# MINUTES OF THE MEETING OF THE MICHIGAN STATE UNIVERSITY BOARD OF TRUSTEES

#### December 14, 2012

President Simon called the meeting of the Board of Trustees to order at 9:30 a.m. in the Board Room.

Trustees present: Dianne Byrum, Brian Breslin, Joel Ferguson, Melanie Foster, Mitch Lyons, Faylene Owen, George Perles and Diann Woodard (via phone).

University officers present: President Simon, Provost Wilcox, Vice President Poston, Secretary Beekman, Vice President and General Counsel Noto, Vice Presidents Burnham, Groves, Hsu, and Swain, Acting Vice President Maybank, and Senior Advisor and Director Granberry Russell. Faculty liaisons present: William Anderson, Sue Carter, Deb Moriarty and John Powell. Student liaisons present: Stefan Fletcher, Kelcey Gapske, Martin Garcia, and Evan Martinak.

All actions taken were by unanimous vote of the Trustees present, unless otherwise noted.

- 1. On a motion by Trustee Foster, supported by Trustee Byrum, the **BOARD VOTED to approve** the agenda.
- 2. On a motion by Trustee Breslin, supported by Trustee Byrum, the **BOARD VOTED to approve** the minutes of the Board meeting of October 26, 2012.
- Board of Trustees Award Presentations

Trustees Ferguson and Foster presented the Board of Trustees Award to the following students:

- Clare Eagle—Major: Accounting; Member of the Honors College;
   4.0 GPA
- 2. Alexa Garrison—Major: Human Biology; Member of the Honors College; 4.0 GPA
- 3. Ashley Potter—Major: Fisheries and Wildlife; Member of the Honors College; 4.0 GPA
- 4. Benjamin Wilson—Major: Accounting; 4.0 GPA

Trustees Ferguson and Foster acknowledged the Board of Trustees Award recipients who were not able to attend:

- 5. Brett Ekblad—Major: Advertising; 4.0 GPA
- 6. Matthew Witmer—Major: Mechanical Engineering; 4.0 GPA

#### 4. President's Report

President Simon presented the following report to the Board.

#### A. Commencement

Today and tomorrow the University will honor its graduates and their families in three commencement ceremonies. This afternoon at the advanced degree commencement ceremony, Thomas Vilsack, Secretary of the U.S. Department of Agriculture, will address the advanced degree candidates and will receive an honorary doctorate of laws. Also, Ian Cowx, director of Hull International Fisheries Institute at University of Hull, United Kingdom, will receive an honorary doctorate of science.

Tomorrow, undergraduate degree recipients will be recognized at two ceremonies. Michigan Governor Rick Snyder will address the graduates and receive an honorary doctorate of laws. Johnetta Cole, Director of the Smithsonian National Museum of African Art, will receive an honorary doctorate of human letters. Also, Christopher Somerville, Director of Energy Biosciences Institute, the world's first research institution solely dedicated to the new field of energy bioscience, will receive an honorary doctorate of science.

#### B. Eli and Edythe Broad Art Museum Opening

Nearly 6,000 people visited the Eli and Edythe Broad Art Museum at Michigan State University during the dedication weekend. Grand opening festivities included Museum tours, a public talk with Eli Broad and the Museum's Pritzker Prize-winning architect Zaha Hadid, live concerts, discussions with Broad Museum staff, art-making activities and more. East Lansing-based Anderson Economic Group projects that visitors to the Museum will spend more than \$5.6 million in the region during the Museum's first year of operations.

#### C. Higher Education Excellence in Diversity Award

MSU recently received the first Higher Education Excellence in Diversity award from INSIGHT Into Diversity magazine, the oldest and largest diversity-focused publication in higher education. As a winner of the HEED award, a national award honoring U.S. colleges and universities that demonstrate an outstanding commitment to diversity and inclusion, MSU will be featured along with 47 other recipients in INSIGHT Into Diversity magazine's December 2012 issue.

#### D. Study Abroad

MSU is one of only four higher education institutions in the nation to rank in the top 10 for study abroad participation and international student enrollment according to the Institute of International Education's annual Open Doors Report released November 12, 2012. MSU is the only Big Ten school to hold the distinction. For the eighth year in a row, MSU sent more students abroad than any other public university with 2,577 students studying overseas in 2010-11.

#### E. Supply Chain Management Top in Nation

MSU's supply chain management program continues setting the national standard, according to U.S. News & World Report's latest rankings of America's Best Colleges. For the second year in a row, the magazine ranked MSU's supply chain specialty for undergraduate students number one, ahead of the program at the Massachusetts Institute of Technology.

