

## UNIVERSITY OF COLORADO at COLORADO SPRINGS

Commencement

May Twenty-Second Nineteen Hundred and Ninety

# THE REGENTS OF THE UNIVERSITY OF COLORADO

Chairman Mr. Lynn J. Ellins Longmont

Mrs. Kathleen S. Arnold Littleton

Mr. Richard J. Bernick Denver

Mr. Robert E. Caldwell Colorado Springs

Mr. Peter C. Dietze Boulder

Dr. Harvey W. Phelps Pueblo

Mr. Norwood L. Robb Littleton

Dr. Roy H. Shore Greeley

Gen. David W. Winn Colorado Springs

#### **PROJECTIONS**

To the Class of 1990:

On behalf of the University of Colorado, I am pleased to extend congratulations upon your achievement. Your graduation is a special milestone in your life, and in the life of the University.

It is customary on these occasions to speak of the opportunities in your future. At this commencement, however, I prefer to dwell, however briefly, upon the University's educational task and the problems you will

face in the coming decades.

The University is committed to missions in education, research, and public service. Of these, education is generally most visible through classroom teaching. Much more is involved in the pedagogical process, however. During the past several years, the University has endeavored to equip you with the knowledge and skills required to lead intelligent, productive lives in the coming decades. That is a basic component in our mission, but it is only the beginning. It is more important that you also have a sense of those societal and ethical values which have guided humankind in its noblest hours. Courage in the face of adversity, perseverance in times of difficulty, creativity under limits of constraint, these are some of the traits you must learn in confronting the problems and challenges of the future. They are functions of personality and experience, and cannot be taught in a classroom. You can, on the other hand, bring to these challenges the knowledge of human experience. and inherent in that experience is the accumulated wisdom of civilization. This is, and should be, your most influential source of learning. Once filtered through your own experience, consideration, and values, this knowledge may guide you in directing the future.

It is your obligation, of course, to consider all appropriate factors in any decision. I urge you to temper knowledge with compassion, to balance immediate gain with farseeing wisdom, and to promote at all times the common good, not self-interest. These are your true obliga-

tions to your society, your fellow-citizens, and the future.

The University of Colorado has, I trust, imparted to you an important quantity of knowledge and an appreciation of certain societal and ethical values. It is now your obligation to extend and develop your knowledge and values, and to direct these toward the common good, toward creating a better future. You will face unprecedented challenges requiring heroic efforts. Society's hopes rest with you.

E. Gordon Gee President

E. Midne See

#### ORDER OF EXERCISES

Leslie Manning, Commencement Marshal (1989 UCCS Chancellor's Award Recipient)

Processional (audience will please remain seated)

Posting of the Colors

Invocation

America the Beautiful<sup>1</sup>

Welcome

Address

Conferring of Honorary Degree Leonard von Bibra Sutton

University of Colorado Medal Fred and Nancy Thomas

University of Colorado Medal Douglas R. Johnson

Legislative Award James T. Rizzuto

Conferring of Baccalaureate Degrees Recognition of Outstanding Graduates

College of Letters, Arts and Sciences
Natural Sciences
Social Sciences
Humanities

College of Business and Administration

College of Engineering and Applied Science

Conferring of Advanced Degrees

Initiation of Graduates into Alumni and Friends Association

Charge to Graduates

Alma Mater<sup>2</sup>

Recessional (audience will please remain seated)

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!

UCCS ROTC Color Guard

Dr. Merrill J. Lessley

Dr. Paul Ballantyne

Chancellor Dwayne C. Nuzum

President E. Gordon Gee

Jaqueline L. Kiplinger Dixie D. Vandeputte Gloria R. Tuffield

Debra D.S. Offerson

Harlo A. Peterson

Kevin Olson

School of Education Dean Margaret Bacon

Dr. Paul Ballantyne

<sup>2</sup>Hail, all Hail our Alma Mater! Ever will our hearts be true You will live with us forever Loyal we will be to you. We will sing forever your praises, Ever more our love renew, Pledge our whole devotion to you, Dear Old C.U.!

#### CANDIDATES FOR DEGREES COLLEGE OF LETTERS, ARTS AND SCIENCES

James A. Null, Dean

THE DEGREES BACHELOR OF ARTS AND BACHELOR OF SCIENCE

Elizabeth F. Aaron, Biology Roxanne E. Adorno, Distributed Studies Magna Cum Laude Terence M. Aires, Communication Robert E. Aldridge, Mathematics

Magna Cum Laude, with highest distinction

Admanda J. Allcock, Geography and Environmental Studies \*\* Jennifer L. Allison, Philosophy Kirstin M. Anderson, Sociology Sally Arnold, Biology
David B. Askew, Distributed Studies \*\* Theresa B. P. Askew, Distributed Studies Jo Ann J. Atkinson, English Magna Cum Laude Daniel P. Avery, Political Science/History Jimmy C. Avila, Psychology/Sociology Nathaniel J. Ayers, Distributed Studies James W. Bailey, Sociology with high distinction Myla L. Baptiste, Distributed Studies Keith L. V. Barber, Sociology Tammy A. Bartel, Communication \* Denise L. Barton, Economics \* Michael R. Bauer, History Sandra J. F. Baum, Communication Curt R. Bayer, Biology
Patricia F. Beckstead, English
Melissa M. Beddingfield, Sociology Christian D. Begley, Communication Douglas L. Bennion, Psychology Stephen A. Bergman, Sociology

Magna Cum Laude, with high distinction Steven B. Bildstein, Physics and Energy Science (B.S.)\* Betty J. Birchard, Communication Evelyn P. Blakely, Sociology Magna Cum Laude
John P. Blay, Political Science Julia A. Blea, Communication \*\* Mary Ann Blitt, Spanish

