Item: AS: A-1

COMMITTEE ON ACADEMIC AND STUDENT AFFAIRS
Thursday, October 18, 2012

SUBJECT: REQUEST FOR APPROVAL OF HONORARY DOCTORATE NOMINATIONS

PROPOSED COMMITTEE ACTION

Request for approval of the conferral of Honorary Doctorate on Michael Levine.

BACKGROUND INFORMATION

University Policy 2.3 (Honorary Doctorates) specifies that those nominated for Honorary Doctorates be recommended to the FAU Board of Trustees by the University Faculty Senate Honors and Awards Committee, the Provost and the President. One candidate is being recommended at this time.

Michael Levine has been nominated by Mohammad Ilyas, Interim Dean of the College of Engineering and Computer Science. A graduate of New York University, Mr. Levine founded several companies and has acquired more than 60 patents. In addition to being an entrepreneur and inventor, Mr. Levine is also a philanthropist. He has been involved with the College of Engineering and Computer Science since 2004, mentoring students and actively participating in several research projects with a sizable funding commitment.

IMPLEMENTATION PLAN/DATE

If approved, this Honorary Doctorate will be conferred at a future commencement ceremony.

FISCAL IMPLICATIONS

N/A.

Supporting Documentation: **Nomination materials**

Presented by: Dr. Diane Alperin, Associate Provost   **Phone: 561-297-3062**

FAU

**FLORIDA
ATLANTIC
UNIVERSITY**

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Memorandum

To: Brenda Claiborne, Provost and Chief Academic Officer

From: Mohammad Ilyas, Interim Dean

Date: July 18, 2012

Subject: Nomination for Honorary Doctorate Degree – Michael Levine

It is my pleasure to nominate Mr. Michael Levine for an honorary doctorate degree from Florida Atlantic University. Mr. Levine is truly an exceptional individual and his achievements far exceed the levels expected for this honor.

Mr. Levine received his BS degree in Mathematics from New York University in 1958. Since then he has been busy with his entrepreneurial, innovative, inventive, and philanthropic activities. Most of his inventions involve putting to use the emerging technologies for the greater good of our society. He has been awarded more than 60 US patents, and continues to add more to his portfolio. His inventions include on-screen VCR programming, water distillation, programmable thermostat, and the first microprocessor-based desktop computer.

As a highly accomplished individual, Mr. Levine is frequently invited to speak. He is actively participating in several research projects in our College and has been mentoring our students. He has sponsored several research projects in our College with a sizable funding commitment. His innovative ideas and inventive approach motivate our students and spurs their intellectual curiosity. His relationship with our College has been very fruitful.

It is amazing to see Dr. Levine's many accomplishments. He is highly deserving of this honor and is strongly recommended for it. I have attached his CV and a letter of endorsement from the Chair of the Department of Computer and Electrical Engineering and Computer Science.

If you need additional information, please feel free to contact me. Thank you for your consideration.

April 12, 2012

Dr. Mohammad Ilyas
Interim Dean, College of Engineering and Computer Science

SUBJECT: Nomination of Michael Levine for Honorary PhD Degree at Florida Atlantic University

It is my great honor to recommend Michael Levine for the Honorary PhD Degree from our College. Michael is well-known entrepreneur, inventor, and philanthropist. He received BS degree in Mathematics from New York University in 1958.

Michael has been a great technical leader and visionary who founded several successful companies, has over 60 US patents in the areas of technology-based products such as computers and consumer electronics, and is frequent invited speaker at engineering and business colleges.

In his long and successful career, Michael had many great design achievements including co-design of Atlas ICBM Digital Guidance Computer in 1959, Fopen Real-Time Radar Processor in 1965, Desktop PC in 1967, Display Terminals in 1970, and Programmable Thermostat in 1975.

Many of Michael's patents were implemented and today they are commercial products used by millions people worldwide. They include: on-screen VCR programming, electronic interactive TV guide, digital video recorder, several environmental patents, a low-energy water distillation method, microprocessor-controlled programmable thermostats, and many

others. One of the patents, water distillation method was part of a FAU project in which our faculty and students built a water installation system and submitted for the worldwide Inventor Hall of Fame competition. Our students became finalists at this competition, which was a great success.

At several occasions Michael and his companies SmartVCR, LLC and LastBestChance, LLC provided funding to support research in the areas of mobile systems, healthcare technologies, and various campus applications. In the past several years, he provided total of $850,000 to support research in our College, and he is committed to provide additional $600,000 in the next few years. In our College, we created a research lab with the name "Innovation and Entrepreneurship Laboratory, sponsored by Michael Levine", in which we initiated seven research projects with seven faculty and 9 graduate and undergraduate students, who are presently working on exciting research projects in this area. Michael is very much involved in these projects providing leadership and working with our faculty and students. His professional experience, innovative spirit, and technical knowledge are crucial for the success of the projects.