#### F. MSU Researchers Named AAAS Fellows

This year, four MSU researchers were named AAAS Fellows by the American Association for the Advancement of Science. This national recognition is awarded to researchers for their efforts to advance science or its applications. During the last four years, 24 MSU faculty members have been named as AAAS Fellows. MSU's Fellows this year are: Jerry Dodgson, professor in the Department of Microbiology and Molecular Genetics; Kay Holecamp, professor in the Department of Zoology; G. Mark Voit, professor in the Department of Physics and Astronomy; and Jonathan Walton, professor and director of the Great Lakes Bioenergy Research Center.

#### G. School of Journalism and WKAR

On election night last month the School of Journalism and WKAR created a newsroom where several hundred JSchool students participated in election coverage that included an array of reporting outlets for posting a wide variety of stories. The experience included on-air time for the students at WKAR TV and radio throughout the evening.

#### H. Spartan Line

The Spartan Line provides a unique travel experience for Chicagoarea MSU Alumni to return to East Lansing via a graphically wrapped green and white MSU train car for special events and occasions. The Spartan Line transports MSU alumni via the historic Amtrak Blue Water "Spartan Line." The inaugural event took place on the weekend of November 16, 2012 and included nearly 60 participants. Organizers are currently planning a second event for spring 2013.

#### I. Kathy Lindahl Retirement

Kathy Lindahl's leadership at MSU and nationally along with her ability to see the bigger picture has enabled her to move a broad set of interests, ideas, and collaborations toward success and change. She has served at Michigan State University since 1978 and in her current role as Assistant Vice President for Finance and Operations for the past 13 years. Kathy will retire from MSU at the end of the month. President Simon thanked her for her 34 years of service to MSU and wished her well in her future endeavors.

#### J. Gary Seevers Resolution

Trustee Breslin presented a Board of Trustees resolution honoring Gary Seevers. (Appendix A)

#### K. Fred Poston Resolution

Trustee Owen presented a Board of Trustees resolution honoring Vice President Poston. (Appendix B)

5. There was no Public Participation on Issues Germane to the Agenda.

#### 6. Personnel Actions

Provost Wilcox presented the following personnel actions:

Cooper, Melanie M, AY—Lappan-Phillips Professor in Mathematics and Science Education, Departments of Chemistry; Teacher Education; CREATE for STEM Institute, \$172,000, with Tenure, effective January 1, 2013.

The following promotions include the award of tenure and are recommend to be effective January 1, 2013.

Gouveia, Saulo R., promotion to Associate Professor, Department of Romance and Classical Studies.

Dworkin, Ian Michael, promotion to Associate Professor, Department of Zoology.

Stamm, Michael R., promotion to Associate Professor, Department of History.

Trustee Owen **moved to approve** the recommendations, with support from Trustee Woodard.

#### THE BOARD VOTED to approve the recommendations.

President Simon presented the following personnel actions:

It is recommended that the position title of Vice President for Finance and Operations and Treasurer be changed to Executive Vice President for Administrative Services, and that all applicable policy documents be revised to reflect the change in title, effective January 1, 2013.

It is recommended that the position title of Provost and Vice President for Academic Affairs be changed to Provost and Executive Vice President for Academic Affairs, and that all applicable policy documents be revised to reflect the change in title, effective December 14, 2012.

Wilcox, Kim A., AN—Provost and Vice President for Academic Affairs, for a change in title to Provost and Executive Vice President for Academic Affairs, effective December 14, 2012.

It is recommended that the title Associate Vice President for Finance and Chief Financial Officer be changed to Vice President for Finance and Treasurer, and that all applicable policy documents be revised to reflect the change in title, effective January 1, 2013.

Haas, Mark P., AN—Associate Vice President for Finance and Chief Financial Officer, for a change in title to Vice President for Finance and Treasurer, effective January 1, 2013.

It is recommended that the title Assistant Vice President for Residential and Hospitality Services be changed to Vice President for Auxiliary Enterprises, and that all applicable policy documents be revised to reflect the change in title, effective January 1, 2013.

Gore, Venceslaus G., AN—Assistant Vice President for Residential and Hospitality Services, for a change in title to Vice President for Auxiliary Enterprises, effective January 1, 2013.

It is recommended that the title Assistant Vice President for Physical Plant be changed to Vice President for Strategic Infrastructure Planning and Facilities, and that all applicable policy documents be revised to reflect the change in title, effective January 1, 2013.

Flinn, Ronald T., AN—Assistant Vice President for Physical Plant, for a change in title to Vice President for Strategic Infrastructure Planning and Facilities, effective January 1, 2013.

Trustee Owen **moved to approve** the recommendations, supported by Trustee Ferguson.

THE BOARD VOTED to approve the recommendations.

