



THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND

Conferring of Degrees
at the close of the ninetieth academic year



JUNE 14, 1966
Keyser Quadrangle
Homewood

ORDER OF PROCESSION

The Graduates

Marshals

ERNEST BUEDING	JOSEPH E. JOHNSON
CARL F. CHRIST	RICHARD A. MACKSEY
LAWRENCE GRAYSON	JAN M. MINKOWSKI
ROBERT E. GREEN, JR.	OWEN M. PHILLIPS
JOHN W. GRYDER	CHARLES THOMAS
EDGAR A. J. JOHNSON	STEPHEN S. WOLFF

*

The Faculties

Marshals

GEORGE F. CARTER and JOHN WALTON

*

The Deans, The Trustees and Honored Guests

Marshals

FERDINAND HAMBURGER and ALSOPH H. CORWIN

*

The Chaplain

The Presenter of the Honorary Degree Candidate

The Honorary Degree Candidate

The Chairman of the Board of Trustees

The President of the University

Chief Marshal

CHARLES S. SINGLETON

*

For the Presentation of Diplomas

Marshals

ADAM ALLERHAND	MAURICE J. BESSMAN
FREDERICK T. SPARROW	EDWIN S. MILLS

*

The ushers are members of the Student Council of
The Johns Hopkins University

ORDER OF EVENTS

Milton Stover Eisenhower, President of the University, presiding

PROCESSIONAL

GRAND MARCH FROM "TANNHAUSER" — RICHARD WAGNER

John H. Eltermann, Organist

The audience is requested to stand as the Academic Procession moves into the area and to remain standing until after the Invocation and the singing of the University Ode

*

INVOCATION

Chester L. Wickwire

Executive Secretary, The Levering Hall YMCA

*

THE STAR-SPANGLED BANNER

THE UNIVERSITY ODE

*

GREETINGS

Charles S. Garland

Chairman of the Board of Trustees

*

CONFERRING OF HONORARY DEGREE ON

Thurgood Marshall

Presented by Francis E. Rourke

*

ADDRESS

Thurgood Marshall

Solicitor General of the United States

*

CONFERRING OF DEGREES ON CANDIDATES

Presented by Dean G. Heberton Evans, Jr.:

BACHELORS OF ARTS

Presented by Dean Robert H. Roy:

BACHELORS OF ENGINEERING SCIENCE

MASTERS OF SCIENCE IN ENGINEERING • DOCTOR OF ENGINEERING

ORDER OF EVENTS

CONFERRING OF DEGREES ON CANDIDATES

Continued

Presented by Dean Richard A. Mumma:

BACHELORS OF SCIENCE • BACHELORS OF SCIENCE IN NURSING
BACHELORS OF SCIENCE IN ENGINEERING
MASTERS OF SCIENCE IN ENGINEERING
MASTERS OF SCIENCE • MASTERS OF EDUCATION
MASTERS OF LIBERAL ARTS
CERTIFICATES OF ADVANCED STUDY IN EDUCATION

Presented by Dean Ernest L. Stebbins:

MASTERS OF SCIENCE • DOCTORS OF SCIENCE
MASTERS OF PUBLIC HEALTH • DOCTORS OF PUBLIC HEALTH

Presented by Dean Francis O. Wilcox:

MASTERS OF ARTS
DOCTORS OF PHILOSOPHY
SCHOOL OF ADVANCED INTERNATIONAL STUDIES

Presented by Dean Thomas B. Turner:

DOCTORS OF MEDICINE

Presented by Dean G. Heberton Evans, Jr.:

MASTERS OF ARTS IN TEACHING
MASTERS OF ARTS • DOCTORS OF PHILOSOPHY

*

PRESENTATION OF AWARDS

The President of the University

*

CHARGE TO GRADUATES

The President of the University

*

BENEDICTION

*

RECESSIONAL

MARCH TRIUMPHAL — EDWARD GRIEG

The audience is requested to remain standing after the Benediction until the members of the faculties and the graduates have left the area.

The Alumni Association of The Johns Hopkins University invites all graduates, their relatives and friends, and the members of the faculties to attend a reception on Keyser Quadrangle immediately following the recessional. In case of rain the reception will be held in Levering Hall.

AWARDS

The Christian R. and Mary F. Lindback Foundation Award for Distinguished Teaching.

Awarded to: RICHARD ALLEN
STUART LILIE

The Sarah and Adolph Roseman Achievement Award in Chemistry in recognition of outstanding accomplishment.