I highly support the nomination of Michael Levine for Honorary PhD Degree in Electrical and Computer Engineering, and recommend that Honorary PhD Degree be presented to him during 2012 Commencements Ceremony.

Borko Furht
Chairman & Professor

Michael R. Levine

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E-mail: mlevine@levwater.com

Summary

- Entrepreneur and inventor extraordinaire, philanthropist
- Issued over 60 US patents in areas of technology-based products such as computers and consumer electronics including:
  - the desktop PC,
  - the on-screen VCR programming feature adopted worldwide
  - the electronic interactive TV guide
  - the digital video recorder
  - architect of the microprocessor
  - environmental patents:
  - a low-energy vacuum water distillation method that uses waste heat from electrical power plants to distil water
  - microprocessor-controlled programmable thermostats for home climate control the heat pump defrost method adopted by most manufacturers
- Founder of several successful companies
- Frequent invited speaker at both engineering and business colleges, including Florida Atlantic University, University of Maryland, Johns Hopkins University, University of Michigan, and Eastern Michigan University
- Speaker and Panelist at the University of Michigan's Growth Capital Symposium
- Offered position as IBM research fellow based on submitted Master's Thesis on a computer that can add and multiply without using carries (declined)
- World-class champion bridge player and 2012 Grand Life Master
- Pilot, cyclist, and sailor
- Sponsored and collaborated in scientific research with Florida Atlantic University, University of Michigan, and Weizmann Institute

Design Achievements

Codesigned Atlas ICBM Digital Guidance Computer 1959, American Bosch Arma Corporation

Fopen (Real Time Side-Looking Radar Processor) 1965, Conductron

Desktop PC 1967, Sycor

First Microprocessor 1967, Sycor

Display Terminals 1970, Ann Arbor Terminals

Programmable Thermostat 1975, Quad 6/Honeywell

Education

BS   Mathematics, New York University, June 1958, New York, NY
Graduate studies, Courant Institute of Mathematical Sciences at NYU
Master's Thesis (degree not completed):

> M. R. Levine, "A set of algorithms which allow the use of modular arithmetic in ultra high speed computers," Master's Thesis, New York University, October 1961.

Academic Experience

Florida Atlantic University, Boca Raton, FL
Student Mentor   2011 – 2012
- Advisor for CAMPUS 2020, a project for campus automation

Student Mentor   2004 – 2008
- Guided students to finals of Collegiate Inventors Hall of Fame Award for invention of a low-energy vacuum water distillation system, resulting in two patents

Membership in Scientific and Professional Societies

American Mathematical Society
Institute of Electrical and Electronics Engineers (IEEE)

Related Employment History

1989 –   **Smart VCR Limited Partnership**
2012   Ann Arbor, MI
       General Partner

- Researched water distillation that resulted in two patents
- Sponsored water distillation project at Florida Atlantic University
- Licensed all VCR manufacturers that used on-screen programming
- Licensed GEMSTAR for interactive TV guide

1988 –   **Michael R. Levine Associates**
1992   Ann Arbor, MI
       Founder

- Developed HVAC patents for Honeywell

1984 – **Quad 6** (sold to Honeywell)
1988 Ann Arbor, MI
Founder & President

- Manufacturer of the Magicstat programmable thermostat, the only check-rated thermostat by Consumer Reports

1977 – **Ann Arbor Leasing**
1988 Ann Arbor, MI
Founder

- Financed 800 Domino's Pizza stores, creating 20,00 permanent jobs

1970 – **Ann Arbor Terminals**
1978 Ann Arbor, MI
Founder & President

- Manufactured CRT displays and computer terminall used at airports for flight arrival and departure displays and for original ATM machines
- Manufactured first Cyrillic, Arabic, and Katakana CRT displays

1967 – **Sycor**
1969 Ann Arbor, MI
Principal Engineer

- Invented and later issued patent for Source Data Entry Terminal, the first desktop microprocessor-based personal computer and the microprocessor itself

1964 – **Conductron**
1967 Ann Arbor, MI
Member of Technical Staff

- Develope motion compensation system for keeping antenna straight as required for airborne side-looking radar system
- Designed real-time digital image processing for side-looking radar
- Inspired paper published as a proof and extension of concept for a simple method for computing the true least squares polynomial and removing rounding error: M. Goldberg

1962 – **Bendix Aerospace**
1964 Ann Arbor, MI
Engineer

- Developed radar-guided missile system interface between computer and guidance system

1959 – **American Bosch Arma Corporation, Arma Division**
1962 Garden City, NY
Associate Engineer, Computer Development Section