#### 7. Gifts, Grants, and Contracts

Vice President Hsu presented the Gifts, Grants, and Contracts Report for the period of August 22, 2012 through November 27, 2012. The report is a compilation of 859 Gifts, Grants and Contracts plus 72 Consignment/Non-Cash Gifts, with a total value of \$139,651,871.

Trustee Ferguson **moved to approve** the report, supported by Trustee Owen.

THE BOARD VOTED to approve the Gifts, Grants, and Contracts Report.

Vice President Gray introduced Dr. Chris Adami, Professor of Microbiology and Molecular Genetics, as well as Professor of Physics and Astronomy. Dr. Adami made a presentation to the Board on using evolution to create and understand complex systems. (Appendix C)

#### 8. Finance Committee

Trustee Breslin presented the Trustee Finance Committee Report and recommendations.

#### A. Bank Account Delegation

It was recommended that the Board of Trustees adopt the following resolutions, to be given effect January 1, 2013.

That each of the President, the Vice President for Finance and Treasurer, and the Controller, individually, is authorized and empowered to establish and maintain bank accounts as necessary for the orderly conduct of the business of Michigan State University and to designate signatories for the accounts, to act by actual, facsimile and electronic signatures; and

That the President and Vice President for Finance and Treasurer may delegate the authority hereby granted, with such limitations and controls as they find necessary and appropriate; and

That the authority and power conferred by this action shall vest in any individual appointed as successor to the President, Vice President for Finance and Treasurer or Controller, and in any successor positions to the Vice President for Finance and Treasurer or Controller and in any individuals appointed to these successor positions; and

That this action supersedes all prior Board actions relating to authority concerning bank accounts and account signatories.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

#### B. Investment Authority

It was recommended to the Board of Trustees that the following action be taken:

Effective January 1, 2013, each of the President and the Vice President for Finance and Treasurer, individually, is authorized and empowered to invest the assets of Michigan State University; to purchase, sell, exchange, lend, or transfer all forms of securities and other investments, including rights or options to acquire the

same, directly or through instructions to brokers or other agents; to execute and deliver any necessary documents in connection with such transactions; and to delegate such authority to others. The authority and power conferred by this action shall vest in any individual appointed as successor to the President or Vice President for Finance and Treasurer, and in any successor position or positions to the Vice President for Finance and Treasurer and in any individuals appointed to these successor positions.

This action supersedes all prior Board actions relating to investment authority.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Woodard.

THE BOARD VOTED to approve the recommendation.

#### C. Revised Investment Policy

It was recommended that the Board of Trustees amend its Investment Policy, including the Statement of Investment Objectives for Michigan State University's Common Investment Fund and the Statement of Investment Objectives for Michigan State University's Pooled Cash Fund.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

D. Appointment of External Investment Advisory Subcommittee Member

It was recommended that the Board of Trustees appoint Scott Eston as an external member of the Investment Advisory Subcommittee.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Woodard.

THE BOARD VOTED to approve the recommendation.

#### E. New Investment Managers

It was recommended that the Board of Trustees select RS Investments, Canyon Capital Advisors LLC, Senator Investment

Group LP, and Halcyon Asset Management LLC as investment managers.

Trustee Breslin **moved to approve** the recommendations, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendations.

F. Authorization to Plan—Well House 32—New Campus Well

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Well House 32—New Campus Well.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Lyons.

THE BOARD VOTED to approve the recommendation.

G. Authorization to Plan—Transportation Services—New Fuel Station

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Transportation Services—New Fuel Station.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Ferguson.

THE BOARD VOTED to approve the recommendation.

H. Authorization to Plan—Facility for Rare Isotope Beams—25 Mega Watt Electrical Duct Bank

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Facility for Rare Isotope Beams—25 Mega Watt Electrical Duct Bank.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

 Authorization to Plan—Administration Building—Second Floor Renovations It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Hannah Administration Building—Second Floor Renovations.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Woodard.

THE BOARD VOTED to approve the recommendation.

J. Authorization to Plan—Former Michigan State Police Post— Renovations to Buildings G and H

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Former Michigan State Police Post—Renovations to Buildings G and H.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

K. Project Approval—Authorization to Proceed—Landon Hall—Dining Renovation, Building Life Safety, and Accessibility (scope adjustment)

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Landon Hall—Dining Renovation, Building Life Safety, and Accessibility to include various code-required enhancements.

It was recommended that the Board of Trustees authorize the Administration to proceed with this project and that it approve a budget of \$17,600,000.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

L. Project Approval—Authorization to Proceed—Steam Distribution— Replace Steam Tunnel from Library to IM Circle

It was recommended that the Board of Trustees authorize the Administration to plan for the project entitled Steam Distribution—Replace Steam Tunnel from Library to IM Circle and that it approve a budget of \$17,125,000.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Woodard.

THE BOARD VOTED to approve the recommendation.

