

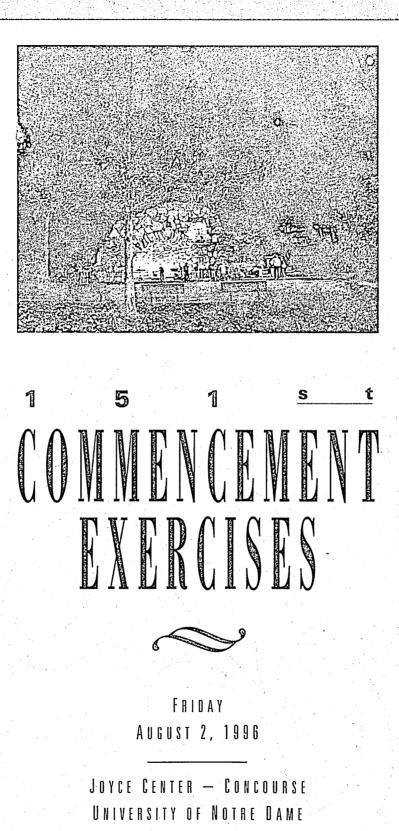
# T 55 T <u>S</u> COMMENCEMENT EXERCISES



FRIDAY, August 2, 1996

JOYCE CENTER UNIVERSITY OF NOTRE DAME NOTRE DAME, INDIANA

OFFICIAL



NOTRE DAME, INDIANA

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### **Events of the Day**

Friday, August 2, 1996

#### **BACCALAUREATE MASS**

- 8:30 a.m. Degree Candidates and Faculty assemble for Academic Procession to the Basilica of the Sacred Heart: the second floor corridor of the Main Building
- 8:40 a.m. Procession Begins. (Please note: If the weather is inclement, the procession will be canceled. Proceed directly to the Basilica.)
- 9:00 a.m. Concelebrated Baccalaureate Mass: the Basilica of the Sacred Heart

Principal Celebrant and Homilist Rev. Thomas E. Blantz, C.S.C. Professor, Department of History University of Notre Dame

#### Concelebrants

Priests who will be receiving degrees, priest members of the faculty, and priest members of the Congregation of the Holy Cross

#### COMMENCEMENT EXERCISES CONFERRAL OF DEGREES

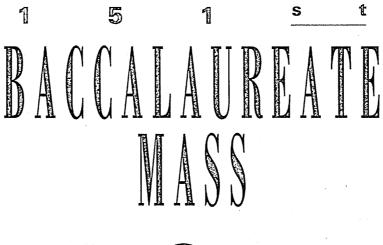
10:25 a.m. Degree Candidates and Faculty assemble in the Auxiliary Gym of the Joyce Center

10:50 a.m. Academic Procession begins

- 11:00 a.m. Conferring of Degrees Ceremony in the Joyce Center Concourse
- Presiding Officer Nathan O. Hatch, Ph.D. Provost of the University
- Commencement Address Phillip R. Sloan, Ph.D. Professor, Program of Liberal Studies University of Notre Dame

(Guests are requested to be seated in the Concourse of the Joyce Center by 10:50 a.m.)

Reception immediately following the ceremony for graduates and guests: Joyce Center - North Dome





FRIDAY, AUGUST 2, 1996 9 A.M.\_est

BASILICA OF THE SACRED HEART University of Notre Dame Notre Damë, Indiana Z

Principal Celebrant and Homilist Rev. Thomas Blantz, C.S.C.

> Organist Andrew McShane

CantorPsalmistTimothy Schorn '95 Ph.D.Boreta Singleton '96 M.A.