Cum Laude, with distinction

Andrew A. Boucher, History Randal W. Bowen, Fine Arts \* with distinction Jennifer L. Brandner, Political Science Michael A. Brass, Psychology \*\*
Patricia L. Brock, Distributed Studies
Katrina M. Brohman, Philosophy/History
with high distinction in Philosophy Roy A. Brown Jr., Spanish Georgina S. Bryant, Communication Chan Langue Christine L. Burkhart, Communication Enrique Camacho-Cervantes, Political Science \*
Christine C. Campbell, Communication Janet L.P. Cardon, Political Science \* William D. Carr, Sociology \*\* Stephen G. Carroll, Jr., Political Science Pamela A. Cherry, Geography and Environmental Studies Haeoh Choe, Biology Song U. Chon, Sociology \* Heejoon Chung, Economics \*\* Stephen S. Church, Political Science
Karin A. Coleman, Psychology
Terry M. Conley, Psychology
\*\* Nancy L. Coomer, Communication Monica A. Cooper, Communication Pamela J. Cooper, Communication \*\* Gregory, A. Coots, Biology \*\* Carrie E. Corcoran, Psychology Stephanie A. Cordova, Spanish Daniel C. Crawford, Biology Brenda M. Creasy, Chemistry Lisa L. Currier, Psychology Whighest Disi Cum Laude

Theresa R. Daniels, Psychology Kimberly S. Dark, Sociology Scott L. Dayberry, Physics and Energy Science (B.S.)\*

Magna Cum Laude, with high distinction Jeffrey N. DeFelice, Communication \* Suzan L. DeGroff, Communication Henrietta K. DeGrott, Political Science \*\* John A. Deignan IV, Distributed Studies \*\*
Martin E. Depner, Physics and Energy Science (B.S.) \*\*
Debbie D. Deterts-Kernan, Psychology Paulette M. DiBenedetti, Political Science Kenza Dillon, Political Science Elizabeth M. Directo, Biology Susan L. Dixon, Economics Sharon L. Dotson, Psychology Pauline A. Drobny, Geography and Environmental Studies Magna Cum Laude Cristy L. Dunlap, Psychology Carol J. Eames, Communication Corrine E.K. Eggers, Communication Felicia M. Eggers, Political Science Henryetta E. Elze, Psychology
Kenneth M. Enright, Fine Arts \*\* Michele L. Erbeck-Comfort, Sociology William L. Esch, Distributed Studies David R. Escobar, Communication \*\* Katherine E. Essick, Sociology ' Jill D. Eye, Communication Amy Z. Fenlon, Mathematics Karla D. Fischer, Distributed Studies \*\* Ricky W. Fitzke, Economics with high distinction
Silvia M. Folts, Communication \*\* Cum Laude Andrew G. Foote, Mathematics
Jeffrey A. Ford, History \*\* Julie F. Forster, Psychology Georgia M. Fortier, Distributed Studies Shellee L. Fortune, Psychology \*\* Clark M. Friedrichs, Geography and Environmental Studies \* Julie L. Gabel, Psychology Thomas P. Gabriel, Economics with distinction Adriana M. Galvan, Economics Ann M. Garcia, History
Leonard J. Gill, Distributed Studies
Cum Laude Dalin D. Gilland, Psychology Elizabeth I. Gillispie, Psychology Whighes Dist Diane S. Givens, Psychology Edward T. Glaza, Communication Magna Cum Laude Stephen J. Gonczkowski, History Suzanne D. Gregory, Psychology Janet L. Gribben, Communication \* James G. Griffith, Economics \*
Steven S. Griffith, Psychology \* Sharon J. Haffley, History Jonathan K. Hage, Political Science Michelle R. Haines, Psychology Kathryn L. Hallahan, Communication/Spanish\*\* Magna Cum Laude Tracy L. Harger, History \*\* Cum Laude Carolyn V. Harmon, Sociology \*\* Valerie L. Harmon, Biology Jeniel N. Harris, Fine Arts Magna Cum Laude Joan L. Hatcher, Sociology Leah A. Hauser, Fine Art \*\* righ Disi Paula J. Havice, Psychology

Randall A. Hayes, Psychology Mallory S. Henning, Communication \* Brenda J. Heimbach, Psychology

Magna Cum Laude, with highest distinction

Susie J. Henry, Geography and Environmental Studies \* Robbin L. Hensley, Communication Sandra S. Hoag, Fine Arts Edward L. Hocker, Geography and Environmental Studies \*\* Magna Cum Laude Penelope Hogarth, Biology \*\*
Magna Cum Laude Patrick M. Hollinger, Economics Annette M. Hritz, Psychology \*
Magna Cum Laude Holly A. V. Hudson, Psychology Robert C. Humphries, Distributed Studies \*\* Andrea L. Hurd, Psychology David N. Jackson, Mathematics Michael W. Jackson, English Jeffrey S. James, History Marilyn D. James, History
Rose M. Jodrey, Psychology
Kathleen K. Johnson, English/Communication Roy A. Johnson, Physics and Energy Science (B.S.) Stacy J. Johnston, Psychology Nancy J. Keeton, Fine Arts Aimee J. Keith, Psychology Cindy M. Kelly, Economics

