

OAKLAND UNIVERSITY

C O M M E N C E M E N T



SCHOOL OF ENGINEERING
AND COMPUTER SCIENCE



The motto of Oakland University, "*Sequir Virtute E Canoscenza*," which is incorporated in its seal, has a distinguished origin, Canto XXVI, l. 120, of Dante's *Inferno*.

These are the final words of Ulysses' great speech to his men urging them to sail on and on in pursuit of knowledge and experience of the world—even beyond the pillars of Hercules, traditionally the frontier and limit of legitimate exploration.

This is the three-line stanza:

*Considerate la vostra semenza
Fatti non foste a viver come bruti
Ma per seguir virtute e canoscenza*

*Consider your birth
You were not made to live like brutes
But to follow courage and knowledge*

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

June 4, 1994

1:30 p.m.

Howard C. Baldwin Memorial Pavilion
Oakland University
Rochester, Michigan

ORDER OF CEREMONY

Processional

Richard E. Haskell, *Marshal*
Hoda Abdel-Aty-Zohdy, *Deputy Marshal*
David E. Boddy, *Deputy Marshal*

*The audience is requested to stand and remain standing during
the processional and the recessional.*

Welcome

Michael P. Polis
Dean, School of Engineering and Computer Science

Commencement Address

Louis R. Ross
*Vice Chairman and Chief Technical Officer
Ford Motor Company*

Presentation of Honors

Presentation of Special Awards

Awarding of Degrees

Sandra Packard, *President, Oakland University*

Presentation of Candidates for the Ph.D. Degree

Presentation of Candidates for the M.S. Degree

Presentation of Candidates for the B.S.E. and B.S. Degrees

Salutation

David M. Martin, *Graduating Senior*

Alumni Welcome

James B. Getchell, *B.S., 1967*
Reliability Manager for Corvette, General Motors Corporation

Valediction

Sandra Packard

Recessional

Richard Haskell

Reception

*The Oakland University Alumni Association cordially invites graduates, guests and
members of the faculty and staff to the reception immediately following the ceremony
in the Oakland Tent.*

*Processional and recessional music by
Andrea and Brian Moon, Trumpet and Keyboard*

ON ACADEMIC REGALIA

An edifying note contributed by a certain anonymous doctor of philosophy.

On at least two solemn occasions during the academic calendar—spring and fall commencement—the faculty of the university publicly displays its full academic regalia and participates in the liturgy of processional and recessional, that curious coming and going that symbolizes the ceremony of commencement. The purposes of commencement are well known, but the reasons for the peculiar garb of the celebrants and their odd order of march are often as obscure to the audience as they are, in fact, to the faculty itself. This note may serve to explain academic dress and the professional pecking order it costumes.

Contemporary academics are descendants of clerical schoolmen in the universities of medieval Europe. Like the clergy, members of the bench and bar, and other learned professions, medieval scholars were clothed in heavy robes to stay warm in unheated stone buildings. Like all members of a hierarchical society, the medieval faculties rejoiced in visible insignia of rank. These outward signs of accomplishment and authority were tailored into the robes. Although the need for such voluminous garments to keep the scholar from freezing is long past, the use of them as

emblems of dignity remains. You will observe that all caps and gowns worn by our faculty are black, with certain disturbing exceptions. Black was the color adopted by mutual agreement among American universities at the end of the 19th century. In Europe each university has its own distinctive gown, varying in color and cut from all others. A European academic assemblage is a far gaudier occasion than its counterpart in America. Recently, certain universities in this country rashly broke the agreement and authorized robes in their own colors: for example, the crimson of Harvard and the green of Dartmouth may be seen in our ranks. This unsuitable spontaneity has been frowned on by sister institutions, yet the mavericks not only persist in their madness, but gain adherents to their ranks with each passing year.