The Quintessence Brass

BACCALAUBEATE MASS

### **Opening Rites**

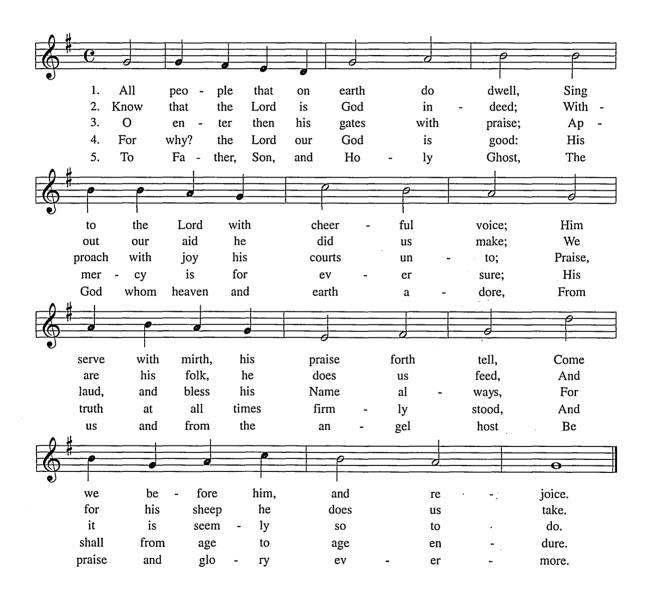
#### ACADEMIC PROCESSION

Trumpet Voluntary ......Stanley

### **OPENING HYMN**

All People That on Earth Do Dwell

tune: Old 100th



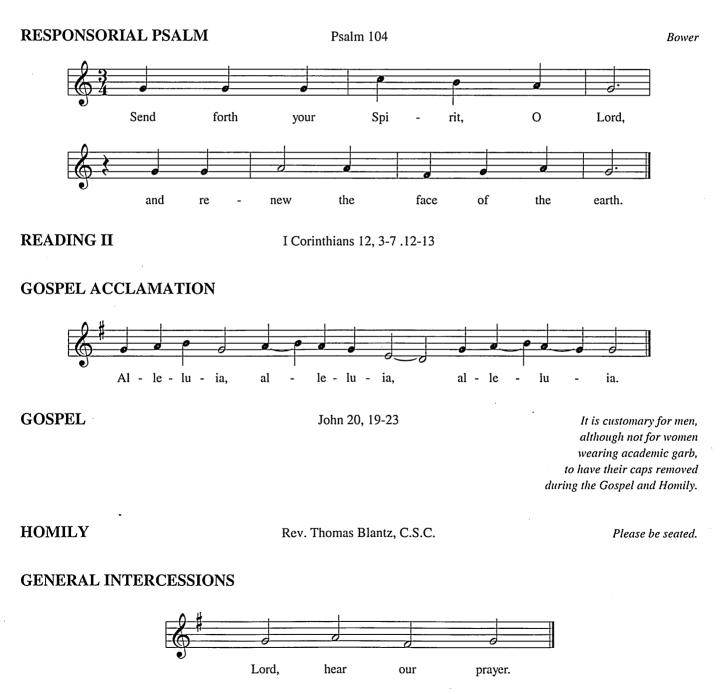
### **OPENING PRAYER**

### LITURGY OF THE WORD

#### **READING I**

Acts 2, 1-11

Please be seated.



# LITUBON OF THE EUCHABIST

#### PREP.

LEPARATION OF THE GIF IS	Please be seated.
Pavane	William Byrd
Fantasia	William Boyce

### Eucharistic Prayer

### **INTRODUCTORY DIALOGUE + PREFACE**

It is customary for men, although not for women wearing academic garb, to have their caps removed during the Eucharistic Prayer. The caps may be replaced at the end of Communion.

SANCTUS

Proulx



### MEMORIAL ACCLAMATION



### **GREAT AMEN**

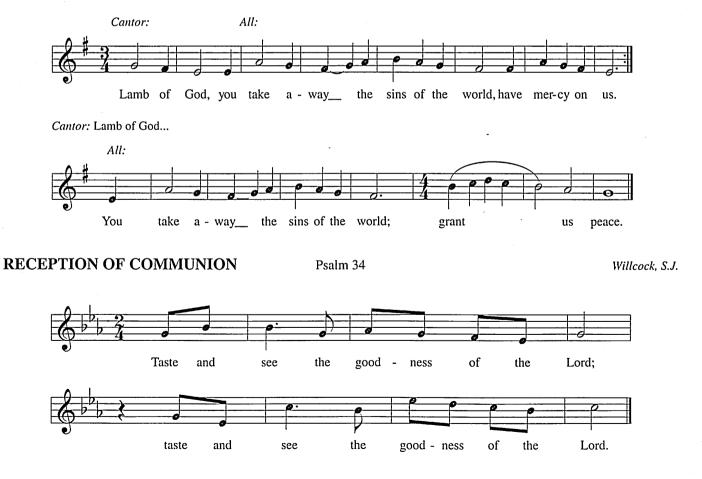
Proulx



Communion Rite

### LORD'S PRAYER + SIGN OF PEACE

### **BREAKING OF THE BREAD + AGNUS DEI**



PRAYER AFTER COMMUNION

Proulx

Bower

### Closing Rites

#### ALMA MATER

#### Notre Dame, Our Mother

O'Donnell/Casasanta

Notre Dame, our Mother tender, strong and true, Proudly in the heavens gleams thy gold and blue. Glory's mantle cloaks thee, golden is thy fame, And our hearts forever praise thee Notre Dame, And our hearts forever love thee Notre Dame.

#### **CLOSING HYMN**

#### Alleluia! Sing To Jesus

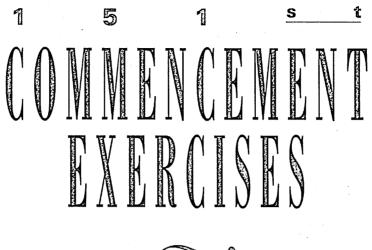
tune: Hyfrydol



#### Acknowledgements

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Notre Dame, Our Mother, words by Rev. Charles L. O'Donnell, C.S.C., music by Joseph J. Casasanta. ©1960, Edwin H. Morris and Co., a division of M.P.L. Communications, Inc. International copyright secured. All rights reserved. Used with permission.



FRIDAY, AUGUST 2, 1996 11 A.M. EST

JOYCE CENTER — CONCOURSE UNIVERSITY OF NOTRE DAME NOTRE DAME, INDIANA



THE GRADUATE SCHOOL THE LAW SCHOOL THE COLLEGE OF ARTS AND LETTERS THE COLLEGE OF SCIENCE THE COLLEGE OF ENGINEERING

THE GRADUATE AND UNDERGRADUATE DIVISIONS OF THE COLLEGE OF BUSINESS ADMINISTRATION

### ORDER OF EXERCISES

#### Processional by Harold L. Pace, Ph.D. University Registrar

America, the Beautiful Bates-Ward Ensemble and Audience

> O beautiful for spacious skies, For amber waves of grain For purple mountain majesties Above the fruited plain. America! America! God shed his grace on thee, And crown thy good with brotherhood From sea to shining sea.