Awarded to: ANTHONY A. BAUM

The C. Richard Martin Award in Political Economy for outstanding work by a first or second year graduate student.

Awarded to: ROBERT G. SCOTT

*

THE UNIVERSITY MACE

The University Mace carried by the Chief Marshal, Professor CHARLES S. SINGLETON, was first used at the 1954 Commemoration Day Exercises. Eight symbols are hand wrought in sterling silver on an ebony staff. The symbols represent man's cultural development from ancient times, through the Middle Ages and the Renaissance, to the modern era.

THE PRESIDENTIAL INSIGNIA

Today, for the first time, University President MILTON S. EISENHOWER is wearing the newly-created Presidential Insignia signifying the authority vested in the President by the Board of Trustees. It is a chain of sterling silver links worn around the neck. Portraits of each of the eight Johns Hopkins University presidents are engraved on the faces of eight of the links. On the reverse are engraved the names and dates of office of each President. Twelve blank links for future use are included. The University Seal completes the design.

*Both the University Mace and the Presidential Insignia were done by
Henry Powell Hopkins, Jr., of Baltimore.*

CANDIDATES FOR DEGREES

BACHELORS OF ARTS

- ROBERT DENNIS ABSHIRE, of Palos Verdes, Calif.
IRA BERNARD ALBERT, of Baltimore, Md.
EVANGELOS ANGELOS AFENDRAS, of Athens, Greece
CHARLES THOMAS ALESSIO, of New Kensington, Pa.
GEORGE D. ALLYN, of Terre Haute, Ind.
JONATHAN LOUIS ALPERT, of Miami, Fla.
FRANK LLOYD ANNIS, of Miami Beach, Fla.
GEORGE LYNN AUSTIN, of Baltimore, Md.
ANDREW CHASE BACKUS, of Silver Spring, Md.
DEMETRIUS H. BAGLEY, Jr., of Washington, D. C.
PETER KENNEDY BAILEY, of Easton, Md.
RENATO ARMANDO BARAHONA, of Mexico City, Mexico
DANIEL JACKSON BARKER, of Brookline, Mass.
JOHN CARLYLE BARKSDALE, of Houston, Texas
GERALD ABBA BECKER, of Bronxville, N. Y.
GREGORY WILLIAM BENKOVIC, of Stamford, Conn.
RAOUL ERIC BENVENISTE, of Coral Gables, Fla.
WILLIAM FREDERICK BILLARD, of Alexandria, Va.
RICHARD JEFFREY BONNIE, of Norfolk, Va.
CARL PRESCOTT BON TEMPO, of Hopedale, Mass.
GEORGE PUHL BOUCEK, Jr., of Pittsburgh, Pa.
RICHARD MARTIN BOUHAN, of Chambersburg, Pa.
JAMES WESLEY BOWMAN, of Hagerstown, Md.
JOHN MICHAEL BRICKMAN, of New York, N. Y.
GARY M. BRITTENHAM, of Decatur, Ala.
STEVEN MICHAEL BROWN, of Arlington, Va.
WINSTON NICHOLSON BRUNDIGE, of Baltimore, Md.
ARCHIBALD THOMAS BRYANT, of Washington, D. C.
RICHARD MARC BULL, of Baltimore, Md.
HERBERT WILLIAM LOUIS BURHENN, Jr., of Baltimore, Md.
MERLE RUDY BUSBY, of Salisbury, N. C.
RALPH AUGUSTUS CANN III, of Palmyra, N. J.
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HARVEY CARMEL, of Baltimore, Md.
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HOWARD ALFRED CARTER, of Baltimore, Md.
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THOMAS WOOD CLASH, of Watchung, N. J.
BENJAMIN COHEN, of Baltimore, Md.
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EDWARD H. CONLEY, of Huntington Station, N. Y.
KARL MARKLEY CONRAD, of Houston, Texas
SAMUEL COOPER, of Baltimore, Md.
QUENTIN DOUGLAS COPLON, of Providence, R. I.
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LUIS PABLO COSTAS ELENA, of Ponce, Puerto Rico
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TONY MATHIAS DEETHS, of Northridge, Calif.
RONALD DUANE DELCOTTO, of Export, Pa.
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 WILLIAM MICHAEL LIPNICK, of Baltimore, Md.
 JOHN VAN SLYKE LOCHHEAD, of Burlington, Vt.
 I. BARRY LORINSTEIN, of Ventnor, N. J.
 PHILIP FRANCIS MACGUIRE, Jr., of Cedarhurst, N. Y.
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 F. KEVIN MURPHY, of Oroville, Calif.
 DAVID PAUL NORBY, of Sunland, Calif.
 BARRY EDWARD NORTH, of Baltimore, Md.
 MICHAEL STANLEY OIDICK, of Baltimore, Md.
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 HOWARD BARRY ROSENBLATT, of Baltimore, Md.
 GERALD DAVID ROSENBLUM, of Ithaca, N. Y.
 ROBERT W. ROSENTHAL, of Philadelphia, Pa.
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 STEVEN KEITH SMITH, of Derwood, Md.
 DAVID LOUIS SNYDER, of Baltimore, Md.
 JUDAH CAREY SOMMER, of Pleasant Valley, N. Y.
 JON WILCOX SONEN, of Arlington, Va.
 ILO SOOVERE, of Cincinnati, Ohio
 JOHN RUSSELL SOPKA, of Boulder, Colo.
 NEWTON JOSEPH SORROW, JR., of Richmond, Va.
 HENRY ANDREW SPALINGER, of Calabasas, Calif.
 DONALD GARY SPEAR, of Pittsburgh, Pa.
 LOUIS PHILIP STEIN, of Miami Beach, Fla.
 PHILIP DENNISON STIEG, of Clintonville, Wis.