- Engaged in modular arithmetic research and in the logical design of pre-prototype modular arithmetic unit
- Assisted in the logical design of Arma's flexible computer
- Originator of several multi-bit division and multiplication algorithms for both conventional, binary, and modular arithmetic units
- Co-author of: "New Techniques in Residual Arithmetic", published in Conference Proceedings, 4th National Convention on Military Electronics, Washington, D.C., June 1960
- Co-author of technical report: "1960 Summary Report on Advanced Computer Research in Modular Arithmetic", January 1961
- Co-author of technical report: "Modular Arithmetic: An Utra – High Speed Computation Technique for Airborne Digital Computers", presented at 1961 Air Force/Aerospace Symposium, Los Angeles, California
- Co-author of technical paper: "A Division Algorithm for High Speed Serial Computers"

U.S. Patents

Patent #	Filing Year	Description
US20020010594	2001	Method of payment for a healthcare service
US20040055866	2003	Desalinization still
US20060157335	2005	Low energy vacuum distillation method and apparatus
US20060231379	2005	Low energy vacuum distillation system using waste heat from water ...
US20060266042	2005	Submerged condenser for steam power plant
US3760375	1971	SOURCE DATA ENTRY TERMINAL
US3821731	1973	Graphics display system and method
US3836888	1972	Variable message length data acquisition and retrieval system and ...
US4117469	1976	Computer assisted display processor having memory sharing by the ...
US4172555	1978	Adaptive electronic thermostat
US4206872	1977	Electronic thermostat
US4314665	1980	Electronic thermostat
US4335847	1980	Electronic thermostat with repetitive operation cycle
US4356962	1980	Thermostat with adaptive operating cycle
US4361273	1981	Electronic humidity control
US4408711	1982	Thermostat with adaptive operating cycle
US4410132	1982	Thermostat with dead zone seeking servo action
US4469274	1982	Electronic thermostat with repetitive operation cycle
US4531064	1984	Electronic thermostat with repetitive operation cycle
US4595139	1984	Control for humidifier of the type used with thermostatically ...
US4606401	1985	Programmable thermostat
US4627245	1985	De-icing thermostat for air conditioners
US4635708	1984	Electronic thermostat for heating and cooling system
US4669654	1986	Electronic programmable thermostat
US4683939	1986	Electronic thermostat with selectable mode to control heating ...
US4685614	1985	Analog to digital conversion employing the system clock of a ...
US4695942	1986	Manual switch for altering a parameter in opposite directions ...
US4730941	1986	Temperature range display device for electronic thermostat
US4733719	1986	Electronic thermostat with a stored program of desired ...

Michael R. Levine

Patent #	Filing Year	Description
US4741476	1987	Digital electronic thermostat with correction for triac self heating
US4751961	1986	Electronic programmable thermostat
US4759498	1987	Thermostatic control without temperature droop using duty cycle ...
US4817705	1987	Thermostatic control without temperature droop using duty cycle ...
US4829457	1987	Overload protection circuit for solid state switch
US4829458	1987	External constant specification in a digital electronic system
US4841458	1987	Analog to digital conversion by measuring the ratio of RC time ...
US4847825	1987	Method and apparatus for signaling the volume level of reproducing ...
US4864513	1987	Potentiometer setting detection by measuring the ratio of RC time ...
US4908713	1988	VCR Programmer
US4910966	1988	Heat pump with single exterior temperature sensor
US4916912	1988	Heat pump with adaptive frost determination function
US4951473	1988	Heat pump defrosting operation
US4963994	1990	VCR programmer
US5123046	1990	VCR with cable tuner control
US5365282	1993	Television system module with remote control code determination
US5373330	1993	Remote-controlled VCR using an associated TV for audible feedback
US5414756	1994	Telephonically programmable apparatus
US5420647	1993	T.V. viewing and recording system
US5508815	1995	Schedule display system for video recorder programming
US5568272	1995	Schedule display system for video recorder programming
US5692214	1994	System for unattended recording of video programs by remote ...
US5701383	1995	Video time-shifting apparatus
US5748716	1996	Telephonically programmable apparatus
US5915068	1996	VCR programmer
US5988078	1997	Method and apparatus for receiving customized television ...
US7431806	2005	Low energy vacuum distillation method and apparatus
US7597785	2008	Low energy vacuum distillation method and apparatus
USD288785	1984	Enclosure for an electronic thermostat or the like
USRE32960	1985	Electronic thermostat

U.S. Patents (cont'd)

U.S. Patents (cont'd)		
Patent #	Filing Year	Description
USRE35954	1996	VCR with cable tuner control
USRE42026	1996	Television system module with remote control code determination