#### **Convening of the Convocation**

by Nathan O. Hatch, Ph.D. Provost of the University

#### **Presentation of Candidates for Degrees**

The Doctor of Philosophy degree by James H. Powell, Ph.D. Associate Dean of the Graduate School

The *Legum Magister* and the *Juris Doctor* degrees by Patricia C. Leonard, J.D. Assistant Dean of the Law School

The Master degree by James H. Powell, Ph.D. Associate Dean of the Graduate School

The Master of Science in Administration degree by Edward R. Trubac, Ph.D. Associate Dean of the College of Business Administration

The Bachelor degree in the College of Arts and Letters by Harold W. Attridge, Ph.D. Dean of the College of Arts and Letters

The Bachelor degree in the College of Science by Francis J. Castellino, Ph.D. Dean of the College of Science The Bachelor degree in the College of Engineering by John J. Uhran, Ph.D. Associate Dean of the College of Engineering

The Bachelor degree in the College of Business Administration by Edward R. Trubac, Ph.D. Associate Dean of the College of Business Administration

#### **Commencement Address\***

by Phillip R. Sloan, Ph.D. Professor, Program of Liberal Studies

#### **Closing of the Convocation**

The Provost of the University

Notre Dame, Our Mother\* - (Alma Mater) O'Donnell-Casasanta Ensemble and Audience

Notre Dame, Our Mother, tender, strong and true Proudly in the heavens gleams thy gold and blue. Glory's mantle cloaks thee, golden is thy fame And our hearts forever praise thee, Notre Dame; And our hearts forever love thee, Notre Dame.

#### **Recessional of the Platform Party**

\*It is customary for men, although not for women wearing academic garb, to have their caps removed during the Commencement Address and the singing of the Alma Mater.

### **The Graduate School**

# THE DEGREE OF DOCTOR OF PHILOSOPHY ON:

Robert Thomas Archambeau, Chicago, Illinois Major Subject: English Dissertation: Wordsworth After Empire: Three Postcolonial Appropriations Director: Prof. John E. Matthias

David Matthew Biewer, Findlay, Ohio Major Subject: Mathematics Dissertation: Blowup Rate of the Solution of a General Parabolic Equation with a Nonlinear Boundary Condition Director: Dr. Bei Hu

Victor Francisco Calvo-Perez, Santiago, Chile Major Subject: Chemistry Dissertation: Assembly of Molecular Clusters of Clusters: Structure Versus Electronic Transitions Director: Dr. Thomas P. Fehlner

James S. Campbell, Des Moines, Iowa Major Subject: English Dissertation: Other Wars: Ethics and Violence in Twentieth Century British and Irish War Poetry Co-Directors: Dr. Gerald L. Bruns and Dr. Seamus Deane

Linda Margaret Chalk, Midland, Michigan Major Subject: Psychology Dissertation: The Effectiveness of a Possible Selves Intervention in Reducing College Women's Occupational Feared Selves Director: Dr. Naomi M. Meara

Seungjin Choi, Seoul, Republic of Korea Major Subject: Electrical Engineering Dissertation: Adaptive Blind Sources Separation Based on Unsupervised Learning Director: Dr. Ruey-Wen Liu

Shirley Jane Dyke, Palos Heights, Illinois
Major Subject: Civil Engineering
Dissertation: Acceleration Feedback Control
Strategies for Active and Semi-Active Control
Systems: Modeling, Algorithm Development, and
Experimental Verification
Director: Dr. Billie F. Spencer, Jr.

Teresa A. Elick, Fort Wayne, Indiana Major Subject: Biological Sciences Dissertation: Molecular Analysis of the *Piggybac* Transposable Element Director: Dr. Malcolm J. Fraser, Jr.

Muriel Cottard, D'Auroure, France Major Subject: Chemistry Dissertation: Studies Directed Toward the Synthesis of Compounds Having Important Biological Activity: Anticancer Agents, Iejimalides A and B and an Antibiotic, Madumycin I Director: Dr. Paul M. Helquist

Shingo Ishii, Tokyo, Japan Major Subject: Chemistry Dissertation: Scope and Mechanistic Studies of Intramolecular C-H Insertion Reactions of (Cyclopentadienyl) Dicarbonyliron Carbene Complexes Director: Dr. Paul M. Helquist

Todd Eric Johnson, Bradford, Pennsylvania Major Subject: Theology Dissertation: In Spirit and Truth: Pneumatology, Modernism and Their Relation to Symbols and Sacraments in the Writings of Evelyn Underhill Director: Dr. Lawrence S. Cunningham

Karen Leigh Jones, Renton, Washington Major Subject: Psychology Dissertation: Discrimination of Two Aspects of Cognitive Social Intelligence from Academic Intelligence Director: Dr. Jeanne D. Day

Padmini Kamath, Mumbai, India Major Subject: Mathematics Dissertation: Unstable Normal Maps on an Open Manifold Without Boundary Director: Dr. E. Bruce Williams

Byunghan Kim, Seoul, Republic of Korea Major Subject: Mathematics Dissertation: Simple First Order Theories Director: Dr. Anand Pillay