MICHAEL MAYNARD STROUP, of Honolulu, Hawaii
 RALPH TOSHIH SUETSUGU, of Honolulu, Hawaii
 PETER KEVIN SYSAK, of Baltimore, Md.
 JOHN WILLIAM TAYLOR, of Baltimore, Md.
 CHRISTOPHER FRANCIS TERRENCE, JR., of Albany, N. Y.
 C. GEOFFREY TOPLITZ, of New York, N. Y.
 ALEX TOTII, of Chagrin Falls, Ohio
 JACK TUCKER, of Baltimore, Md.
 WILLIAM KIRKBY TUCKER, of Chevy Chase, Md.
 JAMES MARSHALL TURNER, of Washington D. C.
 SUMNER BARNES TWISS, JR., of Baltimore, Md.
 JAY NICHOLAS UMBREIT, of Westfield, N. J.
 ROBERT WILLIAM VIRNSTEIN, of Tall Timbers, Md.
 WILLIAM HERBERT WALDMAN, of Wilmette, Ill.
 JUSTIN CLEMENT WALKER, of Chevy Chase, Md.
 TERRY SEIBEL WALKER, of Baltimore, Md.
 KENNETH FLAGG WALTERMIRE, of Somers, Conn.
 JACK HERBERT WATKINS, JR., of Peterboro, N. H.
 CHRISTIAN GORDON WEBER, JR., of Springfield, Pa.
 CHARLES CRAIG WEHRENBURG, of Baltimore, Md.
 ROBERT STEPHEN WEINBERG, of Whiting, Ind.
 RONALD BARBOUR WEINTRAUB, of Frederick, Md.
 CALVIN L. WEISBERGER, of Kingston, Pa.
 MARK ERIC WEISS, of Mt. Vernon, N. Y.
 JOSEPH DANIEL WELCH, of Hornell, N. Y.
 MARK ALLEN WENTWORTH, of Melrose, Mass.
 WILLIAM JOSEPH WESCOTT, of Baltimore, Md.
 H. FREDERICK WESSLER, of Yorktown Heights, N. Y.
 JAMES NEVILLE WHITE, of Newport News, Va.
 THOMAS HUGH WILLIAMS, of New Rochelle, N. Y.
 STEPHEN HENRY WINER, of Baltimore, Md.
 CHARLES WILLIAM WOOD, JR., of Redondo Beach, Calif.
 CRAIG DURYEA WOODARD, of Port Jefferson, N. Y.
 BRUCE LANSING WOODLEY, of Vineland, N. J.
 RICHARD HENRY WORSHAM, of Baltimore, Md.
 HAROLD RUSSELL WRIGIT, JR., of Baltimore, Md.
 DARRYL ARNOLD YOBlick, of Philadelphia, Pa.
 JEFFREY FRANCIS ZABLER, of Garden City, N. Y.
 HENRY DEARBORN ZIEGLER, of Bernardsville, N. J.
 WILLIAM DAVID ZIGRANG, of Los Angeles, Calif.
 CURT RICHARD ZIMANSKY, of Iowa City, Iowa