Magna Cum Laude, with highest distinction Mary E. Kelly, Political Science \* 1 Marla S. Kent, Geography and Environmental Science \*\* Katheryn E. Kilroy, Spanish Mary K. Kimmel, English Magna Cum Laude Robert T. Kinzel, Communication Jaqueline L. Kiplinger, Chemistry (B.S.)
Summa Cum Laude, with highest distinction
Arlene M. Kittel, Sociology
Summa Cum Laude, with highest distinction William V. Klingbeil, Chemistry Maria M. Knighten, Geography and Environmental Science \*\* Deanna M. Knobbs, Psychology Tommy D. Knott, Distributed Studies Sharon A. Komyathy, History/Fine Arts In History Magna Cum Laude Kristen L. Kostner, Political Science Linda S. Krager, Communication
Cum Laude Shery R. Lamerson, Distributed Studies \*\* Cum Laude Debra J. Lamke, Communication Kathleen R. LaRoque, Communication Kimberly L. Leeds, Mathematics \* Lori L. Lehman, Psychology Brian M. LeMay, Communication Timothy B. Lenehan, Biology Charles A. Letner, Chemistry (B.S.) Kathleen J. Lewis, English Leslie A. Lindenberger, Communication/Psychology \*\* Cynthia D. London, Psychology Kathleen A. Lopez, Political Science Lisa C. Luse, Distributed Studies Kathie A. Mac Donald, Psychology \* Magna Cum Laude Dominic G. Madril, Biology Catherine C. Markum, Fine Arts
Magna Cum Laude Donnis A. Martin, Communication Kelly C. Martin, Biology Juanda Y. Mayberry, Political Science \* Molly A. Mayfield, Communication Douglas S. Mayne, Economics Richard P. McClintock, Distributed Studies Colleen M. McCormick, Communication Kathleen S. McCoy, Communication Lucinda G. McElderry, Communication Elizabeth J. McGraw, Communication Carol J. McKenna, Psychology

Carl L. Medearis, History

Elizabeth I. Mendy de Carlton-Wippern, Psychology Maana Cum Laud Mary A. Meuret, Fine Art Laura L. Midkiff, Sociology with distinction Beth A. Miller, Psychology Joseph O. Miller, History Michael D. Miller, Anthropology Dennis C. Mills, History Mary L. Milvid, Psychology Melissa D. Mitchell, Psychology \* Mary R. Mixon, Psychology Marie J. Mooney, Biology
Anthony C. Moorman, Chemistry (B.S.) Cum Laude Jeff R. Mora, Biology Cynthia L. Morton, Psychology \*\* Margaret A. Muller, Political Science \*\* Magna Cum Laude Roy A. Myers, Biology Christine R. Neumann, Communication \*\* Christine M. Nevel, Political Science \* Walter Newell, Jr., Sociology \* Shannon Newson, English Jean L.Nordberg, Psychology Kathryn J. Oberle, Psychology \*
Mary T. O'Connell, Political Science Kevin W. O'Neil, Communication Cum Laude Michael J. O'Neil, Communication James E. Osborne, Fine Arts Shane P. Ousey, Communication Barry J. Ousley, English Cum Laude Gretchen L. Painter, Communication Lisa M. Palmer, Mathematics Susan M. Panzer, English Kimberly D. Parker, Communication David P. Parrish, Communication Christine D. Patterson, English/Geography and Environmental Studies Cum Laude John B. Pecoraro, History \* Cum Laude, with highest distinction
Shelbe L. Pederson, Communication \*\* Paul A. Petersen, Communication ' Cum Laude Tracy L. Pezoldt, Fine Arts, \*\* Carla A. Phillips, Communication \*\* Veronica B. Pillsbury, Geography and Environmental Studies \* Michael R. Pipe, Psychology John R. Piskoty, History Michael S. Plonowski, Mathematics Steven J. Polasek, Geography and Environmental Studies Joan M. Pollard, Psychology \* Magna Cum Laude Darlene F. Pullin, Communication \*\* Mark E. Qualls, History

Magna Cum Laude, with high distinction

Jerri C. Raitz, English \*\* Victoria J. Ramirez, Psychology\_ Amanda L. Randoll Psychology Wayne W. Rasmussen, Geography and Environmental Studies \*Henry T. Rea, English \*\* Suzanne S. Reed, Psychology \*\* Lynn M. Reneau-Neilson, Communication Paula L. Reorda, Psychology Caroline L. Ricks, Political Science Mitchell B. Riley, Communication \*\* Onorina V. Rinker, Fine Arts w/ highest Dist Janice M. Roberts, English
Cum Laude, with highest distinction Cheryl L. Robinson, Psychology Amy E. Routh, Political Science Donna J. Rowe, Psychology Monica L. Rundo, Psychology Paula J. Russel, Communication \* Sandra L. Sanchez, Distributed Studies Laura B. Schell, Communication Ann C.R. Schmitt, Psychology Cum Laude, with high distinction Ann R. Schmitt, Biology Penelope J. Schreiber, Psychology \*\* Debra J. Scruggs, Psychology Cum Laude

Marsha E. Shaikhly, Anthropology/Fine Arts Todd S. Shogren, Geography and Environmental Studies Cum Laude, with highest distinction
Elaine M. Shupe, Mathematics
Magna Cum Laude, with highest distinction John H. Sideris, Psychology Physics assistant on Str. Becky L. Skiles, Psychology \*\* Maria E. Skonielznk, Biology Sean E. Slater, Sociology Deborah J. Sloan, Psychology \*\* Patricia H. Sloan, English Wo \ Disi Mark S. Slover, Political Science BettyJo Smith, Sociology Cindi L. Smith, Communication \*\* David R. Smith III, Biology Cum Laude, with highest distinction Erik J. Smith, Chemistry Frances A. C. Smith, History Kathryn H. Smith, Communication \*\* Patricia A. Smith, Fine Arts Roger A. Smith, Chemistry, (B.S.) Leslie K. Sniff, English
Deborah R. Solomon, Psychology Diana M. Spahr, English \* Renate A. Speer, Philosophy/Geography and Environmental Studies Cum Laude, with highest distinction in Philosophy Wanda M. Stafford, Communication Max A. Stager, Psychology Cum Laude Kristen R. Starr, Psychology \*\* Karin B. Steadman, History Herman F. Stockinger III, Political Science Andrew J. Stover, Psychology Cynthia L. Swanson, Communication \*\* Greggory W. Switzer, Physics and Energy Science (B.S.) Magna Cum Laude, with highest distinction Heather K. Sykes, Anthropology \* Eric H. Talbert, Economics Nancy J. Taylor, Philosophy Jennifer D. Thomas, Physics and Energy Science (B.S) \*\* Cum Laude with high distinction