Meeyoung Kim, Seoul, Republic of Korea Major Subject: Mathematics Dissertation: A Barth-Lefschetz Type Theorem for Branched Coverings of Homogeneous Spaces Director: Dr. Andrew J. Sommese

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Wesley Kirkpatrick, Portsmouth, Virginia Major Subject: Philosophy Dissertation: What to Make of Miss Fanny: Philosophical Reflections on Jane Austen's Mansfield Park Director: Dr. Philip L. Quinn

Kris William Kukla, Freeport, Illinois Major Subject: Physics Dissertation: Measurements of Relativistic and Quantum Electrodynamic Effects in Heliumlike Argon Using Position-Sensitive Ultraviolet Spectroscopy Director: Dr. A. Eugene Livingston

Michael Lattanzi, Washington, D.C. Major Subject: Government Dissertation: Imagination, Language and Being: The Question of Political Critique Director: Dr. Fred R. Dallmayr

Maureen Kay Harley Mulligan, Dowagiac, Michigan Major Subject: History Dissertation: Common Cares: Women and the Family Farm in the Midwest, 1870-1930 Director: Dr. Walter Nugent

Sanjeevan Naguleswaran, Colombo, Sri Lanka Major Subject: Physics Dissertation: Gamma Ray Spectroscopy in the Mass 110 Region Director: Dr. Umesh Garg

Nelson Luiz Passos, São Paulo, Brazil Major Subject: Computer Science and Engineering Dissertation: Improving Parallelism on Multi-Dimensional Applications: The Multi-Dimensional Retiming Framework Director: Dr. Edwin Hsing-Mean Sha

Marie-France Paugam, Annevy, France Major Subject: Chemistry Dissertation: Transport of Saccharides and Catecholamines Mediated by Boronic Acid Carriers Director: Dr. Bradley D. Smith

Terence John Pell, Vienna, Virginia Major Subject: Philosophy Dissertation: Liberalism, Community, and Interpretation: Ronald Dworkin's Neo-Hegelian Theory of Law and Politics Director: Dr. William D. Solomon Janice M. Poorman, Granger, Indiana Major Subject: Theology Dissertation: The Critics of Karl Rahner's Theology of the Universal Offer of Salvific Grace Through Jesus Christ Director: Rev. Thomas O'Meara, O.P.

Maan Qazzaz, Oak Lawn, Illinois Major Subject: Physics Dissertation: Electron Paramagnetic Resonance in Magnetic Semiconductor Epitaxial Layers and Superlattices Director: Dr. Jacek K. Furdyna

Judy Damasiewicz Randolph, Valparaiso, Indiana Major Subject: Psychology Thesis: Timing of Conjugal Loss in Late Life and Successful Outcome: A Life-Span Perspective Director: Dr. Cindy Bergeman

John Lester Ruth, Nacogdoches, Texas Major Subject: Theology Dissertation:"A Little Heaven Below": Quarterly Meetings as Seasons of Grace in Early American Methodism Director: Rev. James F. White

Donelle Rae Ruwe, Meridian, Idaho Major Subject: English Dissertation: Reconstructing Romanticism: Women Poets, the Creative Imagination, and Literary History Director: Dr. Greg P. Kucich

Parthasarathy Seshadri, Madras, India Major Subject: Materials Science & Engineering Thesis: Metastable and Stable RMnO<sub>3</sub> Thin Films and RMnO<sub>3</sub>/ EBCO Heterostructures (R=Er or Dy; EBCO =  $Er_1Ba_2Cu_3O_{7-\delta}$ ) Director: Dr. Krishna Choudhary

Steven William Short, Midlothian, Illinois Major Subject: Physics Dissertation: Optical Investigations of the Quantum Confined Stark Effect in II-VI Semiconductor Heterostructures Director: Dr. Jacek K. Furdyna

Bradley Dale Smith, Siloam Springs, Arkansas Major Subject: Economics Dissertation: The Effects of the Market for Corporate Control at the Firm Level: A Case Study Approach Director: Dr. Martin H. Wolfson Robert Joseph Szczerba, Rochester, New York Major Subject: Computer Science and Engineering Dissertation: New Cell Decomposition Techniques for Planning Optimal Paths Co-Directors: Dr. Danny Z. Chen and Dr. John J. Uhran, Jr.

Jeffrey T. VanderWilt, Madison, Wisconsin Major Subject: Theology Dissertation: The Eucharist as Sacrament of Ecclesial *Koinonia* with Reference to the Contribution of Jean-Marie Tillard to Ecumenical Consensus on the Eucharist Co-Directors: Rev. Richard P. McBrien and Rev. John Allyn Melloh, S.M.