M. Project Approval—Authorization to Proceed—Anthony Hall— Energy Conservation Measures

It was recommended that the Board of Trustees authorize the Administration to proceed with the project entitled Anthony Hall—Energy Conservation Measures, and that it approve a budget of \$7,000,000.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

N. Project Approval –Authorization to Proceed—MSU Union—North Neighborhood Center and Multicultural Center

It was recommended that the Board of Trustees authorize the Administration to proceed with the project entitled North Union—North Neighborhood Engagement Center and Multicultural Center, and that it approve a budget of \$13,000,000.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Byrum.

THE BOARD VOTED to approve the recommendation.

O. Project Approval—Authorization to Proceed—Auditorium—
Alterations to Fairchild Theatre (budget and scope adjustment)

It was recommended that the Board of Trustees authorize the Administration to amend the project scope to include the addition of air conditioning for the project entitled Auditorium—Alterations to Fairchild Theatre.

It was recommended that the Board of Trustees increase the budget from \$18,000,000 to \$20,000,000 for this project.

It was recommended that the Board of Trustees grant a zoning variance for this project, allowing a footprint change within a protected landscape area.

Trustee Breslin **moved to approve** the recommendations, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendations.

P. Bid and Contract Award (budget reduction)—Plant Biology— North Wing Lab Exhaust System Replacement

It was recommended that the Board of Trustees authorize the Administration to award a contract in the amount of \$713,800 to Laux Construction, and that it reduce the budget from \$1,500,000 to \$1,200,000 for the project entitled Plant Biology—North Wing Lab Exhaust System Replacement.

Trustee Breslin **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

#### 9. Policy Committee

Trustee Byrum presented the Trustee Policy Committee Report and recommendations.

A. Enforcement of Ordinance 37.00 (Wildlife)

It was recommended to the Board of Trustees that the enforcement of the prohibition against fishing contained in University Ordinance 37.01 be suspended for a period of three years along the north bank of the Red Cedar, but only to the extent that such fishing is conducted in designated areas and in accordance with guidelines issued by the Vice President and Secretary of the Board of Trustees. A campus map designating the boundaries within which fishing will be permitted is included. (Appendix D)

Trustee Byrum **moved to approve** the recommendation, with support from Trustee Lyons.

THE BOARD VOTED to approve the recommendation.

B. Revision of Ordinance 9.00 (Aircraft)

It was recommended that the Board of Trustees approve the modifications to University Ordinance 9.00 (Aircraft) as indicated. (Appendix E)

Trustee Byrum **moved to approve** the recommendation, with support from Trustee Owen.

#### THE BOARD VOTED to approve the recommendation.

#### C. Approval of Contract Terms

It was recommended to the Board of Trustees that it approve the execution of two research contracts with *Technova Corporation*, consistent with earlier public notice given at a Board meeting and with the "Research Contract Term Sheets" presented to the Board. (Appendix F)

It was recommended to the Board of Trustees that it approve the execution of a contract with *Biophotonic Solutions, Inc.*, consistent with earlier public notice given at a Board meeting and with the "Purchase Agreement Term Sheet" presented to the Board. (Appendix G)

Trustee Byrum **moved to approve** the recommendations, with support from Trustee Lyons.

#### THE BOARD VOTED to approve the recommendations.

#### D. Notice of Intent to Negotiate a Contract

Pursuant to State law, the Chair of the Policy Committee gave notice of the University's intent to negotiate contracts with *Turbo Ventures 2, LLC*, a limited liability company based in Michigan. Dr. Norbert H. Mueller, an Associate Professor in the Department of Mechanical Engineering, and his family own or have options to buy an ownership interest of more than one percent of the company. Dr. Mueller is also a partner in *Turbo Ventures 2, LLC*.

Pursuant to State law, the Chair of the Policy Committee gave notice of the University's intent to negotiate contracts with *Wave Motors, LLC*, a limited liability company based in Michigan. Dr. Norbert H. Mueller, an Associate Professor in the Department of Mechanical Engineering, and his family own or have options to buy an ownership interest of more than one percent of the company. Dr. Mueller is also a partner in *Wave Motors, LLC*.

#### 10. Compensation Committee

Trustee Owen presented the Trustee Compensation Committee Report.

Trustee Owen said that each year at this time the Board of Trustees considers the President's compensation, consistent with section 4a of the employment contract between President Simon and the Board. The Compensation Committee has met for that purpose.

In June of this year at the annual retreat the Board conducted an evaluation of the President. At that time, the Board conveyed to President Simon its uniform support of her leadership of Michigan State University. President Simon's leadership is recognized as exceptional both within and outside of the University and President Simon continues to excel on the established performance criteria. As a result, the Board identified the retention of President Simon as critical to the University's future.