Jeffrey B. Selig, Economics \*\*

Nancy L. Thomason, Sociology Bernadette T. Trask, English Tory L. Traut, Mathematics Linda C. Tray, Communication Gloria R. Tuffield, English/Sociology \*\* Summa Cum Laude Roland D. Valdez, Sociology \* Christopher J. Valin, History \*\* Christopher J. Valin, History

Dixie D. Vandeputte, English/Psychology

Summa Cum Laude, with highest distinction in Psychology, WIDIST IN English

LeAnne W. Vaughan, Psychology

\* James E. Vialpando, Political Science Jack E. Voets, Geography and Environmental Studies James W. Vorhies, History Donna R. Wagner, Political Science Diane C. Walker, Communication Magna Cum Laude Loni J. Wallace, Fine Arts Summa Cum Laude Mary P. Walsh, Fine Arts \*\* Cum Laude, with highest distinction Lisa J. Watkins, Distributed Studies \*\* Summa Cum Laude Ryan A. R. Webb, History Cum Laude Mary E. Weidner, Political Science Magna Cum Laude Why h Disi Cum Laude, with distinction Moira A. White, English Catherine A. Whitney, History Mary J. Wiejaczka, English Sandra S. Wilkins, History Jodie L. Williams, Distributed Studies Cum Laude Roberta L. Wilson, Sociology/Psychology Ellen R. Woodhouse, Biology Evan S. Wyman, Psychology Gary J. Zakjicek, Fine Arts Kevin C. Zehnder, Communication

#### COLLEGE OF BUSINESS AND ADMINISTRATION

James T. Rothe, Dean

#### THE DEGREE BACHELOR OF SCIENCE (BUSINESS)

Hassan S. Alame Penny L. Amaral \*\* Summa cum laude Douglas F. Arroyo \*\* Kim Ashley \* Teresa L. Barnhart \*\* Theresa M. Barnes Gary V. Barr \* John P. Barry Steven A. Beck Steven A. Beebe Deborah A. Black Michael W. Bowman Kimberly M. Brockway Denise A. Brown Scott E. Brzycki William P. Bunney Ronald A. Burns, Jr. Rebecca G. Burright \*\* Sheryl A. Calvert Cum laude Lain R. Chappell Cynthia A. Espinoza Chavez \* Howard D. Cheshire Magna Cum Laude Deborah A. Chlebus Wendy D. Colby \*\* Eugene G. Contreras Karin A. Craft Cum Laude Elizabeth M. Davis Ted T. Del Duca Louis E. Dennis, Jr. \*\* Salena DiMatteo \*\* Debra L. Drobney \*\* Cum laude

James P. Egan \*\* Dana A. English \*\* Danielle M. Ennenga Scott R. Erickson Raymond G. Everhart Douglas K. Fettig \*\* James W. Finnell \*\* Elizabeth A. Flanders \*\* James A. Fletcher \* Kristi L. Ford Scott T. Freeland Heath A. Fuehrer \*\* Andrew D. Gates Cynthia G. Gearhart Mary E. Glynn \*\* Marla L. Goettsche \*\* Lorraine M. Gourde Cum Laude Kirsten L. Gray Deborah J. Grey \*\*
Cum Laude Nanette C. Grys \* Ronnie W. Hairston \*\* Carol L. Hansen G. Duane Hendrickson \*\* Phillip J. Hildebrand \* Richard J. Holzmer Barbara A. Horst ' Maryanne Hostetler Edward J. Hughes James B. Humeston \*\* Mary S. Hunsinger \* Keith Jeffries Tanya M. Johnson Roy A. Jung

Christopher K. Kane \*\* Michael J. Kearney \* Sarjit K. Kellerman Joseph F. Klingensmith Michael L. Koenigsknecht \*\* Carol J. Kulik \*\* Connie J. Lane LeAnn G. Langeliers Karen A. Lavee Renee L. LeMoine \*\* Lisa L. Lessig Trent A. Linville \*\*
Gail E. Lott Margaret R. M. Marsh Cum Laude Anthony Marinucci \* Leslie J. Martinez Michael K. May \* Julia A. McCarthy Patricia A. McConnel Terry L. McDaniel Mark T. McElderry Donna M. McElroy Magna Cum Laude Timothy J. McNamara \* Carman L. Miller Elaine L. Miller Suzanne E. Miller Wayne O. Mills wan Lande Robert J. Mone Wayne F. Monroe Steven L. Morris Mina E. Morse \*\* Cum laude

Brian P. Murphy

Bich H. T. Nguyen Jennifer T. Nguyen \*\* Suong T. H. Nguyen Steve M. Norman \* Joline D. Nortum \*\* Debra D. S. Offerson Summa Cum Laude Tamra S. Oglesby Cum Laude Ilse M. Owens \*\* Robert L. Ownbey \* Jvoti V. Patel \* Susan K. Peverley \*\* Michael T. Peyton Tammy L. Phillips Barbara A. Porter \*\* Barbara L. Propp \* Amber T. Ramey Wendy S. Rees Mary M. Reis \*\* Summa cum laude Randy L. Rowe \* Karen C. Rubino Robert A. Sala \* Michael J. Schenk Deborah L. Schwab \*\* Magna cum laude Jeffrey L. Schwartz Pamela C. Scott Herlinda C. Serna Ronald T. Shaffer \* Theresa M. Simon \*\* Judy M. Smith Cum Laude Richard A. Smith

Saundra S. Smith \*\* Melinda M. Snow \*\* Magna cum laude Josephine A. Spiridigliozzi \* Richard N. Spreier \* Cherilyn Lee Srajer \* Philip D. Stafford \*\* Kazuko Stern \* Scott R. Straus Barbara J. Taylor \* James S. Traynor \*\* Kathleen M. Unverrich \* Nancy J. Vail \* Janet M. Valentine Sally A. Vargas Jacqueline A. Veri \* Paula M. Vickerman Michael A. Waller Max A. Walz Jacqueline K. Watkins Cum Laude Rodney P. Watkins Summa Cum Laude Laura R. Watt Stephanie L. Weber Magna Cum Le Laura M. Wenker \* Magna cum laude Elinor I. West \* Margaret P. Williams Pamela E. Williams Leah J. Wilson Michelle L. Wise Hilda J. Wolfli \*