Suhas Prabhakar Vaze, Pune, India Major Subject: Mechanical Engineering Dissertation: Response and Buckling of Elastic-Plastic Square Tubes Under Cyclic Bending Director: Dr. Edmundo Corona

Pamela Rae Westmark, Dubuque, Iowa Major Subject: Biochemistry Dissertation: 1. Selective Facilitated Transport of Biological Compounds Through a Phospholipid Bilayer using Boronic Acid Complexation
2. Influence of Eluent Anions in Boronate Affinity Chromatography 3. Photoregulation of Enzyme Activity: Synthesis and Study of Photochromic, Transition-State-Analogue Inhibitors Director: Dr. Bradley D. Smith

 Yutong Zhang, Taiyuan, People's Republic of China Major Subject: Biological Sciences
 Dissertation: Vascular Capacitance and its Regulation in Rainbow Trout (Oncorhynchus Mykiss)
 Director: Dr. Kenneth R. Olson

### The Law School

#### THE DEGREE OF LEGUM MAGISTER ON:

Cristóbal de Aldecoa, Buenos Aires, Argentina Anneloes Groen, Cum Laude, Rotterdam, Netherlands Jean-Marc Grosperrin, Magna Cum Laude, Clermont-Ferrand, France Victor M. Moreno Rodriguez, Torreon Coahuila, Mexico Jose Alfredo Reygadas Del Valle, Mexico City, Mexico Liang-Ching Tsai (Grace), Taipei, Taiwan Alfred Zehner, Mariapfarr, Austria

#### THE DEGREE OF JURIS DOCTOR ON:

John Joseph Flynn, West Warwick, Rhode Island Christine Marie Tucker, Charleroi, Pennsylvania

### **The Graduate School**

### THE DEGREE OF MASTER OF FINE ARTS ON:

Robert Thomas Archambeau, Chicago, Illinois Major Subject: English Thesis: Victory Over the Sun Director: Prof. John E. Matthias

# THE DEGREE OF MASTER OF MEDIEVAL STUDIES ON:

Michael Machias Waddell, Owatonna, Minnesota

#### THE DEGREE OF MASTER OF MUSIC ON:

Janet N. Brooks, Nashville, Tennessee

#### THE DEGREE OF MASTER OF ARTS ON:

Vilma C. Balmaceda, Lima, Peru Major Subject: International Peace Studies

Patricia Ann Noonan Bogdan, Fairfax, Virginia Major Subject: Theology

Judith Head Bullock, Louisville, Kentucky Major Subject: Theology

- Paulette M. Chapman, Des Moines, Iowa Major Subject: Theology
- Hilary Ann Condon, De Witt, Iowa Major Subject: Psychology

Catia Cecilia Confortini, Rezzato, Italy Major Subject: International Peace Studies

Hal Robert Culbertson, Delavan, Illinois Major Subject: International Peace Studies

Mary Grace B. Dairo, Butuan City, Philippines Major Subject: International Peace Studies

- Larissa Deriglazova, Tomsk, Russia Major Subject: International Peace Studies Thesis: Soldiers' Mothers: A Case Study of a Social Movement in the Context of Russian Political Change Director: Dr. Mark A. Chaves
- Margaret Ann Desmond, Bloomfield Hills, Michigan Major Subject: International Peace Studies
- Radoslav S. Dimitrov, Sofia, Bulgaria Major Subject: International Peace Studies
- Beatrijs Elsen, Brugge, Belgium Major Subject: International Peace Studies

Theresa M. Fifer, Toledo, Ohio Major Subject: Theology

- David Paul Furlonger, C.S.S.R., London, Canada Major Subject: Theology
- Christine A. Green, Highland, Indiana Major Subject: Art History Thesis: The Natural Gas Boom in the Midwest: A Study of Architectural History and Patronage Director: Dr. Kathleen A. Pyne
- Matthew Ryan Guynn, Indianapolis, Indiana Major Subject: International Peace Studies
- Heba Hage, Beirut, Lebanon Major Subject: International Peace Studies
- Anselm Hagedorn, Hemmingen, Germany Major Subject: Theology
- Bracy Vauncille Hill II, Mishawaka, Indiana Major Subject: Theology

- Mark Todd Johnson, Madison, Wisconsin Major Subject: Theology
- Erin Joyce, Mansfield, Ohio Major Subject: Government
- Timothy Christopher Keating, Phoenix, Arizona Major Subject: Theology
- Anupam Khanuja, New Delhi, India Major Subject: International Peace Studies
- **Donald Jay Koyle**, London, Canada Major Subject: Theology
- Emmanuel Kwasi Kuada, Accra, Ghana Major Subject: International Peace Studies
- Stefanie Jo Lieland, Lawrenceburg, Indiana Major Subject: Psychology
- Carol Ann Lind, Smithfield, Utah Major Subject: Art History Thesis: The Carracci Academy: A Painter's Education in Sixteenth-Century Bologna: Antecedents and Innovations Director: Dr. Robert R. Coleman
- Pedro Lopez Jimenez, Ventura, California Major Subject: Theology
- Patricia Anne Lynn, Philadelphia, Pennsylvania Major Subject: International Peace Studies
- Tatyana Alexeevna Makogon, Nikolaev, Ukraine Major Subject: Psychology
- Thomas Daniel Manning, Lake Oswego, Oregon Major Subject: Theology
- Eerik Marmei, Tartu, Estonia Major Subject: International Peace Studies
- Charles Donald Martel, St. Louis, Missouri Major Subject: Theology
- Joseph F. Nuzzi, Upper Saddle River, New Jersey Major Subject: Theology
- Amy Sue Humphrey O'Brien, South Bend, Indiana Major Subject: Communication Arts

Toshiko Oino, Yokohama, Japan Major Subject: International Peace Studies Thesis: Problems and Opportunities in UN Peacekeeping: Lessons from Akashi's Way of Conflict Management Director: Dr. Robert C. Johansen

