of the Student Success Center. For more information, visit www.training.gatech.edu.

April 17
Literature, Communication and Culture Professor Thomas Lux presents Albert Goldbahr and Quincy Troupe, as part of Poetry at Tech, 7 p.m. in the Clary Theatre in the Bill Moore Student Success Center. For more information, visit www.poetry.gatech.edu.

Social commentary is the basis for Tony Award–winning “Urinetown: The Musical” through April 19 at 8 p.m. in the Dramatech Theatre. Tickets are $8 for faculty and $10 general admission. For more information, visit www.dramatech.org.

April 22
The Georgia Tech Symphonic Band will perform at 8 p.m. in the Ferst Center for the Arts. For more information, visit www.coa.gatech.edu.

Ongoing
The School of History, Technology and Society presents the Robert C. Williams Paper Museum exhibit “How Do They Spend It?” from April 23 to Sept. 2. Formed by Professor Gus Giebelhausen and students from HTS 4001, the exhibit examines money and images on money from 10 countries. For more information, visit www.ipst.gatech.edu.

Conferences & Lectures
April 14–17
The School of Modern Languages presents its French Speaker Series, “Encounters” with Marie “Diane.” For more information, contact Assistant Professor Stephanie Boulard at stephanie.boulard@moitlangs.gatech.edu.

April 15
University of North Carolina Professor Maurice Brookhart presents “Catalytic Transformations Incorporating C-H and Si-H Bond Activation Reactions by Metalloenzymes” as part of the Cherry Emerson seminar series, 5 p.m. in room G011 of the Molecular Science and Engineering building. For more information, visit www.chemistry.gatech.edu.

Clemson University Professor Igor Luzinov presents “Interactive Surfaces and Nanoparticles: What Responsive Polymer Grafted Layers Can Do?” from 3 to 4 p.m. in room 185 of the Love building. For more information, visit www.matecouncil.gatech.edu.

April 16
Lake Williams, creative director of frog design, presents “Crossing Boundaries in Design: The Naked Interface,” from 6 to 7 p.m. in room 1116 west of the Klaus Advanced Computing Building. For more information, visit www.coa.gatech.edu.

April 17
Leong Kong and Bummo Chung with the Center for Assistive Technology and Environmental Access (CATEA) present “Neuroscience and Rehabilitation Engineering,” from 8:30 a.m. to 9:30 a.m. at the center. For more information, visit www.catea.org.

April 21
Michigan State University Economics Professor Jay Wilson presents “Optimal Tax Remittance with Firm-Level Administrative Costs,” from 11 a.m. to 12:30 p.m. in room 136 of the Haberham building. For more information, visit www.econ.gatech.edu.

April 22, 23
Northwestern University Professor J. Fraser Stoddart presents “Mingling Art with Science,” the Peter B. Sherry Annual Lecture, 5 p.m. on April 22. On April 25 at noon, Stoddart presents “Chemistry and Molecular Nanotechnology in Tomorrow’s World.” Both lectures are in room G011 of the Molecular Science and Engineering building. For more information, visit www.chemistry.gatech.edu.

April 24
Stephen Spigle, director of the Center for Assistive Technology and Environmental Access (CATEA), presents “Assistive Technology Development: The Juggling of Stakeholders,” from 11 a.m. to noon, in the Architecture Library. For more information, visit www.coa.gatech.edu.

Massachusetts Institute of Technology Professor Jonas Peters presents “Multi-electron Transformations with First Row Metals,” 3 p.m. in room G011 of the Molecular Science and Engineering building. For more information, visit www.chemistry.gatech.edu.

April 23
The School of Modern Languages presents its French Speaker Series, “Encounters” with Marie “Diane.” For more information, contact Assistant Professor Stephanie Boulard at stephanie.boulard@moitlangs.gatech.edu.

April 24
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April 25
The Office of Organizational Development presents an update on the Institute’s Campus Master Plan and the Innovative Learning Resource Center (ILRC), from 11:45 a.m. to 1 p.m., in room 520 of the Student Center. For more information, visit www.gtaan.gatech.edu.

Miscellaneous
April 26
Online registration for 2008-2009 parking permits begins April 15, and continues through June 30. To register, visit www.applyingparking.gatech.edu. For more information, visit www.parking.gatech.edu.

April 27
Georgia Tech’s 11th Annual Earth Day Celebration, “Take Action: Code Green,” wraps up Think Green Week (April 14-18). The event will be held from 10 a.m. to 2 p.m. near Skiles. For more information, visit www.earthday.gatech.edu.

April 28
The Office of Organizational Development presents an update on the Institute’s Campus Master Plan and the Innovative Learning Resource Center (ILRC), from 11:45 a.m. to 1 p.m., in room 520 of the Student Center. For more information, visit www.gtaan.gatech.edu.