Stuart A. Woods \*\*

John D. Wyckoff

#### COLLEGE OF ENGINEERING AND APPLIED SCIENCE

Pieter A. Frick, Dean

#### THE DEGREE BACHELOR OF SCIENCE

Ingrid I. Aligaen, Computer Science

Donna D. Bellows, Computer Science \*\*

Charles R. Brath, Electrical Engineering \*\* Rhonda F. Burns, Applied Mathematics

Steven G. Cocroft, Computer Science

Torry L. Ebell, Computer Science

Charles R. Edmundson Jr., Computer Science \*\* Karen V. Espinoza, Computer Science \* Debra L. Evans-Kamp, Computer Science

with special honors Bradford E. Golson, Computer Science \*

with special honors

Janet M. Greensweight, Computer Science

Donald R. Henninger, Computer Science Daniel F. Hewett, Computer Science Jennifer S. Hilty, Electrical Engineering Judith E. Hoch, Electrical Engineering Rodney F. Hofer, Electrical Engineering Jane A. Houtsma, Applied Mathematics with special honors

Jeffrey H. Jewell, Electrical Engineering \*\* with special honors

Mark A. Jones, Electrical Engineering with honors

Wayne E. Kuntz, Electrical Engineering Kent C. Lawyer, Electrical Engineering Jennie C. Manson, Electrical Engineering \*\* Paul W. McDermott, Electrical Engineering Alison G. Milligan, Electrical Engineering

Linda L. Miner, Electrical Engineering \*\* Mary L. Modic, Computer Science Thomas L. Morel, Computer Science \*\* Sozila D. Nagieswaran, Computer Science with special honors

Monica A. Novack, Applied Mathematics \*\* Benjamin B. Nystuen, Computer Science \*\*
Thomas W. O'Steen, Computer Science \*\*

Kevin E. Pawlik, Applied Mathematics and Electrical Engineering

Bryan J. Peachey, Electrical Engineering Evan S. Pedersen, Electrical Engineering \*\* Arnel I. Periquet, Computer Science

with honors
Harlo A. Peterson, Computer Science

with special honors Hung Q. Pham, Electrical Engineering \*\* Curt D. Pigford, Electrical Engineering Jeffrey M. Polk, Computer Science Richard B. Rooks, Computer Science

Mark N. Shaw, Electrical Engineering Judith E. Smith, Electrical Engineering

Matthew T. Starr, Electrical Engineering Dale A. Strickland, Electrical Engineering Mary C. Strohmeyer, Applied Mathematics Vernon L. Tague Jr., Computer Science Steven R. Tourville, Applied Mathematics \*\*

Henry M. Watkin, Computer Science Roger W. W. Dale L. Yones, Electrical Engineering

#### GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

James T. Rothe, Dean

#### THE DEGREE MASTER OF BUSINESS ADMINISTRATION

Sam Ashman Daniel S. Baracz \*\* John L. Barbato \*\* Mark A. Bertison \* Bradley S. Bickford David K. Bishop \* Richard D. Bruder \*\* Janet S. Carlisle ' Rodney A. Connell Drue L. DeBerry David G. Dietz Richard J. Duprey \*\* Frances C. Durham Bruce L. Eskew Robert D. Foley Claude Fortin Robert J. Franson James R. Fries Thomas G. Gallogly

Mildred B. Garrison \*\* Milton E. Gigax Jr. Bobbie M. Goldstein \*\* Ellin J. Graham John S. Hackett John C. Hamilton Carol A. Hatmaker Julie S. Hogan \* Denise M. Hollywood \*\* Sandra K. Holst \* Todd R. W. Horn David L. Hudson Barbara H. Ihde Karen A. James Lawrence D. Jewell Norman L. Karasa Michael A. Ketterhagen \*\* Richard S. Loraine Sue M. Malone

Edward G. Martinez \*\* Harold E. Maxwell \* Sharon M. Meyer \*\* Leon L. Mitchell Joseph Monroe Jr. Robert E. Morris Kimberle A. Mueller \*\* Carol A. Norman \* Gerard S. Paul \*\* Debra S. Paquin Gregory J. Quimby Ronald K. Quinn \* Susan L. Rauscher Jill Roberts Barbara J. Robinson Carol A. Rosenbaum Rex C. Rudy James E. Scarlett \*\* Charles A. Schaefer

Debra A. Scheiwe Barbara A. Schnathorst Debra K. Scott \* Frank R. Selders Elaine A. Silver Randal L. Simpson Carolyn J. Skarke James M. Stata \* James Thomson \*\* Robert T. Thul David L. Tolle Tuan A. Tran \*\* Emma S. Tritt \* James L. Wentz Nathan E. Winterfield Renita P. Wolf

#### GRADUATE SCHOOL OF PUBLIC AFFAIRS

Marshall Kaplan, Dean; Mark McConkie, Resident Dean

THE DEGREE MASTER OF PUBLIC ADMINISTRATION

Marvin R. Adams Sr. Arvald R. Avery \* Laurel H. Bennett Wayne E. Blubaugh Barry J. Brinton \*\* Daniel L. Corsentino \*\*

Zeone J. DeMarrais Linda J. Firth \*\* Karen R. Grines \* Richard J. Karlsson Patricia A. Mather \*\* Bruce A. Mathis \*

Gerald E. Paulus \*\* Charlotte L. Schuler Donald K. Seidel II John N. Shults \*\* Bobby D. Throldah Jeanie D. Turse

Margo Vaughan Edwin W. VonBorstel \*\* Michael G. Wallingford \*\* James H. Williams Allen J. Wineland Charles J. Zeitvogel