- Le Pan, Nanjing, People's Republic of China Major Subject: International Peace Studies
- Matthew Pennington, Scotts Valley, California Major Subject: Theology
- Mónica Peñuela Jaramillo, Bogotá, Colombia Major Subject: International Peace Studies
- Marie-Eileen Burke Picard, Aurora, Ohio Major Subject: Theology

Oana Plescan-Popa, Cluj-Napoca, Romania Major Subject: International Peace Studies

- Rose Imelda Ramos, San Antonio, Texas Major Subject: English
- Vadim Grigorievitch Roussin, Moscow, Russia Major Subject: International Peace Studies
- Glenn Rymsza, South Bend, Indiana Major Subject: Theology
- Jessica L. Schiller, Belmont, Michigan Major Subject: Psychology
- John Paul Sherk, Middlebury, Indiana Major Subject: Theology
- Robert J. Simon, Clarks Summit, Pennsylvania Major Subject: Theology
- Boreta Ann Singleton, I.H.M., Philadelphia, Pennsylvania Major Subject: Theology
- Julianne Smith, South Bend, Indiana Major Subject: English
- Carrie Anne Trollinger, Ormond Beach, Florida Major Subject: Psychology

Kimberly Anne Wallace, Smithtown, New York Major Subject: Psychology Thesis: Hardiness in Later Life: A Preliminary Investigation Director: Dr. Cindy Bergeman

Stephen John Zabrocki, Wolf Point, Montana Major Subject: Theology

### THE DEGREE OF MASTER OF SCIENCE ON:

- Pieder Beeli, South Bend, Indiana Major Subject: Physics
- Tami L. Elton, Roseau, Minnesota
   Major Subject: Biological Sciences
   Thesis: Venereal Transmission of La Crosse Virus by
   Aedes Albopictus
   Director: Dr. George B. Craig, Jr.

Betty Kreuger, New Orleans, Louisiana Major Subject: Biological Sciences Thesis: Parameters of Infection by Ascogregarina SPP. (Apicomplexa: Lecudinidae) on Container-Breeding Aedes SPP. (Diptera:Culicidae) Director: Dr. George B. Craig, Jr.

# THE DEGREE OF MASTER OF SCIENCE IN AEROSPACE ENGINEERING ON:

Bruce Andrew Hardy, Durham, New Hampshire Thesis: Interaction of Acoustic, Entropic, and Vortical Waves with a Plane Shock Director: Dr. Hafiz M. Atassi

#### THE DEGREE OF MASTER OF SCIENCE IN CHEMICAL ENGINEERING ON:

Sandeep Gupta, New Delhi, India Thesis: Parametric Sensitivity Analysis of Reverse-Flow Operation in Fixed-Bed Catalytic Reactors Director: Dr. Arvind Varma

# THE DEGREE OF MASTER OF SCIENCE IN CIVIL ENGINEERING ON:

Beth Lee Mullenbach, La Crosse, Wisconsin Thesis: Acoustic Imaging of Sediments Director: Dr. Laura J. Pyrak-Nolte

### THE DEGREE OF MASTER OF SCIENCE IN COMPUTER SCIENCE & ENGINEERING ON:

Hong Yan, Fuzhou, People's Republic of China Thesis: SCSInet: High Performance Communication Support for Distributed Computing Systems Director: Dr. David L. Cohn

Kaixiang Zhong, Beijing, People's Republic of China Thesis: Abstract Data Structures and Object-Oriented Design for High Performance Numerical Linear Algebra Director: Dr. Andrew Lumsdaine

# THE DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING ON:

Jaime Moises Gutierrez Carvajal, Panama City, Panama Major Subject: Civil Engineering Thesis: Sequencing Batch Reactors for Wastewater Treatment in the Republic of Panama Director: Dr. Lloyd H. Ketchum, Jr.

### THE DEGREE OF MASTER OF SCIENCE IN GEOLOGICAL SCIENCES ON:

James Albert O'Neill, Jr., Short Hills, New Jersey Major Subject: Civil Engineering Thesis: Development of an ICP-MS Analytical Technique for the Quantification of the Platinum Group Elements (PGES) and Gold in Geological Samples Using Cation Exchange Pretreatment Director: Dr. Clive R. Neal

## THE DEGREE OF MASTER OF SCIENCE IN MECHANICAL ENGINEERING ON:

Richard Joseph Caspar, South Windsor, Connecticut Thesis: Experimental and Numerical Study of Shear Localization as an Initiation Mechanism in Energetic Solids Co-Directors: Dr. James J. Mason and Dr. Joseph M. Powers

Fen Li, Zhejiang, People's Republic of China Thesis: Advanced Friction Model in Manufacturing Process Simulation Director: Dr. Steven Schmid

Jeffrey Joseph Scherock, Traverse City, Michigan Thesis: Modeling Unsteady Potential Flows in Coupled Cascades Director: Dr. Hafiz M. Atassi

Jian Su, Hohhot, People's Republic of China Thesis: Automatic Differentiation in Robust Optimization Director: Dr. John E. Renaud

