



UNIVERSITY OF MASSACHUSETTS AMHERST

28TH ANNUAL
Research Recognition
DINNER

*Wednesday, May 14, 2008
Campus Center Auditorium*



UNIVERSITY OF MASSACHUSETTS AMHERST

28TH ANNUAL
Research Recognition
DINNER

Dear Colleagues,

The level of research, scholarship, and creative performance on campus continues to climb each year. Stories of path-breaking discoveries, academic achievements, and national recognition are daily news. In short, excellence has become the norm. We are fortunate to have in our midst a great number of leaders, innovators, and educators who have set the bar for excellence in their fields. Many of you have commented that a unique culture of collaboration exists here, which has enabled achievements beyond the reach of individuals. As a result of the persistent effort and cooperation among our tremendously talented faculty members, the campus has achieved wide recognition for leadership in science, technology, and the humanities. Tonight, we honor some of those faculty members who, even among so many talented peers, have attained an exceptional level of distinction.

We welcome you to tonight's 28th Annual Research Recognition Dinner. Please join us in celebrating the accomplishments of this year's most outstanding faculty researchers and scholars.

Handwritten signature of Charlena Seymour in black ink.

Charlena Seymour
Provost and
Senior Vice Chancellor for
Academic Affairs

Handwritten signature of Paul Kostecki in black ink.

Paul Kostecki
Vice Provost for Research

28TH ANNUAL
Research Recognition
DINNER

PROGRAM OF EVENTS

WELCOME AND OPENING REMARKS

PAUL KOSTECKI, VICE PROVOST FOR RESEARCH

CHANCELLOR'S REMARKS

THOMAS W. COLE, JR., CHANCELLOR

PROVOST'S REMARKS

CHARLENA SEYMOUR, PROVOST AND SENIOR VICE CHANCELLOR FOR ACADEMIC AFFAIRS

RESEARCH HIGHLIGHTS

PAUL KOSTECKI

PRESENTATION OF FACULTY AWARDS

PATENT RECOGNITION AWARDS

SAMUEL F. CONTI FACULTY FELLOWSHIPS

DISTINGUISHED AND ENDOWED FACULTY

CLOSING REMARKS

PAUL KOSTECKI

FACULTY AWARDS

2007-2008

PATENT RECOGNITION AWARDS

An award program sponsored by the Vice Provost for Research and the Office of Commercial Ventures and Intellectual Property to acknowledge faculty inventors.

PATENTS ISSUED 2007



Micah Adler
(Computer Science)
*Probabilistic Packet
Marking*



Thomas H. Boyle
posthumously
(Plant, Soil and Insect Sciences)
Cactaceae Plant Named "Harmony"
and *Cactaceae Plant Named "Elsie"*



Thom Kendall

Wayne P. Burluson
(Electrical and
Computer Engineering)
*Circuit For Differential
Current Sensing with
Reduced Static Power*



Thom Kendall

E. Bryan Coughlin
(Polymer Science and Engineering)
Cross-Linked Polycyclooctene



Susan L. Cumberledge
(Biochemistry and Molecular Biology)
*Secreted Frizzled Related Protein, SFRP,
Fragments and Methods of Use Thereof*

PATENTS ISSUED 2007 (CONTINUED)



Thom Kendall



Thom Kendall



Thom Kendall

Israel Koren, C. Mani Krishna, Csaba Andras Moritz

(Electrical and Computer Engineering) *Reducing Processor Energy Consumption Using Compile-Time Information*



Thom Kendall



Thom Kendall

Thomas P. Russell
(Polymer Science and
Engineering)

Mark T. Tuominen
(Physics)

Andrei Ursache, not pictured
(Physics)
Nanofabrication

Thomas P. Russell
(Polymer Science and
Engineering)

Mark T. Tuominen
(Physics)