#### GRADUATE SCHOOL

Merrill J. Lessley, Resident Dean

#### THE DEGREE OF MASTER OF ARTS

Jane D. Aldea, Education Connie G. Ashmun, Education \* Cathy G. Bailey, Education \* Wesley A. Baki, Education \* Gerald L. Bartsch, Education Darlene E. Beaton, Education \*\* Louise C. Beisler, Education 5 Marit A. Brandt, Education ' Nancy J. Bressler, Education \* Peter R. Brumlik, History Rebecca W. Cafasso, Education Carolyn J. Coatney, Education Deborah L. H. Cole, Education Elden E. Daniel, Education Janeen A. Demi-Smith 50(10109) Momilani C. Dufault, Education Dorothy E. Dunlap, Education Kathleen S. Dutke, Education \* Stephen M. Ferguson, Education \* Teresa J. Garcia, Education \* Carol A. Goeson, Education Daniel L. Gould, Education Judy A. Hall, Education \* Michael R. Hannigan, Education \*\* Susan K. S. Harmon, Education LaVonne C. Harris, Education

Dale R. Hart, Education \* Patricia M. Hawkins, Education Floy A. Hay, Education Janet L. Henderson, Education \* Deborah C. Hill, Education \* Joseph L. Hodge, Education \*\* Anita M. Hohisel, Education Patricia L. Holst, Education \*\* Becky S. A. Houston, Education \* Gail S. lida, Education \* Richard H. Jewett, Education Terence A. Johnson, Education Mary K. Jones , Education ' Judith S. Kay, Education Robert B. Kean, Sociology \*\* Carole A. Klinger, Education Stephen A. Krygier, Education \* Deborah A. Kueck, Education \* Nancy K. Law, Education Patricia A. Lee, Education \*\* Karen H. Lepore, Education \* Thomas D. Lepore, Education \*\* Lana L. Lipich, Education \* Leslie J. Lobban, Education \*\* Glenn R. Logan, Education \*\* Roxanne M. Logan, Education

Linda L. Loper, Education Stephen D. Lovelace, Education \* Catherine A. Martin, Education \* Sherry L.S. Maxwell, Education \*\* Dennis P. McCloskey, Education \* Kathleen M. McEneny, Education \*\* Constance McMillan, Education \* Lillian R. Mears, Education \* Donna J. Melton, Education \* Corrinne V. Minnard, Education \*\* Joseph P. Moroski, Education Judith M.L. Morrill, Education \* Anne L. Muehlbauer, Education \*\* Jeanette F. Mutchler, Education \* Susan S. Nosal, Education Kathleen D. Papachronis, Education Carol A. Pharris, Education Cheryl A. Pratt, Education \* Janice A. Prendergast, Education \* Judith E. Price, History Beverly J. Raider, Education Barbara J. Rauert, Education \* Martha L. Reid, Education \* Sandra L.P. Risberg, Education \* Virginia C. Roska, Education Katherine A. Salaz, Education

Sue A. Saylors, Education \* Eric M. Schewe, Education \*\* Ronda J. Schimpf, Education \*\* Diane L. Sebastian, Education \* Joan C. Sheffer, Education \* Pamela K. Sicola, Education \* Judith I. Sikes, Sociology Martha E. Slayden, Education \* Cynthia S. Smith, Education ' Mark J. Stahler, Education \* Tara L. Strohm, Education Barry K. Thorpe, Education Mary A. Tinsley, Education \*\* Martha A. B. Tirk, Sociology Carmen K. Unruh, Education \* Richard E. Valdez, Education Kathy A. Van't Hull, Education \*\* Merl A. Wallace, Education Anita L. Waller, Education \* Lynne A. Williams, Education Judith M. Williamson, Education \* Janet E. Wineland, Education \* Barbara A. Zeornes, Education

#### THE DEGREE MASTER OF BASIC SCIENCE

Anis M. Abutabikh Sheila M. Arrendondo\* Gregory J. Bennett\*\* David A. Brown\*\* Rosemary J. Dewey\*\* Alta J. Dunst Matthew W. Haile Steven P. Quigley Karl H. Sietman

#### THE DEGREE MASTER OF SCIENCE

Leo Anderson, Electrical Engineering Craig M. Barnhart, Electrical Engineering \*\* William D. Beteille, Computer Science \* Curtis Bressler, Mathematics Capple D Darin L. Buchanan, Computer Science \*\* Thomas R. Bushman, Mathematics \*\* Popply D Jerome J. Butler, Computer Science Charles D. Carlson, Mathematics \*\* Popular Pavid E. Dauenhauer, Computer Science \* Frank B. Dubach, Computer Science Robert S. Dunn, Electrical Engineering \* Roberta Ewart, Electrical Engineering Armand A. Fannin Jr., Computer Science \*\* Donnie Gray, Electrical Engineering Chris Herdt, Electrical Engineering Ryan N. Jensen, Electrical Engineering \*\* Robert Karschnia, Electrical Engineering Charulata Kearney, Computer Science Cheryl L. Kimble, Computer Science Shannon T. Kingsley, Electrical Engineering \* Raymond W. Kolbe, Computer Science \*

Randall Musselman, Electrical Engineering Robert Oliver, Electrical Engineering D'Arlyn C. Oppeboen-Fromme, Electrical Engineering \*\* Ronald Persson, Electrical Engineering Josef E. Pfauntsch, Computer Science James F. Popelka, Electrical Engineering \*\* Robert J. Power, Electrical Engineering Carl D. Reintsema, Electrical Engineering \*\* Kerry Rhea, Electrical Engineering Jamey Robbins, Electrical Engineering David Schlottman, Electrical Engineering Kevin L. Schultz, Electrical Engineering Ian Sheridan, Mathematics Mark D. Smith, Electrical Engineering Cynthia L. Starr, Electrical Engineering \*\* Timothy L. Trowbridge, Electrical Engineering \*\* Kirstan A. Vandersluis, Computer Science \* Gary D. Unger, Computer Science William E. Walsh, Computer Science \*\* Carolyn M. Yeager, Computer Science \*