At her request, the Board has not increased President Simon's salary since December of 2007. Every year since, she has expressed concerns about receiving a salary increase in the context of the severe economic circumstances facing the State and the University. This year is no different. President Simon has again requested that she not receive a salary increase.

The Board must, however, ensure that the compensation of the president of Michigan State University remains competitive with the compensation of presidents at peer institutions. Consistent with the University's goals regarding faculty compensation and the retention of President Simon, it is the intention of the Board to keep the total compensation of MSU's president in the mid-range among the presidents of the public universities in the Big Ten and other comparable institutions.

This year the Compensation Committee recommends to the Board of Trustees that President Simon receive an annual retention bonus. In recognition of the President's continued service and provided that she continues to serve as President through December 31, 2012, the University shall pay to the President, on or before January 31, 2013, the amount of \$100,000. Further, for each year that the President provides continuing service as president through December 31 of the year, she will receive a retention bonus of \$100,000, by no later than January 31 of the subsequent year. The Board will continue to provide President Simon with an annual salary of \$520,000 per year as established by the Board on December 7, 2007.

Finally, the Board applauds the commitment that Drs. Roy J. and Lou Anna K. Simon have made to give back to the University through their generous, regular, and substantial financial contributions, including prior salary increases. Based on their current level of cash and estate giving, the Simons are members of MSU's Wharton Society. The Simon's current

cash gifts to MSU, including gifts committed through March 2013, exceed \$1 million. They provide a tremendous example of philanthropy for Team MSU and the Spartan Community.

The Compensation Committee recommends that the above terms be incorporated into the President's employment agreement and the Chairperson of the Board of Trustees be authorized to sign an employment agreement consistent with these terms on behalf of the Board.

Trustee Owen **moved to approve** the recommendation, with support from Trustee Ferguson.

THE BOARD VOTED to approve the recommendation.

#### 11. Environmental Stewardship Report

Ms. Jennifer Battle, Assistant Director of Campus Sustainability, provided a summary of the Environmental Stewardship Report and noted that the full report is available on the MSU website:

http://www.bespartangreen.msu.edu/documents/environmental-stewardship-report-2012-final-interactive.pdf

#### 12. Trustees' Comments

Trustee Owen said that she values her meetings with the faculty liaison committee

Trustee Lyons applauded the student liaison committee members for their hard work and dedication.

Trustee Ferguson presented a resolution to Trustee Melanie Foster. (Appendix H)

Trustee Owen thanked Trustee Foster for her service to MSU.

Trustee Lyons thanked Trustee Foster for her work on behalf of MSU.

Trustee Breslin wished Trustee Foster well and thanked her for service to MSU.

Trustee Byrum thanked Trustee Foster for all of her efforts on behalf of MSU.

Trustee Woodard said that she would miss Trustee Foster's enthusiasm and wished her well.

President Simon said that she believes Trustee Foster will find many ways to continue to support MSU and thanked her for her leadership.

Trustee Foster said that it was an honor and privilege to serve on the Board of Trustees. She thanked Trustee Ferguson for his leadership as Chair. Trustee Foster thanked President Simon for her leadership and continued dedication to MSU. Trustee Foster thanked Vice President and Secretary Beekman for his support. She said that serving on the Board of Trustees has been one of the most rewarding, memorable and enriching experiences in her life. She thanked everyone for the opportunity to serve.

- 13. There was no Public Participation on Other Issues
- 14. Request to Adjourn

On a motion by Trustee Owen, supported by Trustee Ferguson, **THE BOARD VOTED to adjourn** at 11:40 a.m.

Respectfully submitted,

William R. Beekman

Secretary of the Board of Trustees

#### RESOLUTION HONORING GARY L. SEEVERS

Michigan State University Board of Trustees
December 14, 2012

The Board of Trustees of Michigan State University today extends its appreciation and gratitude to Gary L. Seevers.

As an inaugural member of the MSU Investment Advisory Subcommittee, Dr. Seevers has been a strong and valuable asset to his university.

And this truly is his university. After earning a bachelor's degree from MSU, where he was a charter member of the Honors College, he served as a county 4-H Extension agent. He then returned to his alma mater to earn masters and doctoral degrees.

After serving on the faculty of Oregon State University for two years, he joined the senior staff of the President's Council of Economic Advisers in 1970, specializing in agricultural policy. He was later named by President Richard Nixon to be one of the three members of his council, the first landgrant university economist to serve in that capacity.

In 1975 he was appointed by President Gerald Ford as one of the charter commissioners of the new Commodity Futures Trading Commission.

Since 1979 he has served in a number of capacities with Goldman, Sachs, & Co., including coheading the firm's Japan and Asia offices, as well as a senior partner in charge of its global futures business.