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Graduating with Departmental Honors

GEORGE D. ALLYN	Psychology	EDWIN EARLE ELLIS	Psychology
GARY M. BRITTENHAM	Philosophy	NATHAN STANLEY FRANKLE	Physics
STEVEN MICHAEL BROWN	Physics	JOHN MELVIN FRAZIER	Physics
ARCHIBALD THOMAS BRYANT	History	JOSHUA BARUCH HALPERN	Physics
HERBERT WILLIAM LOUIS BURHENN, JR.	Philosophy	BRUCE LOWELL HANSON	Psychology
THOMAS HAUGEN CARPENTER	Writing Seminars	WALTER H. JESTEADT	Psychology
JAMES EDWARD CASKEY, III	History	MARTIN LEWIS KAREL	Mathematics
BENJAMIN COHEN	Physics	GEORGE RUSHING KEMPF	Mathematics
ROBERT ALAN DAVIDSON	Chemistry	RICHARD BRANDON KERSHNER, JR.	English

MICHAEL GEORGE KORT	History	JUDAH CAREY SOMMER	Political Science
WILLIAM MICHAEL LIPNICK	Romance Languages	PETER KEVIN SYSAK	Chemistry
MARK NOEL MARTZ	Biophysics	JACK TUCKER	History
ROBERT RAYMOND MILLER	International Studies	JAMES MARSHALL TURNER	Physics
TOBY LEE SIMON	History		

Graduating with General Honors

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DEMETRIUS H. BAGLEY, JR.	FREDERICK RICHARD LEVIN
RAOUL ERIC BENVENISTE	STUART LEE LINAS
WILLIAM FREDERICK BILLARD	WILLIAM MICHAEL LIPNICK
GARY M. BRITTENHAM	MARK NOEL MARTZ
STEVEN MICHAEL BROWN	FRANK AUGUSTUS MCGREW, III
HERBERT WILLIAM LOUIS BURHENN, JR.	CURTIS ANSLEY MCMICHAEL
CHARLES HERBERT CAPPER	ALBERT LEWIS MENNER
HOWARD ALFRED CARTER	MARIO FRANK MORELLI
JAMES EDWARD CASKEY, III	HOWARD J. READ
BENJAMIN COHEN	TERRANCE DAVIS REYNOLDS
LEO H. CRIEP, JR.	ROBERT W. ROSENTHAL
WILLIAM JOSEPH DEANGELO	HENRY STUART SABATIER, JR.
RICHARD PHILIP ELLMAN	DAVID ADAM SCHOOLMAN
BRUCE DAVID FISHER	PETER BENNETT SHELLEY
NATHAN STANLEY FRANKLE	TOBY LEE SIMON
DAVID MURRAY GOTTLIEB	EDWARD DOYLE SMITH, JR.
H. LEON GREENE	DAVID LOUIS SNYDER
JAMES GLENN HAINES	PHILIP DENNISON STIEG
JOSHUA BARUCH HALPERN	JACK TUCKER
JOSEPH MOLL HELMS	JAMES MARSHALL TURNER
JAMES LEONARD HUDSON	JAY NICHOLAS UMBREIT
WILLIAM COOLIDGE HUMPHRIES, JR.	ROBERT STEPHEN WEINBERG
MARTIN LEWIS KAREL	RONALD BARBOUR WEINTRAUB
GEORGE RUSHING KEMPF	CALVIN L. WEISBERGER
RICHARD BRANDON KERSHNER, JR.	MARK ERIC WEISS
LAWRENCE JAMES KOEP	WILLIAM JOSEPH WESCOTT
MICHAEL GEORGE KORT	WILLIAM DAVID ZIGRANG
	CURT RICHARD ZIMANSKY

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LOUIS MELVIN BROWN, JR., of Atholton, Md.	ROBERT BRUCE FISHER III, of Jacksonville, Md.
PETER BROWN, of Burtonsville, Md.	HARVEY STUART FOX, of Baltimore, Md.
LAWRENCE CONSTANT CARUTHERS, of Arlington, Va.	JOSEPH GARY GERATH, of Severna Park, Md.
ROBERT ELWOOD CHILDERS, of Huntington, W. Va.	JAMES WILLIAM GILBART, of Baltimore, Md.