Nanocylinder Arrays

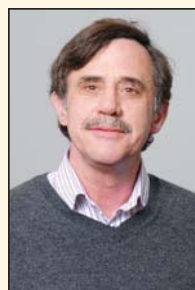
Lloyd Semprevivo
(Veterinary and Animal
Sciences)

*Lipoglycan Compositions
and Methods of Treating
Parasitic Infections*

MILESTONE AWARD – 5TH ISSUED PATENT



Thomas H. Boyle
posthumously
(Plant, Insect and Soil Sciences)
Cactaceae Plant Named “Elsie”



Thom Kendall

Thomas P. Russell
(Polymer Science and
Engineering)
Nanocylinder Arrays

SAMUEL F. CONTI FACULTY FELLOWSHIPS

A co-investment program of the campus Deans and the Vice Provost for Research honoring faculty from across the campus for outstanding accomplishments and potential for continued excellence in research and scholarly or creative activity. This is a prestigious research award given by the campus that enables faculty members to pursue their passion.



Thom Kendall

Daniel R. Anderson
(Psychology)



Thom Kendall

Nancy R. Folbre
(Economics)



Thom Kendall

Donald F. Towsley
(Computer Science)

DISTINGUISHED AND ENDOWED FACULTY

Awarded by the Board of Trustees upon recommendation of the Campus. Named and Endowed Faculty are recognized for outstanding national or international contributions in research, teaching and/or public service.



Thom Kendall

George M. Langford
(Dean, College of Natural
Sciences and Mathematics)
Distinguished Professor of
Biology



Thom Kendall

Joel W. Martin
(Dean, College of
Humanities and Fine Arts)
Distinguished Professor
of History



Thom Kendall

John J. McCarthy
(Linguistics)
Distinguished Professor

FACULTY RECOGNITIONS

2007-2008

ARMSTRONG FUND FOR SCIENCE

An internal grant made possible through a bequest from John and Elizabeth Armstrong and intended for faculty members with aggressive research visions. The research should represent a new initiative: either a bold, new line of research, or the application of prior research to a field that has no precedent for it.

Yeonhwa Park (Food Science) *Molecular Mechanism of Bone Formation
By Conjugated Linoleic Acid in Bone Marrow Stem Cells*

AWARDS FOR OUTSTANDING ACCOMPLISHMENT IN RESEARCH AND CREATIVE ACTIVITY

Sponsored by the Office of the Chancellor and Office of the Provost and presented at the third annual Faculty Convocation in September 2007. The recipients are faculty members recommended by their peers in recognition of achievements and initiatives bringing national and international renown to UMass Amherst.

John J. Clement (Teacher Education and
Curriculum Studies)

Eric A. Decker (Food Science)

Walter B. Denny (Art)

Nancy Folbre (Economics)

Patty S. Freedson (Kinesiology)

Jeffrey W. Holmes (Music and Dance)

Sabina Murray (English)

James J. Watkins (Polymer Science and
Engineering)

CREATIVE ECONOMY FUND

Sponsored by the Office of the President to promote initiatives which support the contributions of the arts, humanities, and social sciences to the social and cultural fabric of the Commonwealth of Massachusetts and thus to the overall strength of its economy.

Joel Martin (Humanities and Fine Arts)
*Benchmarking SouthCoast and Pioneer Valley
Creative Economies*

Peggy Schwartz (Music and Dance)
Dance in Three Stages

CVIP TECHNOLOGY DEVELOPMENT GRANT

Sponsored by the Office of the President and managed by the UMass System's Office of Commercial Ventures and Intellectual Property, recognizes faculty who take technology invented on campus to the next level of commercialization.

Kevin Fu (Computer Science)
Zero-Power Telemetry for Implantable Medical Devices

George W. Huber (Chemical Engineering)
Green Gasoline from Catalytic Fast Pyrolysis of Lignocellulosic Biomass

DISTINGUISHED FACULTY LECTURERS

The Distinguished Faculty Lecture Series sponsored by the Office of the Chancellor and Office of the Provost honors individual faculty members and celebrates the value of academic excellence. Faculty members chosen for the series receive the Chancellor's Medal which is the highest honor bestowed on individuals for exemplary and extraordinary service to the University.