### The College of Business Administration

In the Graduate Division

# THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION ON:

Christopher Robert Kavanagh, Bolingbrook, Illinois

## THE DEGREE OF MASTER OF SCIENCE IN ADMINISTRATION ON:

Gail Lynn Burton Blackburn, Magna Cum Laude,

Hammond, Indiana Julie Scott Bowers, South Bend, Indiana Paula M. Brush, Alliance, Ohio Myrtie Kimmins Coleman, South Bend, Indiana Irene Dunn, S.S.J., Summa Cum Laude, Erdenheim, Pennsylvania Céline Dupuis, S.S.A., Cum Laude, Lachine, Canada Christine Ereiser, O.S.B., Magna Cum Laude, Tulsa, Oklahoma Russell Edward Fish, Cum Laude, South Bend, Indiana Lawrence D. Ford, O.F.M., Cum Laude, Olean, New York Keith D. Fulks, Cum Laude, Mishawaka, Indiana Mary Antoinette Vassallo Hoste, East Lansing, Michigan Martha Ellen Kummerer, Magna Cum Laude, South Bend, Indiana Peter Daniel Lanser, Cum Laude, South Bend, Indiana Maureen Lynn McNamara, Magna Cum Laude, Peoria, Illinois Catherine Lynné Powers, Magna Cum Laude, Elkhart, Indiana Mary Faut Rodts, Cum Laude, Oak Park, Illinois Ruoping Zhu, Shanghai, People's Republic of China David E. Ziege, Cum Laude, Granger, Indiana

# The College of Arts and Letters

# THE DEGREE OF BACHELOR OF FINE ARTS ON:

Benjamin Richardson Foos, Simpsonville, Kentucky

## THE DEGREE OF BACHELOR OF ARTS ON:

Estevan Lorenzo Almanza, El Paso, Texas Nicole Marie Amato, Portland, Maine Katherine Anne Babka, Belleair, Florida Joseph Bryan, Wilkes-Barre, Pennsylvania John Ryan Burke, Rapid City, South Dakota James Dunn Burns II, Portland, Oregon Vincenzo Donaldo Carrasco, Indiantown, Florida Kim Chavez, Jacksonville, Arkansas Hugh H. Corkery, Sacramento, California Michael John Doherty II, Magna Cum Laude, Washoe Valley, Canada Jennifer Ann Earls, Azle, Texas Ryan Patrick Hallford, Arlington, Texas Sarah Elizabeth Jeffery, Cum Laude, Janesville, Wisconsin Christopher Alan Lary, Delmar, Iowa Theo Henry McCourtney, Katonah, New York Jane Allison Phinney, Edwardsburg, Michigan Anthony Edward Pillari, Summa Cum Laude, Bay Village, Ohio Sarah Breckinridge Reishman, Charleston, West Virginia Eamon Patrick Shea, Jacksonville, Florida Darcy Kyung Yaley, Mariposa, California

### The College of Science

# THE DEGREE OF BACHELOR OF SCIENCE ON:

Shelby Dwight Brown, Independence, Kansas
Kyle Hutchins Friedman, The Woodlands, Texas
Shane Taylor Igoe, Saint Francisville, Louisiana
Seth Turner Keene, Magna Cum Laude, Deadwood, South Dakota
Jamie Lynn Webb Kennedy, Summa Cum Laude, Fairfax, Virginia
Charles Kim Shin, Lima, Ohio
Amalia Villafan, Hammond, Indiana

### The College of Engineering

### THE DEGREE OF BACHELOR OF SCIENCE ON:

Mary Nahasbah Etsitty, Glendale, Arizona

# THE DEGREE OF BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING ON:

Jason Lee Schroeder, Magna Cum Laude, Findlay, Ohio

### THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING ON:

Catherine Nell Price, Cresco, Pennsylvania

### THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER ENGINEERING ON:

Michael Tecson, Hershey, Pennsylvania

# THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE ON:

Ryan Patrick Malayter, Valparaiso, Indiana

#### THE DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING & ENVIRONMENTAL SCIENCE ON:

Scott Dennis Horrigan, Buffalo, New York

#### THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING ON:

Robert Plaxton Bolton, Greensboro, North Carolina Peter Francis Goyer, Shaker Heights, Ohio

### The College of Business Administration

In the Undergraduate Division

# THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION ON:

Robert Anthony De La Riva, São Paulo, Brazil Glen James Hoffman, Warren, New Jersey Linda LaFaye Howell, Nesbit, Mississippi Gregory Sean Lane, Austin, Texas William Paul Lanza, Dumfries, Virginia William Michael Leisen, East Meadow, New York Michael Sean McCullough, Chaska, Minnesota James Frederick McEvoy, Jr., Henderson, Nevada Curtis Geoffrey Miller, Pittsburgh, Pennsylvania Jennifer Lynn Moore, Salt Lake City, Utah Jose Alberto Perez, Jr., San Antonio, Texas Edward Jet Salazar, Torrance, California Gregory Jason Sinnott, Albany, New York Christopher Carl Sloan, Rochester, New York Susan Joyce Tate, Magna Cum Laude, Pittsburgh, Pennsylvania James Tremante III, Wilton, Connecticut

Zane Stephen Way, Boise, Idaho

### ACADEMIC ATTIRE

Ceremonial garments worn at academic functions take their meaning from the original centers of learning of the Western world in the Church of the Middle Ages. Caps, hoods and gowns of the early students and monks have been held through the centuries to be traditionally symbolic of the scholarly devotion so basic to education and to the deliberate and orderly evolution of knowledge.