BARRY GOLDSTEIN, of Lawrence, N. Y.
 PAUL DOUGLAS HARPER, of Hampstead, Md.
 JOSEPH EDWIN HARTKA, of Baltimore, Md.
 WILLIAM WALTER HELLIER, JR., of Baltimore, Md.
 JAMES MICHAEL HEMSLEY, of Baltimore, Md.
 ALLAN SMITH HUSTON, JR., of Baltimore, Md.
 RONALD EUELL JONES, of Baltimore, Md.
 ROBERT EUGENE KNAUFF, of Ward's Chapel, Md.
 JAMES ERNEST KOLSRUD, of Frederick, Md.
 EDWARD KUTLIK, of Baltimore, Md.
 JOHN VAN WIE LASHIER, of Seattle, Wash.
 JOSEPH MARTIN LIDSTON, of Baltimore, Md.
 BRIAN GEOFFREY LUCAS, of Parkton, Md.
 ARISTIDES MELISSARATOS, of Baltimore, Md.
 ARNOLD MARK MICHELSON, of Baltimore, Md.
 NICHOLAS PAUL MILLER, of Murtyville, Pa.
 ROBERT FREDERICK MILLER, of Westminster, Md.
 JOHN GARLAND MOORE, of Woolford, Md.
 MICHAEL PEERCE MULLINIX, of Baltimore, Md.
 MICHAEL JAY NUSBAUM, of Silver Spring, Md.
 FRANK JOSEPH PERGAL, of Silver Spring, Md.

JOSEPH REED POLEK, of Baltimore, Md.
 CARL SCOTT POWERS, of Garden Grove, Calif.
 ROBERT ALLEN PRYOR, of Hagerstown, Md.
 FRANCIS CARLYLE RALEY, of Leonardtown, Md.
 PETER JAMES REGNA, of Englewood Cliffs, N. J.
 RICHARD MORGAN SABAT, of Baltimore, Md.
 BRUCE ST. JOHN, of Forest Hills, N. Y.
 RODNEY KEITH SCHUTZ, of Baltimore, Md.
 GUY THOMAS SICILIA, of Thurmont, Md.
 ARNOLD JAY SINDLER, of Baltimore, Md.
 RICHARD HENRY SMITH, JR., of Baldwin, Md.
 ROLF STEENDAL, of Gothenburg, Sweden
 BERNARD EUGENE STULL, of Frederick, Md.
 DAVID BLAIR SWINK, of Vienna, Va.
 CHARLES FREDERICK TOEWE, JR., of Huntingdon Valley, Pa.
 PHILIP STEVEN UNGER, of Kew Garden Hills, N. Y.
 GLENN CARL WAEHNER, of Scarsdale, N. Y.
 ELIOT LEONARD WEGBREIT, of Wheaton, Md.
 LAWRENCE ALBERT WILSON, of Randallstown, Md.
 PETER DAVID WOLAK, of Baltimore, Md.
 FRED WOLPERT, of Baltimore, Md.

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Graduating with Honors

STEFAN DAVID BLOOMFIELD
 ALLEN JACOB DOUMA
 ROBERT EUGENE KNAUFF
 BRIAN GEOFFREY LUCAS

MICHAEL JAY NUSBAUM
 ROBERT ALLEN PRYOR
 ELIOT LEONARD WEGBREIT

MASTERS OF SCIENCE IN ENGINEERING

with titles of essays

PRAVINKUMAR VIRCHANDBHAI AJMERA, of Madras, India, B. Sc. University of Madras, 1964. Chemical Engineering. Study of Opposed Jet Diffusion Flame.

DONALD LEE BROSKY, of Fairport, N. Y., B. S. The Pennsylvania State University, 1959. Environmental Engineering Science.

ABS and Solids in a Small Urban Watershed at Extreme Flows.

SIVAM CHANDRASEKHAR, of Madras, India, B. S. in Technology University of Madras, 1963. Chemical Engineering. A Semi-Empirical Approach for the Determination of the Structure of the Liquid-Liquid Interphase.

JUDSON WILLIAM CRAWFORD, of Des Moines, Iowa, B. S. Iowa State University of Science and Technology, 1964. Operations Research and Industrial Engineering.

The Use of Prior Information in Sequential, Single Variable Mathematical Search Theory.

DANIEL WALTER CWCYNAR, of Scranton, Pa., B. S. The Pennsylvania State University, 1964. Operations Research and Industrial Engineering.

Optimal Routing in a Communications Network.

NORBERT DEE, of Milwaukee, Wis., B. of C. E. Marquette University, 1965. Environmental Engineering Science.