Ben S. Branch (Finance and Operations Management) *If Markets Aren't Efficient, Why Aren't You Getting Rich?*

Stephen G. Sireci (Educational Policy, Research and Administration) *Are Education Tests Inherently Evil?*

Sara Lennox (Languages, Literatures and Cultures) *Claiming Blackness in Germany*

H. Martin Wobst (Anthropology)
An Archaeological Look at Us

FACULTY RESEARCH/HEALEY ENDOWMENT GRANTS

Offered under the Office of the Vice Provost for Research with matching support from schools, colleges and departments, this internal grant program was established to enhance the development of research and creative activities on campus.

Marc Achermann (Physics) *Ultrafast Carrier Dynamics in Organic Photovoltaic Materials*

Barry Braun (Kinesiology) *Optimizing Exercise to Oppose Insulin Resistance and Prevent/Manage Type-2 Diabetes*

Sofiya Alhassan (Kinesiology) *The Preschool Structured Outdoor Playtime Trial*

John Burand (Plant, Soil, and Insect Sciences) *Differential Hz-SV Viral Gene Expression in Tissues of Infected Helicoverpa Zea Insects*

Harry Bermudez (Polymer Science and Engineering) *Dynamic Interfaces To Control Cell Motility*

Michelle DaCosta (Plant, Soil, and Insect Sciences) *Physiological Responses Associated with Low Temperature Tolerance for Perennial Ryegrass*

David Boutt (Geosciences) *Influence of Anthropogenic Steam-stage Fluctuations on Groundwater-Surfacewater Interactions*

Matthew Davidson (Psychology) *The Effects of Physical Activity on Cognitive Abilities Across Development*

Sylvia Brandt (Resource Economics) *What Determines Household Health Investment? The Case of Childhood Asthma in A Low-Income Urban Area*

FACULTY RESEARCH/HEALEY ENDOWMENT GRANTS (CONTINUED)

Jane Degenhardt (English) *Embodying Islam: “Turning Turk” and Christian Resistance on the Early Modern Stage*

Gregory Grason (Polymer Science and Engineering) *Soft Sphere Packing: Towards a Theory of Structured Amphiphile Self-Assembly*

Ruth Jennison (English) *The Zukofsky Era: Modernity, Margins and the Avant-Garde*

Jesse Mager (Veterinary and Animal Sciences) *Conditional Deletion of Yin-Tang 1 in the Male Germline*

Margaret Pierce (Student Development and Pupil Personnel Services) *When It Just Doesn't Add Up: Examining the Manifestation of Math Difficulty Among Fifth and Sixth Graders with Learning Disabilities*

Sally Powers (Psychology) *Pilot Study of a New Method of Assessing Long-term Functioning of Hypothalamic-pituitary-adrenal Axis (HPA) Functioning*

Erik Rosenfeldt (Civil and Environmental Engineering) *Regenerating Spent Zeolites Used to Remove Endocrine Disrupting Compounds from Drinking Water with UV and UV/H₂O₂ Processes*

Elizabeth Selkirk (Linguistics) *Intonation in Black and White Varieties of American English*

Lynmarie Thompson (Chemistry) *Mechanisms of Transmembrane Transport: ATP Binding and Hydrolysis by the E. coli Methionine Transporter*

Rui Wang (Computer Science) *Real-time Image Synthesis Using Pre-captured Illumination Datasets*

Wilmore Webley (Microbiology) *Elucidating the Role of Chlamydia in the Initiation of Neonatal Asthma*

Qian Yu (Geosciences) *Estimating Carbon Flux from Terrestrial Landscape to Coastal Water Using Remote Sensing Technology and Watershed Modeling*

PUBLIC SERVICE ENDOWMENT GRANTS

Offered under the Office of the Vice Provost for Research and intended to serve as an internal university source of funds to enhance the public service mission of the University.