Dr. Seevers has brought a wealth of financial experience and investment expertise to the Board of Trustees Investment Advisory Subcommittee. In addition to serving on the Investment Advisory Subcommittee, Dr. Seevers was co-chairperson of the President's Campaign Cabinet, was a member of the Honors College Campaign Advisory Committee, and a member of the Stakeholders Advisory Council for the College of Agriculture and Natural Resources.

He has supported numerous scholarships and programs at MSU, including developing and funding the Gordon and Norma Guyer and Gary L. Seevers Chair in Natural Conservation in the College of Agriculture and Natural Resources.

It is with much respect and gratitude that the MSU Board of Trustees offers this resolution to Dr. Seevers for his willingness to share his time and expertise that contributed importantly to MSU's continuing investment success.

Joel Ferguson, Chairman

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Hylene Owen

Dianne Byrum

Brian Breslin

Melanie Foster, Vice Chairperson

George Perles

Diann Woodard

Mitch Lyons

#### RESOLUTION HONORING FRED POSTON

Michigan State University Board of Trustees
December 14, 2012

The Board of Trustees of Michigan State University today extends to Fred Poston its deep gratitude and appreciation for his exceptional service to the university as its vice president for finance and operations and treasurer.

Dr. Poston first came to MSU in 1991, serving as vice provost and dean of the College of Agriculture and Natural Resources.

In 1999 he moved to the Administration Building to be MSU's Vice President for Finance and Operations and Treasurer. In his role as vice president, Dr. Poston has led a team responsible for all matters relating to the university's finances, investments, operations and facilities.

In his time as vice president, Dr. Poston was instrumental in keeping MSU's housing costs among the lowest in the Big Ten; he oversaw \$1.5 billion worth of construction and created a cutting edge infrastructure improvement process, eliminating a decades-long backlog of infrastructure improvements.

It was on Dr. Poston's watch that MSU established itself as a national leader in sustainability and energy saving. He guided the construction of a nationally acclaimed recycling center and led the charge for a long-range energy transition plan that is now serving as the university's road map to a future in which MSU is powered by 100 percent renewable energy.

We are very grateful that Dr. Poston will continue to serve his university by returning to the College of Agriculture and Natural Resources, where he will again lead the college as dean.

A long-time advocate of the university's land-grant mission, Dr. Poston has deep roots with the agriculture community, possessing a strong awareness of the needs of that community at both the state and national levels.

It is with much respect, admiration and gratitude that the MSU Board of Trustees offers Fred Poston its best wishes for the future.

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Faylene Owen

Dianne Byrum

Brian Breslin

Melanie Foster, Vice Chairperson

George Perles

Diann Woodard

Mitch Lyons

# RESEARCH PRESENTATION

TO THE MSU BOARD OF TRUSTEES

**DECEMBER 14, 2012** 

## CHRIS ADAMI

COLLEGE OF NATURAL SCIENCE

Facilitated by the Office of the Vice President for Research and Graduate Studies

Christoph Adami is Professor of Microbiology and Molecular Genetics, as well as Professor of Physics and Astronomy, at Michigan State University. He obtained his PhD and M.A. in theoretical physics from the State University of New York at Stony Brook, as well as a Diplom in Physics from Bonn University (Germany). His main research focus is Darwinian evolution, which he studies at different levels of organization (from simple molecules to brains). He has pioneered the application of methods from information theory to the study of evolution, and designed the "Avida" system that launched the use of digital life as a tool for investigating basic questions in evolutionary biology. He wrote the textbook "Introduction to Artificial Life" (Springer, 1998), is the recipient of NASA's Exceptional Achievement Medal and a fellow of the AAAS.



# Using Evolution to Create and Understand Complex Systems

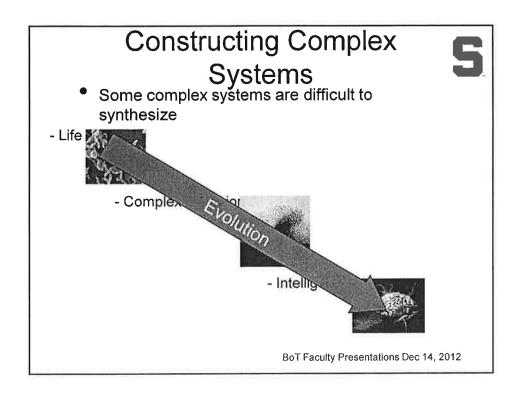
C. Adami

Microbiology & Molecular Genetics
Physics & Astronomy
BEACON Center
Michigan State University

# Understanding Complex Systems



- Standard tools:
  - identify components
  - identify connections between components
  - disable specific components and/or connections
  - probe system to study response
  - construct system