An Investigation of Waste Water Reuse as a Supplement to the Domestic Water Supply.

WILLIAM ALONZO DENSON, of Greenbelt, Md., B. S. United States Military Academy, 1958. Environmental Engineering Science.

Analysis of Algal Activity in Back River, Baltimore, Maryland.

HATIM FAZLEHUSEIN DOCTOR, of Calcutta, India, B. of Chem. Eng. Jadavpur University, 1962; M. Sc. University of Bombay, 1963. Chemical Engineering.

Particle Size Distribution and Droplet Dynamics in Dispersions.

- RICHARD EDWARD FEDLER, of Elm Grove, Wis., B. of C. E. Marquette University, 1965. Environmental Engineering Science.
Distribution of Brackish Waters in the United States with Reference to Desalination.
- ANNE CAROLYN FISHER, of Crewe, Va., A. B. Randolph-Macon Woman's College, 1964. Operations Research and Industrial Engineering.
Application of the Critical Path Method to Multicycle Projects.
- L. RUSSELL FREEMAN, of Montrose, Colo., B. S. (C. E.), B. S. (Bus) University of Colorado, 1961. Environmental Engineering Science.
Trickling Filters.
- LUCIAN MASON FURROW, JR., of Norfolk, Va., B. C. E. University of Virginia, 1964. Environmental Engineering Science.
The Enumeration and Significance of Coliform Bacteria in Pulp and Paper Mill Effluents.
- STEVEN JOEL GITOMER, of Pennsauken, N. J., B. E. S. The Johns Hopkins University, 1964. Electrical Engineering.
A Brush Cathode Plasma.
- ALBERT LOUIS HEDRICH, of Bethesda, Md., Electrical Engineering.
The Use of Bolometric Techniques for the Measurement of Microwave Power.
- EDMUND GEORGE HENNEKE II, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1963. Mechanics.
The Determination of the Modes of Elastic Wave Propagation and of the Orientation Dependence of Their Attenuation Due to Dislocation Motion in Zinc.
- FRANK MELVILLE HOOT, of Sinking Spring, Pa., B. S. C. E. Indiana Institute of Technology, 1950. Environmental Engineering Science.
Field Evaluation of the LAS Removal across a Trickling Filter.
- JOHN CHARLES KENNEDY, of Le Roy, N. Y. Environmental Engineering Science.
Airborne Infrared Thermometry in Water Temperature Sensing.
- ACHILLE JACQUES LEBLANC, of Trois-Rivieres, Que., Canada, B. of Applied Sciences Laval University, 1961. Biomedical Engineering.
A New Method of Recording Pulsatile Arterial Dilatation.
- EDWARD ALBERT METZBOWER, of Baltimore, Md., B. S. Loyola College, 1960. Mechanics.
A Noncentral Force Model for Hexagonal Close-Packed Crystal Lattices.
- MACE TOKUMI MIYASAKI, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1960. Electrical Engineering.
Pseudo-Random Noise Sequences.
- JOHN ROLAND ORNDORFF, of Arlington, Va., B. S. C. E. Duke University, 1962. Environmental Engineering Science.
Domestic Water Use Differences in Individual Well and Public Water Supplies.
- FREDERICK WALLACE PYNE, of Linwood, Md., Environmental Engineering Science.
Municipal Waste Stabilization Lagoons as Used in the State of Maryland.
- ARYE ROSEN, of Tel-Aviv, Israel, B. S. Howard University, 1963. Electrical Engineering.
Applications of the Circular Waveguide in High Quality Communication Systems.
- WOLFGANG H. SACHSE, of St. Marys, Pa., B. S. The Pennsylvania State University, 1963. Mechanics.
A Study of the Orientation Dependence of Ultrasonic Attenuation of Aluminum Single Crystals Undergoing Plastic Deformation.
- DAVID KEITH SCHMALZER, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1964. Chemical Engineering.
An Experimental Study of Metal Dissolution in Laminar Tube Flow Reactors.
- HANS H. SCHUSTER, of Ludwigshafen/Rhein, Germany. Environmental Engineering Science.
An Automated Determination for Orthophosphate in Waters Containing Dissolved Iron.
- KATSUO TONOOKA, of Ashikaga, Japan, B. S. Keio University, 1962. Chemical Engineering.
Viscous Heating during Couette Flow of a Newtonian Liquid between Isothermal Cylinders.
- GERHARD TSCHANNERL, of Swarthmore, Pa., Environmental Engineering Science.
Financing Water Supply and Sewage Disposal Where Capital Is Scarce.
- DONALD CLIFTON UBER, of South Hadley, Mass., B. E. E. Cornell University, 1962. Biomedical Engineering.
A Telephone Transmission System for On-Line Computer Control of Operant Behavior Experiments.
- BEHIC UYAN, of Istanbul, Turkey, M. S. in Civil Eng. Istanbul Technical University, 1953. Environmental Engineering Science.
Water Hammer and Its Prevention.
- JAMES GEORGE VAMVAKIAS, of South Portland, Maine, B. S. University of Maine, 1962. Environmental Engineering Science.
Aerated Stabilization Basin Treatment of Pulp and Paper Mill Effluent.
- CHANG CHING WANG, of Taipei, Taiwan, Republic of China, B. S. Tangshan College of Engineering, National Chiao Tung University, 1944. Environmental Engineering Science.
An Approach to Water Supply Operator Training and Certification.
- JOST O. L. WENDT, of Glasgow, Scotland, Chemical Engineering.
A Study of the Hydrogen Bromine Flame.