Robert Maloy, Sharon Edwards, Ruth-Ellen Verock-O'Loughlin (Teacher Education and Curriculum Studies) *4MALITY (4th Grade MCAS Active Learning Intelligent Tutoring System)*

Erin Baker (Mechanical and Industrial Engineering) *Decision Support For the Hitchcock Center Sustainable Building Demonstration Project*

RESEARCH LEADERSHIP IN ACTION GRANTS

Sponsored by the Vice Provost for Research, supports the development of sponsored activities through the hosting of high-profile annual events providing opportunities for collaboration with external partners.

Sonia E. Alvarez (Political Science) *Interrogating the Civil Society Agenda*

David Buchanan and Lisa Wexler (Public Health) *Post-colonial Prospects for Indigenous Circumpolar Peoples*

Wayne Burleson (Electrical and Computer Engineering) *Integrated Circuits and Systems Science Contract Review*

Sarina J. Ergas (Civil and Environmental Engineering) *2008 North American Membrane Research Conference*

Massimo V. Fischetti (Electrical and Computer Engineering) *12th International Workshop on Computational Electronics*

Michael Henson (Chemical Engineering) *First Annual Conference on Cellulosic Biofuels*

Bernie D. Jones (Legal Studies) *The Future of Equality in the Workplace: Women and the Opt-Out Revolution*

Ventura R. Perez (Anthropology) *Landscapes of Violence: Conflict and Trauma Through Time*

SCIENCE AND TECHNOLOGY INITIATIVES FUND

Sponsored by the Office of the President to support campus and multi-campus initiatives that strengthen the University's research and development bases, deepen ties with Massachusetts industry and research institutions, leverage external resources, and contribute to economic growth in the Commonwealth.

John Collura (Civil and Environmental Engineering) *University Collaborative for Intelligent Transportation Systems*

Dennis Goeckel (Electrical and Computer Engineering) *UMass Amherst Wireless Center for Excellence*

George Langford (Dean, College of Natural Sciences and Mathematics); **Samuel Black** (Veterinary and Animal Sciences); and **Paul Kostecki** (Vice Provost for Research) *UMass Institute for Stem Cell Research and Regenerative Medicine*

Brian Levine; Prashant Shenoy (Computer Science) *Massachusetts Center for Networked Sensing in Challenged Environments*

T. J. Mountziaris (Chemical Engineering) *UMass NanoMedicine Institute*

PREVIOUS SAMUEL F. CONTI FACULTY FELLOWSHIP AWARDEES

Established in 1981 and sponsored by the Office of the Vice Provost for Research in an effort to encourage, reward, and recognize outstanding accomplishments of faculty in graduate education, research and scholarly attainment.

2007

W. Bruce Croft, Computer Science
Naomi R. Gerstel, Sociology
Nikolay V. Prokofiev, Physics

2006

Salvatore Macchia, Music and Dance
Peter A. Monson, Chemical Engineering
Margaret Speas, Linguistics

2005

James K. Boyce, Economics
Michael J. Maroney, Chemistry
Maria A. Tymoczko, Comparative
Literature

2004

Stephen Clingman, English
H. Henning Winter, Chemical
Engineering
R. Thomas Zoeller, Biology

2003

Joseph Donohue, English
Vincent M. Rotello, Chemistry
Daniel H. Schaubert, Electrical and
Computer Engineering

2002

Rachel Keen Clifton, Psychology
Lila M. Gierasch, Biochemistry
and Molecular Biology
Michael F. Malone, Chemical
Engineering
Stephen Nissenbaum, History

2001

Thomas P. Russell, Polymer Science
and Engineering
Christopher L. Woodcock, Biology
George N. Wade, Psychology

2000

William E. Bemis, Biology
Todd K. Fuller, Natural Resources
Conservation
Thomas J. McCarthy, Polymer Science
and Engineering
Richard Yarde, Art