There are three basic academic degrees: the baccalaureate or bachelor's degree, the master's degree, and the doctorate. A special style of robe is prescribed for each. The bachelor's gown is sparsely cut, neat, but a bit skimpy and unadorned, as befits apprentices. The master's gown is still simple, but fuller, sports a sleeve of extraordinary design impossible to describe, and has a

hood draped from the shoulders down the back. Once used to keep the frost from the tonsured heads of medieval clerks, the hood now is solely a badge of a degree of scholarly achievement. The master's hood is small and narrow, but displays the colors of the institution that awarded the degree. If you knew the colors of American universities, you could easily identify whence came our masters. The doctoral robe is the most handsome of academic raiment. Generous of cut, of fine aristocratic stuff, it is faced with velvet and emblazoned with velvet chevrons on the ample sleeves. You will note that most of the velvet facings and chevrons are black, but that some are of other colors. According to personal taste, the doctor may display the color of his or her doctoral degree on the sleeves and facings: light blue for education, pink for music, apricot for nursing, orange for engineering, and many more. The royal blue of the Doctor of Philosophy (Ph.D.) is the most commonly seen in liberal arts institutions such as Oakland. The doctor's hood is the most elegant of all academic appurtenances. Large and graceful, it is lined in satin with the colors of the university that awarded the degree and is bordered with the color of the degree itself. Most academic costumes include the square cap called a mortarboard; the doctor's tassel may be either black or gold — tassels of all other degrees are black and stringy.

To instructed eyes, the order of march in the processional and recessional reveals the standing of individuals in the institution's formal hierarchy. In the processional the order of entrance into the hall is, quite fittingly, from most junior to most senior. The baccalaureate candidates enter first, followed successively by the masters and doctoral candidates with the whole separated from the faculty by a decent interval. In the faculty order, the instructors precede the assistant professors who in turn are followed by the associate professors. The august full professors bring up the rear. After a respectful distance come the deans who in turn are separated by a significant space from the awful majesty of the platform party, the president, the vice president, and the members of the board of trustees. All remain standing until the board is seated. After the ceremony, the order of recessional is the reverse of the processional. The greatest dignitaries stream out of the hall first, with the artfully organized ranks of priority wallowing in their wake.

It is hoped that these notes may make more intelligible the spectacle you are witnessing today. A discerning intelligence may detect in it many clues to an understanding of the academic profession as it confronts the ambiguities of the future with ancient wisdom and dignified confidence.

DEGREES AWARDED

December 1993

DOCTOR OF PHILOSOPHY

Systems Engineering

Farouk Mohamed Zanaty

Dissertation: *Optimization of Structured and Unstructured Linear Uncertain Multivariable Control Systems: Robust Stability and Robust Performance*

MASTER OF SCIENCE

Computer Science and Engineering

Kenneth Eugene Barclay

Douglas Brian Barnhart

Heidi Kristine Beale

Shivakuma C. Bettadapura

Wendy A. December

Tammy A. Hebert

Radhika Kannan

Christi Ann Loehr

Donald Masselli

Richard Garrett Moore

David H. Ong

Douglas Kevin Price

Pradeepan Srinivasan

Kevin Phillip Sudy

Tzuu-Tao Weng

Computer and Information Science

Gordon T. Sefchik

Electrical and Computer Engineering

Anju Passi Mahendroo

Stephen L. Miller

Jacqueline Denise Price

Sandro Scaccia

Stuart Bryan Slack

Aaron Roger VanDyke

Mechanical Engineering

Steven Gerard Corrion

David Daniel Delikat

Michael Robert DiNunzio

Matthew Scott Fistler

Daniel Thomas Griffin

Brian Paul McLaughlin

John Paul Shallal

David A. Southwick

Systems Engineering

James C. Chang

Sun-Mook Kang

Ananda Padmanabhan

Robert James Schaller

BACHELOR OF SCIENCE

Computer Science

Jeffrey Andrew Balagna

Steven Reed Fleck

Robert M. Lupa, Jr.

Michael James McCanney

David Edward Naumowicz

Brian Joseph Schwartz

Ryan August Shannon

BACHELOR OF SCIENCE IN ENGINEERING

Computer Engineering

Kevin James Verbrugge

Electrical Engineering

Daniel Scott Albert

Scott Avery Boulanger

Stephen R. Diem

Eric James Frelick

Douglas Wayne Kohl

Tamara Kay Majkowski

David Jeffrey Martin

David Scott Schneider

Robert Zacharias
Michael Daniel Zavinsky

Mechanical Engineering

Gerard Frank Adams
April A. Copp
Scott Alwyn Dawson
Kenneth C. English
Lisa Ann Fallon
Robert James Giannone
Scott Allen Gordon
Mark S. Hardy
William James Hipol
Wissam Ibri
Jennifer Kathleen Jennings
Carolynn Ann Kennedy
Cynthia Marie Leahy
Kenneth Andrew Lilly
Nora Ann Lyszak