DOCTOR OF ENGINEERING

with title of dissertation

TOMOS LLEWELYN AP RHYS, of Bangor, North Wales, B. Sc.
University College of North Wales, 1948; M. S. E. The
Johns Hopkins University, 1959. Electrical Engineering.
Radially Symmetric Lenses for Millimeter Wave Antennas.

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BACHELORS OF SCIENCE

RONALD ELMER ANTLITZ, Sr., of Baltimore, Md.
ALLAN JAY BAER, of Washington, D. C.
LYMAN ORVILLE BAIER, of Bel Air, Md.
GABEL LEROY BAUER, of Ellicott City, Md.
GEORGE ALEXANDER BAUMANN, of Baltimore, Md.
DOROTHY MAY BEAMAN, of Baltimore, Md.
JOHN WENDELL BEAVERS, of Baltimore, Md.
GOLDIE WACHTER BEBER, of Baltimore, Md.
JOEL MARK BERELOWITZ, of Baltimore, Md.
DONALD HENRY BERLAU, of Baltimore, Md.
HAROLD LYNN BLANN, of Reisterstown, Md.
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HARRY LAMAR BOLLING, of Wise, Va.
CECIL DORAN BOWERS, of Baltimore, Md.
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CHARLES CURTIS BRUSH, of Annapolis, Md.
ARTHUR PURDUM CALTRIDER, of Reisterstown, Md.
EDWIN THOMAS CALVERT, of Pasadena, Md.
JAMES WILBUR CASE, JR., of Finksburg, Md.
JOAN JOHNSTON CLARK, of Westminster, Md.
RONALD LEE CONLEY, of Baltimore, Md.
MARY ELIZABETH SANDS COOK, of Baltimore, Md.
ROBERT EDMUND DALY, JR., of Baltimore, Md.
ANTHONY MICHAEL D'ANTONIO, of Glen Burnie, Md.
NANCY TILGHMAN BRICE DAVIS, of Baltimore, Md.
ARDEBELLA DEAN, of Baltimore, Md.
JOHN ARTHUR DECKER, of Baltimore, Md.
PERRY JOHN DEMOS, of Baltimore, Md.
CLIFTA MAY EDGINGTON, of Baltimore, Md.
LILLY LOWINGER EGERTON, of Owings Mills, Md.
DORIS STYCHE ELLIS, of Baltimore, Md.
ERNEST ROBERT ELWELL, of Baltimore, Md.
ANTON STANLEY ENDLER, of Sykesville, Md.
AUDREY COOK FERGUSON, of Baltimore, Md.
CHARLES JOSEPH FERN, of Randallstown, Md.
JOHN FRANCIS FIEDOR, of Bowie, Md.
JEANNE ELIZABETH FISHER, of Baltimore, Md.
GERALD FRANK FREY, of Baltimore, Md.
THOMAS GABRISZESKI, of Baltimore, Md.
RODNEY DAVID GARDNER, of Baltimore, Md.
LEONA M. FISHER GRAHE, of Baltimore, Md.
MILDRED STEIN GREMLER, of Catonsville, Md.
WILLIAM CHARLES GRINDLE, of Bel Air, Md.
WILLIAM ORVILLE HARRISON, of Linthicum, Md.
HELEN MORISON HEATON, of Baltimore, Md.
CHARLES LEE HEDGEPEETH, of Baltimore, Md.
ALEENE PASSMORE HELLIER, of Baltimore, Md.
CHARLES OTTO HOFFMAN, of Randallstown, Md.
FRANCIS LEO HOPKINS, of Sykesville, Md.
ANNE ROBINSON JARRETT, of Baltimore, Md.
KINNETH RAY JOHNSON, of Baltimore, Md.
DOROTHY TUCKER KATZENSTEIN, of Baltimore, Md.
RENE KAWALEC, of Baltimore, Md.
HENRY OVILA KELLER, of Baltimore, Md.
LEROY LINWOOD KELLY, of Linthicum, Md.
ROBERT RICHARD KLOVENSKY, of Baltimore, Md.
LOUIS CASIMIR KORDEK, of Baltimore, Md.
FREDERICK CHARLES KUHN, JR., of Baltimore, Md.
ALFARATA MCCARRIAR LE TEOUR, of Baltimore, Md.
RAYMOND CHRISTIAN LOHN, JR., of Baltimore, Md.
FRANK EBAUGH MASON, JR., of Baltimore, Md.
MENA ROSE MCGEE, of Baltimore, Md.
GILBERT DORSEY MCNEW, of Annapolis, Md.
ROSE SAFER MILLER, of Baltimore, Md.
JAMES BURNS MILLETTE, of Baltimore, Md.
DIANE KLEINBERG MONHEIT, of Forest Hills, N. Y.
BEVERLY ANN PARKS MULLIKIN, of Queenstown, Md.
HEIKO MULTHOPP, of Baltimore, Md.
NORMAN STANLEY NOGIC, of Kingsville, Md.
THOMAS ARTHUR PAGE, of Baltimore, Md.
SALLY LANGER PARELHOFF, of Baltimore, Md.
FLOYD LAVINIUS PARKS, JR., of Baltimore, Md.
WILLIAM FREDERICK PATTEN, of Baltimore, Md.
ROBERT WILLIAM PITTMAN, of Baltimore, Md.
TURID ANDERSSON POWELL, of Oslo, Norway
PANTYP TOONKUL RAMASOOTA, of Chiangmai, Thailand
WILLARD GOLDSMITH ROUSE, of Baltimore, Md.