1999

Charles E. Clifton, Jr., Psychology
Angelika Kratzer, Linguistics
Edward M. Riseman, Computer Science
Lawrence M. Schwartz, Biology

1998

Paul R. Cohen, Computer Sciences
Michael F. Doherty, Chemical Engineering
Barbara A. Osborne, Veterinary and
Animal Sciences

1997

John J. McCarthy, Linguistics
Murugappan Muthukumar, Polymer
Science and Engineering
Calvin T. Swift, Electrical and
Computer Engineering

PREVIOUS SAMUEL F. CONTI FACULTY FELLOWSHIP AWARDEES (CONTINUED)

1996

Lynne Rudder Baker, Philosophy
Eduardo H.C. Cattani, Mathematics
and Statistics
Rodney K. Murphey, Molecular
and Cellular Biology

1995

Leila Ahmed, Women's Studies Program
Robert E. McIntosh, Electrical and
Computer Engineering
David A. Tirrell, Polymer Science and
Engineering

1994

Eric M. Beekman, Germanic
Languages and Literatures
Maurille J. Fournier, Biochemistry
and Molecular Biology
Shaw Ling Hsu, Polymer Science
and Engineering
Donald E. Kroodsmma, Biology
Sally I. Powers, Psychology

1993

Lori A. Clarke, Computer Science
Peter Elbow, English
Lyn Frazier, Linguistics
Robert B. Hallock, Physics
and Astronomy
Allen E. Ivey, Education

1992

Susan Tufts Fiske, Psychology
Robert Mallery, Art
Gerald W. McFarland, History
Lynn Margulis, Botany
Robert A. Zimmermann,
Biochemistry and Molecular Biology

1991

Raymond S. Bradley, Geology and
Geography
Richard J. Farris, Polymer Science
and Engineering
Keith Rayner, Psychology
Elisabeth O. Selkirk, Linguistics
Robert Stern, Music and Dance

1990

Yvonne Y. Haddad, History
William M. Irvine, Physics and
Astronomy
Arnold L. Rosenberg, Computer
and Information Science

1989

Louis Carpino, Chemistry
James C. W. Chien, Polymer Science
and Engineering
Anna Nagurney, General Business
and Finance
Thomas Roeper, Linguistics

1988

David A. Hoffman, Mathematics
and Statistics
Stephen E. Haggerty, Geology
Sheldon Goldman, Political Science
Katherine V. Fite, Psychology
Julio M. Ottino, Chemical
Engineering

1987

Margaret Barr Bigelow, Botany
John F. Donoghue, Physics and
Astronomy
Kathy Swaim, English

PREVIOUS SAMUEL F. CONTI FACULTY FELLOWSHIP AWARDEES (CONTINUED)

1986

David Porter, English
Edwin S. Williams, Linguistics
Robert R. Holmes, Chemistry
James M. Douglas, Chemical
Engineering

1985

Paul Mariani, English
Julius Lester, Afro-American Studies
Peter K. Hepler, Botany
Samuel Bowles, Economics

1984

Edward R. Harrison, Physics and
Astronomy
William J. MacKnight, Polymer
Science and Engineering
Robert J. Ackermann, Philosophy
Peter Rossi, Sociology

1983

Seymour Epstein, Psychology
Frank Karasz, Polymer Science and
Engineering
Arthur F. Kinney, English
Robert W. Lenz, Chemical Engineering
Alice Rossi, Sociology
George M. Wardlaw, Art

1982

Emmon Bach, Linguistics
John Brandts, Chemistry
Vincent Dethier, Zoology
Archibald Lewis, History
Roger Porter, Polymer Science and
Engineering
Jack Keil Wolf, Electrical and
Computer Engineering

1981

Michael A. Arbib, Computer
and Information Science
Bronislaw M. Honigberg, Zoology
Stephen B. Oates, History
Barbara H. Partee, Linguistics
Richard S. Stein, Chemistry
James Tate, English



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