Paul Bryan McCormick
Andrew G. McGuire
David T. Moore
Dean Curtis Paavola
Alyce Marie Polulak
Susan Ann Pousho
Donald A. Scott
Gary Matthew Sobek
Erika Lorraine Stephens
Brian Walter Tucker
Gordon Rodney Tullock
Eve Amber Vitale Warnez
Adam Clarence Windeler
Scott Alan Zimmerman

Systems Engineering

Robert Alan Frederick
John Patrick Wink

CANDIDATES FOR DEGREES

April 1994

DOCTOR OF PHILOSOPHY

Systems Engineering

James Melvin Slicker

Dissertation: *Robust Control Design Using M-Exclusion in the Complex Plane with Applications to Vehicle Launch*

James C. Smith

Dissertation: *Parametric Control of Dynamic Systems Via Neural Networks*

MASTER OF SCIENCE

Computer Science and Engineering

Craig Randall Ashley

Lisa Margaret Bozeman

Robert Lee Hodge

Sonja Yvette Hunter

James Allen Johnson

Surendra S. Khambete

Mark E. Kuschel

Li Lin

Brian P. Minnebo

Michael David Mozariwskyj

Brian Stephen Pavlik

Mark Vincent Portelli

Jennie Zhiren Qin

Taruvai N. Subramaniam

Min Sway-Tin

Christopher John Teslak

Pattabhi R. Yarlagadda

Kenneth Ning-Yan Yee

Electrical and Computer Engineering

William A. Basile

Shui-Hang Chou

Jeffrey R. Exell

Scott Wayne Faust

Tyrone Patrick Gallagher

Scott Michael Gelber

Mark Allen Kretz

Robert Mariani

Thomas Richard Mueller

Lisa Marie Paganini

Kristen Marie Siemen

Samir K. Taylor

Mechanical Engineering

Douglas Ernst Boddy

Jeffrey Paul Carroll

Stephen M. Clancy

William Joseph Foor

Jennifer Ann Hitchcock

Christopher John Kobus

Thomas David Novitsky

Deirdre Pettigrew

Christopher John Waites

Patrick John Wolak

Rongzhi Zhao

Systems Engineering

Connie S. Harris

Keith Alan Larson

Tricia Marie Olszewski

Matthew James Reisner

Frances M Ring

BACHELOR OF SCIENCE

Computer Science

David Louis Czereszka

Brian C. Dolinar

David William Hopkins

James Paul Pasek

Barbara Ann Perkowski

Lisa Marie Schoonover

Stanley James Wallace

Engineering Chemistry

Steven J. Andreski

David Michael Headley

John Vincent Purcell

Engineering Physics

Michael Gerard Schall

**BACHELOR OF
SCIENCE IN
ENGINEERING****Computer Engineering**

Amal Adnan Abbasi

Mark Victor Bartoski

Paul H. Kahler

Brian Joseph MacCallumMhor

Brenda Ruth Roberts

Alicia R. Sopala

Florence Jean Stiles

Michael K. Sutherland

Electrical Engineering

Jeffrey Edwin Bailey

Kurt L. Belloli

John Christopher Busch

Jeffrey James Chapp

Dean Edward Condron

Michael John Durak

Ibrahim Hassan Elzhenni

Stephen Wayne Greene

Mohammad Zahirul Haque

James Paul Harrison

Mike A. Hichme

Jim Edward Hielscher

Michael F. Hornung III

Paul Michael Jones

Mark Anthony Kaganac

Paul H. Kahler

Leif Lion Magowan

Patrick E. Mancier

Rebecca Noel Smart

Alicia R. Sopala

Mechanical Engineering

Jeffrey N. Berger

Eric Lorenzo Burnett

Scott K. Cheney

Kenneth James Correia

Michael Patrick Duddy

Kevin Michael Dyer

John Joseph Eberle

Cynthia Marie Finnigan

Kenneth H. Frye

Marites Gusilatar

Arthur Paul Gustina

Edward Keith Harshman

Gretchen Lynn Hart

Joseph James Joyce

Scott M. Kocit'a

Jeffrey J. Lind

Kevin Matthew Maloney

Steven Raymond Muylaert

Kenneth James Parker

Steven Patrick Ragan

Robert Anthony Rechul

Michael Edward Reibling

Jeffrey William Ronne

Michael Raymond Schihl

Jeffrey William VanNorman

Systems Engineering

Laurent Fella II

Paul Michael Jones

David Michael Martin

Jeffrey Alan Powell

David Leonard Wisz

ABOUT HONORS AND AWARDS

On the occasion of commencement, the university offers special recognition to those students who have attained outstanding levels of academic achievement and service.