# BEACON Center for the Study of *Evolution in Action*





Dr. Richard Lenski



Dr. Charles Ofria

- \$25 million/5 years (\$50 million/10 years)
- "illuminating and harnessing the power of evolution in action to advance science and technology and benefit society"
- use biochemical and artificial forms of life to reveal fundamental biological concepts and illuminate the nath toward computational applications



## **Evolve Complex Systems**



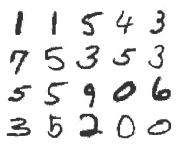
- If we can evolve complex behavioral and intelligent systems in the laboratory, we can
  - study function in meticulous detail
  - perform experiments that are difficult or impossible
    - suggest new experiments that can reveal biological function
  - discover new algorithms for behavior/intelligence

BoT Faculty Presentations Dec 14, 2012

### **Markov Brains**

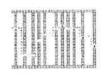


- Using a new technology developed here, we are able to evolve "artificial brains" that can
  - control complex behavior
  - recognize hand-written digits











## A Visual Cortex for



Recognition
Hand-written digit recognition was chosen by DARPA to demonstrate neuromorphic chip technology





A BEACON-sponsored research project

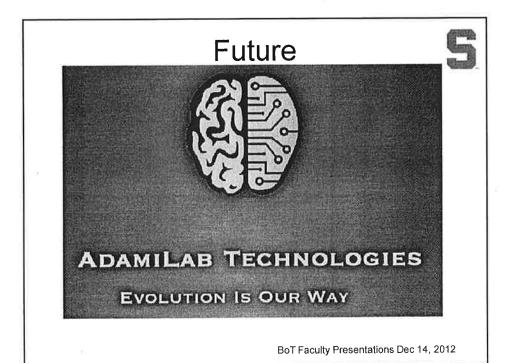
- Evolved cortex achieves 94% accuracy on 10,000 test images
- beats DARPA's result for 1,000th of cost
  - Resulting evolved networks are digital logical circuits, easily transportable to other systems

BoT Faculty Presentations Dec 14, 2012

# **Evolved Visual Cortex on** iPad™

- A group of complex evolved digital circuits recognize digits "in committee"
- Much more efficient than standard machine learning approaches
- Algorithm any individual brain uses is currently unknown



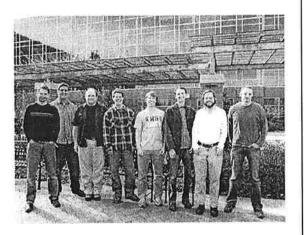


## Team

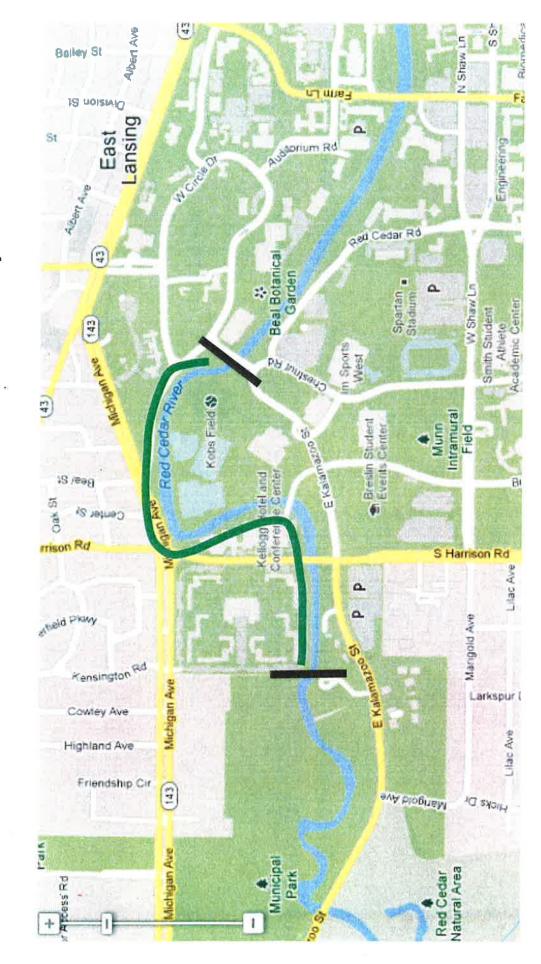
S

Dr. Arend Hintze Dr. David Knoester Dr. Bjørn Østman Randall Olson Jory Schossau David Phillips

Not depicted: Dr. Aditi Gupta Jacob Clifford Massoud Mirmomeni Faisal Tameesh



Fishing allowed in the areas as shown below in green (north end of the Red Cedar River)



#### 9.00 AIRCRAFT

- 9.01 Landing of9.02 Unmanned aircraft
- No person, except law enforcement authorities acting in the performance of their duties, shall without approval of the Police Chief and Director of Public Safety, or his/her designee, land any aircraft or depart in any aircraft, on or from property governed by the Board of Trustees.
- .02 No person shall, except in accordance with Federal Aviation Administration (FAA) regulations, operate any unmanned aircraft in the airspace above property governed by the Board of Trustees.