The introduction of classical studies, the gradual rise of the great universities across Europe, and the everincreasing awareness of the decisive role of education in the entire development of civilization influenced leaders among academicians in their desire for a singular identity. In the attempt to create this differentiation, educators fell upon the medieval system of classic heraldry, whereby the coat of arms, assorted ornamental trappings, and patterns of colorful design had been adopted to denote the distinctive character of designated chivalric orders. The function of "pedagogical heraldry" became, then, simply identification. As such, measures were taken to signify through distinctive markings on the academician's attire the institution that had granted the degree, the field of learning in which the degree had been earned, and the level of the degree-bachelor, master or doctorate.

Of the three pieces of academic attire, the cap, the gown and the hood, it is the hood that offers the most abundant and most readily discernable information about its owner. The inner lining of the hood identifies the institution at which the individual earned the degree. Some schools have adopted two-color patterns and introduced chevrons and bars in various designs to set themselves apart from other institutions. The velvet trim bordering the hood indicates the major field of learning, or faculty, in which the degree has been earned. The list at the conclusion of this section will explain this relationship. A final feature of the hood concerns its length and width and distinguishes further between holders of bachelor's, master's, and doctor's degrees. The length of the hood for the bachelor's degree is three feet, closed at the bottom, and the velvet border is two inches. At Notre Dame, individuals receiving a bachelor's degree do not wear a hood. A master's degree holder has a hood three and one half feet in length with a three inch wide border, and is slit at the bottom. Those individuals with a doctorate degree wear a hood four feet in length, open at the bottom, with a five inch border.

The gown is usually black in color but some American universities, including Notre Dame, have adopted distinctive colors for their robes. Notre Dame doctorate degree robes are blue, reflecting one of its official colors.

The cut of the gown aids in differentiating between the three levels of degrees. The bachelor's gown is relatively simple and falls in straight lines from an elaborate voke. It may be recognized most readily by the long, pointed sleeves. The master's gown is somewhat fuller and bears no adornment. The sleeves are oblong in shape and open at the wrist, with the rear part of the oblong square cut while the front edge has a cutaway arc. The doctor's gown is more elaborate with velvet panels down the front and around the neck of the garment. The sleeves are bellshaped at the end and have three bars of the same material as the front panels at the upper portion of the arm. It is cut rather full and may be ornamental in color. Notre Dame's doctoral gown has royal blue velvet front panels with the University's shield embroidered in gold. The royal blue sleeve chevrons are outlined in gold.

The mortarboard or Oxford-type cap has been adopted throughout most universities in the United States, although Notre Dame's doctoral cap is a royal blue tam. Colored tassels are usually worn by holders of the bachelor's and master's degrees. These denote the field of learning. The list on the next page indicates the tassel colors. Gold tassels are reserved for those with doctorate degrees and governing officers of educational institutions.

### PROCESSIONAL BANNERS (GONFALONS)

The gonfalon, a banner that hangs from a crosspiece or frame, originated in the medieval republics of Italy as an ensign of state



or office. Gonfalons have been adopted in many universities around the world as college or institutional insignias, and many use them to identify and lead colleges and schools within the university in academic procession. The nine gonfalons represent the University and the eight colleges and schools of Notre Dame. The lower half of the gonfalon consists of a shield with a clear blue field and a cross of gold. This is part of the armorial seal designed by Pierre de Chaignon la Rose of Harvard in 1931. The heraldic colors (gold and blue) are symbolic of the Mother of God, to whom, Father Sorin first dedicated Notre Dame. As the shield's base are two wavy lines (indicating the a Lacu, "of the Lake", in the University's official title), and above them to the left is a star, another emblem of the Virgin, Star of the Sea. The cross represents the Congregation

of Holy Cross, which founded Notre Dame; an institution of learning is denoted by the open book. The phrase "Vita, Dulcedo, Spes," taken from the ancient prayer to the Virgin, the Salve Regina, celebrates her as 'life, sweetness, and hope."

Gonfalons designed by Paul Wieber of Notre Dame Publications and Graphic Services, commissioned by Watra Church Goods, Chicago, and manufactured by Slabbinck of Brugge, Belgium.

### FACULTY COLORS

AGRICULTURE	Maize
ARTS, LETTERS, HUMANITIES	White
COMMERCE, ACCOUNTANCY, BUSINESS	Drab
DENTISTRY	Lilac
ECONOMICS	Copper
EDUCATION	. Light Blue
ENGINEERING	Orange
FINE ARTS, INCLUDING	
ARCHITECTURE	Brown
FORESTRY	Russet
JOURNALISM	Crimson
LAW	Purple
LIBRARY SCIENCE	
MEDICINE	Green
MUSIC	Pink

NURSING	Apricot
OPTOMETRY	Sea Foam Green
ORATORY (SPEECH)	Silver Gray
PHARMACY	
PHILOSOPHY	Dark Blue
PHYSICAL EDUCATION	Sage Green
PODIATRY-CHIROPODY	Nile Green
PUBLIC ADMINISTRATION, INCLUI	DING
FOREIGN SERVICE	Peacock Blue
PUBLIC HEALTH	Salmon Pink
SCIENCE	Golden Yellow
SOCIAL SCIENCE	Cream
SOCIAL WORK	Citron
THEOLOGY	Scarlet
VETERINARY SCIENCE	Gray

Old Gold and Royal Blue in Hood Denotes a Notre Dame Degree