Students who have demonstrated superior performance in the courses of their major subject area are awarded Departmental Honors. The faculty of the School of Engineering and Computer Science has elected several graduating seniors to receive Departmental Honors in engineering or in computer science. They are identified by red cords worn over their academic regalia.

The University Senate of Oakland University has established three levels of University Honors to recognize superior academic performance in all subject areas. Students who have completed at least 62 credits of study at Oakland University and whose cumulative grade point average ranges between 3.60 and 3.74 graduate *cum laude*. A student who has earned a grade point average between 3.75 and 3.89 graduates *magna cum laude*. Students attaining the highest academic level, grade point averages of 3.90, and above, graduate *summa cum laude*. Students who have earned University Honors wear gold cords over their academic regalia.

Additionally, the faculty of the School of Engineering and Computer Science has created several awards to honor graduating seniors who have distinguished themselves by truly outstanding scholarship in engineering studies, by outstanding technical development toward the engineering profession and by exemplary service to the school. These special awards are marked by the presentation of certificates and prizes to the recipients and also by the engraving of the recipients' names on permanent commemorative plaques in Dodge Hall of Engineering.

Membership in the Golden Key National Honor Society, an academic honors organization, is indicated by a purple cord with white tassels worn over academic regalia. The faculty extends most hearty congratulations to all of the students receiving honors and awards at this commencement exercise.

Membership in Tau Beta Pi, the National Engineering Honor Society, is indicated by a brown cord worn over academic regalia.

Membership in Eta Kappa Nu, the National Electrical Engineering Honor Society, is indicated by a royal blue cord worn over academic regalia.

HONORS AWARDED

December 1993

UNIVERSITY HONORS

Cum Laude

William James Hipol
Kenneth Andrew Lilly
Susan Ann Pousho
Ryan August Shannon
Eve Amber Vitale Warnez

SCHOOL HONORS

Computer Science

Robert M. Lupa, Jr.
David Edward Naumowicz
Ryan August Shannon

Electrical Engineering

Scott Avery Boulanger

Mechanical Engineering

Kenneth C. English
Robert James Giannone
William James Hipol
Carolynn Ann Kennedy
Kenneth Andrew Lilly
Paul Bryan McCormick
Dean Curtis Paavola
Susan Ann Pousho
Eve Amber Vitale Warnez

HONORS AWARDED

April 1994

UNIVERSITY HONORS

Summa Cum Laude

David Michael Martin
John Vincent Purcell

Magna Cum Laude

Eric Lorenzo Burnett
Kenneth James Correia
James Paul Harrison
Edward Keith Harshman
Mark Anthony Kaganac
Kenneth James Parker

SCHOOL HONORS

Computer Engineering

Florence Jean Stiles

Computer Science

Brian C. Dolinar
David William Hopkins

Electrical Engineering

Jeffrey Edwin Bailey
Kurt L. Belloli
Jeffrey James Chapp
Ibrahim Hassan Elzhenni
James Paul Harrison
Mike A. Hichme
Paul Michael Jones
Mark Anthony Kaganac

Engineering Chemistry

John Vincent Purcell

Mechanical Engineering

Eric Lorenzo Burnett
Kenneth James Correia
Arthur Paul Gustina
Edward Keith Harshman
Scott M. Kociba
Kenneth James Parker
Steven Patrick Ragan

Systems Engineering

Paul Michael Jones
David Michael Martin

These lists were current at the time of printing this commencement program. Changes occurring too late to be included are reflected on the diplomas and transcripts of graduates.

HONORS COLLEGE

The Honors College has been established by the faculty of the College of Arts and Sciences for highly motivated students who wish an unusually challenging undergraduate education. It provides a specially designed general education and additional requirements in conjunction with a departmental major in the College of Arts and Sciences or in one of the professional schools.

The graduates listed below have completed programs in both Honors College and the School of Engineering and Computer Science and are identified by a white cord worn over academic regalia.