### THE DEGREE MASTER OF ARTS IN COMMUNICATION WITH C.U. AT DENVER Marta B. Benson

#### THE DEGREE MASTER OF ARTS IN PSYCHOLOGY WITH C.U. AT BOULDER

Teresa L.S. Anderson \* David C. DiRito \*\* Teresa J. Lange \* Jennifer C.P. Nagode Sandra L. Rooks Kathryn L. Swanson Eugene E. Van Dusseldorp \*

#### THE DEGREE MASTER OF ENGINEERING IN SPACE OPERATIONS WITH C.U. AT BOULDER

Maria E. Badessa Charles A. Danley \*\* Reynal R. Guillen Brenda J. Kallighan \*\* Richard W. Kile Richard R. Mayer, Jr. \* Peter J. Ouellette Dale B. Watts \*\*

#### THE DEGREE DOCTOR OF PHILOSOPHY

Douglas E. Dunn, Electrical Engineering \*\*
"A Velocity—Space Model of Carrier Transport in Gallium Arsenide"

#### THE DEGREE DOCTOR OF PHILOSOPHY FROM CU AT BOULDER

Judith Ann Laux, Business Administration "Content Analysis and Corporate Bankruptcy"

<sup>\*</sup> Graduated August 1989 \*\* Graduated December 1989
The preceding lists of candidates for degrees and honors are not an official record that such candidates have been awarded such degrees or honors.

#### CANDIDATES FOR COMMISSION

Second Lieutenant, United States Army

Sean F. Ahrens Kristilee Arndt Edwin L. Bedford Laurinda S. Burns Ronald A. Burns Jr. Christine J. Gutierrez Jonathan K. Hage Keith E. Igyarto James B. Knight Mark L. Lazarcheff Steven C. Mekus Steven L. Morris Brian P. Murphy Shane P. Ousey William H. Rabe III Eliezer Santana Richard D. Smith Michael J. Welch Douglas M. Williams

## HONORARY DEGREE LEONARD VON BIBRA SUTTON

Leonard von Bibra Sutton, former Chief Justice of the Colorado Supreme Court, is a noted Colorado, national, and international judicial reformer; an advocate for global understanding and world peace; and a humanitarian.

He was a national leader of court reform who was very instrumental in bringing about revisions in the Colorado Court System including the re-creation of the Colorado Court of Appeals and the construction of a judicial building to house the Supreme Court and the Appeals Court. Later, as Chief Justice, his inspirational leadership resulted in moving the Colorado Supreme Court to first place in the nation in opinions written.

He has also extended his vision for the judiciary system well beyond Colorado. He was instrumental in establishing the American College of Trial Judges and created the first-ever Institute for Trial Judges in the U.S. When he became

concerned about the state of the judiciary in Central America, he traveled at his own expense throughout the region to examine first-hand ways in which the courts could be modernized.

While Judge Sutton has left a judiciary legacy throughout the hemisphere, he has also remained a loyal supporter of the University of Colorado Law School. The "Chief Justice Sutton Room" was conceived and beautifully furnished by him, and the time he has donated to sitting on the Moot Court has been valued by a generation of CU law students.

Therefore, in recognition of his dedication, commitment and untiring efforts to improve our system of justice and the advancement of peace through law, the Board of Regents is pleased to present Leonard von Bibra Sutton with the degree, of Doctor of Laws, Honoris Causa.

#### 1990 LEGISLATIVE AWARD JAMES T. RIZZUTO

State Senator James T. Rizzuto is currently serving his second term in the Colorado State Senate. During his tenure as a senator, Jim Rizzuto has worked vigorously on behalf of higher education and the University of Colorado.

He is a member of the Joint Budget, Appropriations and Education committees, and has been an influential member of the Advisory Committee Commission on Higher Education. He has long been an advocate of higher education and has played a key role in securing a significant increase in general fund support for higher education over the past three years. In addition, he has worked tirelessly to keep his District 2 Electorate aware of the importance of education in Colorado.

Senator Rizzuto has cultivated a well-earned reputation for fairness and a willingness to listen to his constituents. He is an effective negotiator and arbitrator whose skills in analyzing issues and fostering fair debate contribute greatly to the legislative process.

The University of Colorado and its Colorado Springs campus have benefited from Senator Rizzuto's commitment to sound and equitable decision making, clarity in direction, and his ability to set forth alternatives on behalf of his constituents and all the citizens of Colorado.

It is appropriate, therefore, that Senator James T. Rizzuto be the recipient of the University of Colorado at Colorado Springs Legislative Recognition Award for 1990.

## UNIVERSITY OF COLORADO MEDAL FRED AND NANCY THOMAS

Fred and Nancy Thomas, both graduates of the University of Colorado, have helped organize and fund a farreaching link from the University of Colorado to the Western Slope.

As residents of Cortez, the Thomases helped establish the CU-Cortez partnership. They donated a building in Cortez to house a physical presence of the University in the form of a museum, lecture hall, and meeting place for prospective CU students.

Since 1988, more than 4,000 people have visited the museum, and the weekly lectures have drawn CU alumni and residents of the Southwestern Colorado city together to work toward economic development and cultural enrichment.

The center also is a distribution point for information about the role of CU as the University continues in its mission to broaden its commitment to serve rural Colorado. The efforts of the Thomases have resulted in increasing CU's activety and contributions to Southwestern Colorado.

Fred and Nancy Thomases' initial concept for bringing the resources of the University of Colorado to their city has evolved into a strong university-community partnership, resulting in a wide array of educational and enrichment opportunities for the residents of Montezuma Valley.

In recognition of their generosity and commitment, and for embodying the highest values of University of Colorado graduates, the Board of Regents is pleased to present the University of Colorado Medal to Fred and Nancy Thomas.

#### UNIVERSITY OF COLORADO MEDAL

DOUGLAS R. JOHNSON

Douglas R. Johnson is a highly accomplished and greatly admired administrator at the University of Colorado at Colorado Springs who, for 20 years, has dedicated himself to this University and its students.