Enacted: September 15, 1964 Amended: December 10, 1994 Amended: April 14, 1995 Amended: December 14, 2012

#### RESEARCH CONTRACT TERM SHEET

Party:

Technova Corporation

**Contracts:** 

Sponsored research agreement

"Polymer Nanocomposites"

Term:

December 14, 2012 to November 9, 2020

**Payment Terms:** 

MSU contract eight year total: \$51,198.

**Services Provided:** 

By MSU to Technova: testing and evaluation of

thermoplastic nanocomposites for stability under

temperature

By Technova to MSU: none

Use of University Facilities/Personnel:

Use of MSU facilities/personnel by Technova provided at

prevailing rates for industrial research.

Organization Type: Incorporated Michigan-based small business.

Personnel Interest: Dr. Parviz Soroushian, a Professor in the Department of Civil and Environmental Engineering, and his family own or have options to buy an ownership interest of more than 1% of the company. Dr. Soroushian is also the president

of Technova Corporation.

#### RESEARCH CONTRACT TERM SHEET

Party:

Technova Corporation

Contracts:

Sponsored research agreement

"Polymer Nanocomposites"

Term:

December 20, 2012 to December 31, 2020

**Payment Terms:** 

MSU contract eight year total: \$23,663.

**Services Provided:** 

By MSU to Technova: testing and evaluation of

thermoplastic nanocomposites for stability under extreme

service environments.

By Technova to MSU: none

Use of University Facilities/Personnel:

Use of MSU facilities/personnel by Technova provided at

prevailing rates for industrial research.

**Organization Type:** Incorporated Michigan-based small business.

Personnel Interest: Dr. Parviz Soroushian, a Professor in the Department of

Civil and Environmental Engineering, and his family own or have options to buy an ownership interest of more than 1% of the company. Dr. Soroushian is also the president of

Technova Corporation.

#### PURCHASE AGREEMENT TERM SHEET

Party:

Biophotonic Solutions, Inc.

Contract:

Purchase of scientific equipment, namely:

Purchase: MIIPS Box 640 Custom (\$29,950)

Purchase (and installation): SLM-LC mask (\$6,000)

**Payment Terms:** 

\$35,950 to Biophotonic Solutions, Inc.

Services Provided:

By MSU to Biophotonic Solutions, Inc.: None under contemplated

agreement.

By Biophotonic Solutions, Inc. to MSU: Installation of SLM-LC mask.

Use of University Facilities/Personnel:

None

Organization Type: Michigan-based corporation

Personnel Interest: Dr. Marcos Dantus, a Professor in the Department of Chemistry, and his immediate family own or have options to buy an equity interest of more than 1% of the company. Dr. Dantus is also an officer of Biophotonic

Solutions, Inc.

#### RESOLUTION HONORING MELANIE FOSTER

Michigan State University December 14, 2012

The Board of Trustees of Michigan State University today extends a special tribute to Trustee Melanie Foster.

Trustee Foster originally served on the MSU Board of Trustees from 1991 to 1992, when she was appointed by Gov. John Engler.

In 1997 she was appointed to the Central Michigan University Board of Trustees and served until 2004. While at CMU she chaired a national presidential search and a comprehensive presidential performance review.

In 2004 Trustee Foster was elected to the MSU Board of Trustees and has served as vice chairperson for the past five years.

As a member of the MSU Board of Trustees, Trustee Foster has worked tirelessly as an advocate for all students. She played a major role in the board's efforts to keep tuition rates low, despite decreased state funding.

Trustee Foster also was instrumental in increasing the amount of financial aid available to all Spartans, levels which have risen by more than 40 percent over the last three years.

Trustee Foster is a strong advocate of Michigan State's research-intensive, land grant mission. She has actively supported many critical campus initiatives including the Facility for Rare Isotope Beams, the growth of Plant and Soil Sciences, and the Broad Art Museum.

In addition to her service on the MSU board, Trustee Foster serves on the Capital Area United Way Board. She also is a former member of the MSU Wharton Advisory Council, and the Michigan Dyslexia Association.

Trustee Foster earned a bachelor's degree in ornamental horticulture from MSU. For 15 years she was president and CEO of a commercial landscape company that she built into the nation's largest female-owned and controlled landscape firm.

For her extraordinary leadership and efforts on behalf of her university, the Michigan State University Board of Trustees extends its heartfelt thanks and sincere gratitude to Melanie Foster.

Joel L Berguson, Chairman

Faklene Oven

Dianne Byrum

Mitch Lyons

Brian Breslin

George Perles

Diann Woodard