APRIL 1994

James Paul Harrison
John Vincent Purcell

ALFRED G. AND MATILDA R. WILSON AWARDS

The Alfred G. and Matilda R. Wilson Awards are presented annually to an Oakland University senior man and woman, respectively, who have made outstanding contributions as scholars, leaders, and responsible citizens to the Oakland University community. The 1994 recipient of the Alfred G. Wilson Award is a senior in the School of Engineering and Computer Science:

David Michael Martin

SPECIAL AWARDS

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Award for Exceptional Achievement

Awarded annually to the graduating senior in the School of Engineering and Computer Science who, in the judgment of the faculty, has achieved the highest level of scholastic excellence.

David Michael Martin

Award for Academic Achievement

Awarded annually to the graduating senior in the School of Engineering and Computer Science who, in the judgment of the faculty, has demonstrated an outstanding level of academic performance.

Jennifer Jiashan Chen

Award for Service

Awarded annually to the graduating senior in the School of Engineering and Computer Service who, in the judgment of the faculty, has rendered the greatest service to the School.

Susan Ann Pousho

Award for Professional Development

Awarded annually to the graduating senior in the School of Engineering and Computer Science who, in the judgment of the faculty, has demonstrated the greatest technical development in his/her studies and shown an outstanding measure of individual initiative in connection with a project.

Stephen John Fiondo

BOARD OF VISITORS

William G. Agnew, Ph.D.
Consultant

Hadi A. Akeel, Ph.D.
FANUC Robotics Corporation

Allen A. Alper, Ph.D.
GTE Products Corporation

Ronald R. Boltz
Chrysler Corporation

Herbert H. Dobbs, Ph.D.
Consultant

Lamont Eltinge, Ph.D.
Consultant

Robert W. Hildebrand
Rockwell International Auto

Alfred F. Houchens, Ph.D.
GM Technical Center

Sidney D. Jeffe
Schlegel Corporation

William L. Kath
Ford Motor Company

Ronald P. Knockeart
Siemens Automotive

Rober T. Lentz, Ph.D.
General Dynamics Services Company

Ronald L. McIntyre
Detroit Edison

Kenneth Oscar, Ph.D.
U.S. Army TACOM

James Sutton
SSOE, Inc.

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Oakland University's School of Engineering and Computer Science offers instruction leading to the Bachelor of Science in Engineering (B.S.E.); with majors in computer, electrical, mechanical and systems engineering and the Bachelor of Science (B.S.), with a major in computer science. Programs leading to the Bachelor of Science degree in engineering chemistry and engineering physics are offered jointly with Oakland's College of Arts and Sciences. The school also offers graduate programs leading to masters and doctoral degrees.

The school consists of three departments and the Center for Robotics and Advanced Automation (CRAA). The school is of medium size, with 1,200 undergraduate and graduate students and features an outstanding faculty – dedicated to classroom instruction of the highest quality as well as to research in their fields of specialization. Its size permits close student/faculty interaction, small classes and individualized attention.

Undergraduate engineering and computer science programs at Oakland University place an emphasis on a well-rounded education characterized by:

- A broad-based perspective of engineering and computer science that stresses creative thinking – preparation for solving complex technological problems.
- Relevant laboratory instruction as an integral part of course work – giving a balance between theory and practice.
- Integration of computer instruction and utilization throughout the curricula.
- Design and creative development as a central activity of engineering and computer science.
- A social and humanistic perspective through a comprehensive program of general education.

All academic programs at Oakland University are accredited by the North Central Association of Colleges and Schools (NCA). Besides the NCA accreditation, the undergraduate programs in computer, electrical, mechanical and systems engineering are accredited by the Accreditation Board for Engineering and Technology (ABET), and the computer science program by the Computing Sciences Accreditation Board (CSAB).

Graduate programs at the masters level are offered in electrical and computer engineering, mechanical engineering, systems engineering, and computer science and engineering.

The Doctor of Philosophy degree is offered in systems engineering. The goal of the doctoral program is to prepare engineers who have a broad competence that crosses the boundaries of traditional engineering disciplines and who are capable of dealing with complex large-scale problems.

OAKLAND UNIVERSITY BOARD OF TRUSTEES

James A. Sharp, Jr. *Chairman*

Stephan Sharf, *Vice Chairman*

Larry W. Chunovich

Andrea L. Fischer

David T. Fischer

David Handleman

Rex E. Schlaybaugh, Jr.

Howard F. Sims

Ex officio

Sandra Packard, *President of Oakland University*