As director of the Office of Admissions and Records, Doug Johnson helped usher in a new age of student registration as chair of the University of Colorado's systemwide Student Information System. Through SIS, the University developed modules for admissions, courses, records, registration, telephone registration, transfer credit, scheduling, student billing, and financial aid. This large, complex system will serve the students and faculty of the University into the 21st century.

Mr. Johnson has also worked to inspire a greater sense of community and compassion on the Colorado Springs campus. For the past five years, he has served as co-chair of the campus United Way campaign, providing innovative leadership that resulted in a 400 percent increase in campus contributions. In 1989, in recognition of his long-term service to the University, he was awarded the President's University Service Award.

Now, as he prepares to retire, he is leaving a special legacy to this campus through the creation of an endowed fund to support lectures, symposia, and workshops to bring to the campus and the community people whose lives, work and philosophy have made a difference in how we see ourselves and function as a humane society.

In recognition of his outstanding achievements as a campus and community leader, and for his dedication to the students of this University, the Board of Regents is pleased to present the University of Colorado Medal to Douglas R. Johnson.

### THE PRESIDENTIAL CHAIN OF OFFICE

The Presidential Chain of Office was created in 1980 by Mary Sartor, M.F.A., University of Colorado, Boulder, for the inauguration of President Arnold R. Weber. The Chain was a gift to the University by Mr. and Mrs. David G. Hawthorn, Class of '24.

Colorado gold and silver are used throughout the chain to symbolize the importance of those minerals to the history of the State. The gem stones chosen also consist entirely of minerals from Colorado.

Three pendants are suspended on the chain. The back pendant is the Seal of the State of Colorado surrounded by a golden ribbon representing the golden Circle of Knowledge. The top pendant in the front, the Seal of the University of Colorado surmounted by an arch set with diamond and topaz, signifies the necessary link between the search for knowledge and its practical application to the world outside the University. The Seal is supported at the bottom by the laurel wreaths found in the Seal, emblematic of honor and success.

The bottom pendant is centered with a golden topaz indicating man's quest for knowledge. The surrounding ring is paved with fragmented cubes and diamonds which suggest fragments of knowledge with brilliant breakthroughs of understanding.

The chain surrounding these pendants symbolizes the endless but ever-changing cycle of human knowledge.

#### THE UNIVERSITY SEAL

The University of Colorado has used three different seals in its lifetime.

The present seal, adopted in 1908, depicts a classical Greek male figure seated against a pillar and holding a scroll. A burning torch framed in laurel is placed beside him. The Greek inscription means "Let your light shine."

According to Denver designer Henry Read, the classical design was used because Greek civilization "stands as the criterion of culture." The laurel symbolizes honor or success, the youth of the figure suggests the "morning of life," and the scroll represents written language.

From 1893 to 1908, a seal was used which copies Wyon's medallion, "Science Trims the Lamp of Life." The classical figure of a kneeling Greek woman was flanked by mariposa lilies, which President Baker described as "a true Colorado flower."

Before 1893, a seal was used which essentially copies the Colorado state seal. It was never adopted by the Regents.

The official seal of the University of Colorado is used only by the Regents in transmitting official business.

#### THE NORLIN CHARGE TO GRADUATES

(From the baccalaureate address by President George Norlin, of the University of Colorado, June 1935.)

"You are now certified to the world at large as alumni of the University.

She is your kindly mother and you her cherished sons and daughters.

"This exercise denotes, not your severance from her, but your union with her. Commencement does not mean, as many wrongly think, the breaking of ties and the beginning of a life apart. Rather it marks your initiation in the fullest sense into fellowship of the University, as bearers of her torch, as centers of her influence, as promoters of her spirit.

"The University is not the campus, not the buildings on the campus, nor the faculties, not the students of any one time—not one of these or all of them. The University consists of all who come into and go forth from her

halls, who are touched by her influence and who carry on her spirit. Wherever you go, the University goes with you. Wherever you are at work there is the University at work.

"What the University purposes to be, what it must always strive to be, is represented on its seal, which is stamped on your diplomas—a lamp in the hands of youth. If its light shine not in you and from you, how great is the darkness! But if it shine in you, today and in the thousands before you, who can measure its power?

"With hope and faith, I welcome you into the fellowship. I bid you farewell only in the sense that I pray you may fare well. You go forth, but not from us. We remain, but not severed from you. God go with you and be with you and us."

#### ACADEMIC DRESS

The tradition of the academic costume apparently began during the twelfth or thirteenth century in the early European universities. Since the clergy composed the majority of the educated class, academic dress is an adaptation of the cope or mantle which was usually of silk or wool, and worn by church dignitaries in religious processions.

Through the years, great diversity in color and in style of cap, gown and hood developed. In 1896, the colleges and universities in the United States adopted a uniform code governing academic dress. Today, the black gown, hood, and mortar board worn by the graduates in most institutions follow this code.

While it is not apparent to the casual observer, the gowns worn by the recipients of the various degrees vary somewhat in design. The sleeves of the gown worn by the baccalaureate candidate are long and pointed, while the sleeves of the gown worn by the master's degree recipient are square at one end with a slit at the elbow. The doctor's gown has flowing sleeves with three bars of velvet, and a facing of velvet down the front of the gown.

Those who receive a master's or a doctoral degree from the University of Colorado wear hoods lined with the school colors, silver and gold. The hood worn by the doctoral candidate differs in design from that of the master's as it has side panels and is slightly longer. The velvet border of the hood indicated the degree and usually follows the same code as the color of the tassels.

The oxford cap, usually referred to as a mortar board, is black and has a long tassel which is fastened by a button on the top. Candidates for the baccalaureate degree wear the tassel pendant over the right front of the cap before the degree is conferred, then it is worn on the left side. Summa Cum Laude and special honors candidates will wear gold honor cords.

#### **ACKNOWLEDGEMENT**