WILLIAM NELSON ROWE, of Newark, Del.
RUTH PATRICIA RYAN, of Baltimore, Md.
NANCY RAVITCH SCHWENTKER, of Baltimore, Md.
JOSEPH WALTER SHAW, of Lutherville, Md.
GERHARD HERBERT SIEBERT, of Baltimore, Md.
EDWARD ROBERT SLACK, of Joppa, Md.
DANIEL JOSEPH SMITH, of Elkton, Md.
ALVIE GLENN SPENCER, Jr., of Westminster, Md.
BETHANY JUNE STRONG, of Baltimore, Md.
MELISSA BRYAN STROUP, of Baltimore, Md.
RICHARD DAVISSON TABER, of Baltimore, Md.
RUTH YOST TABOR, of Baltimore, Md.

CALVIN LEROY TALBOTT, of Baltimore, Md.
MALCOLM BIBB TEBBS, JR., of Cockeysville, Md.
WARREN WALTER THIELL, of Baltimore, Md.
EDWIN LYBURN THOMAS, of Elkton, Md.
ANN ATKINS TORMEY, of Baltimore, Md.
HELEN CATHERINE WENZEL, of Baltimore, Md.
CARROLL CLAYTON WEYRICH, of Baltimore, Md.
WILLIAM EDWARD WIEDEFELD, of Timonium, Md.
MICHAEL FRANCIS WILT, of Baltimore, Md.
ALMA WARD WOOD, of Baltimore, Md.
LOUISE NEUHAUS WORRELL, of Baltimore, Md.
AUDRA GENEVA ZINN, of Baltimore, Md.

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Graduating with Honors

DOROTHY MAY BEAMAN
JOHN WENDELL BEAVERS
JEANNE ELIZABETH FISHER
HELEN MORISON HEATON
DOROTHY TUCKER KATZENSTEIN

DIANE KLEINBERG MONHEIT
CALVIN LEROY TALBOTT
HELEN CATHERINE WENZEL
CARROLL CLAYTON WEYRICH
LOUISE NEUHAUS WORRELL

BACHELORS OF SCIENCE IN NURSING

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JEANNETTE BRUNDICK CROUCH, of Joppa, Md.
MARY ADAMS DE GROOT, of Easton, Md.
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DONNA STINE FABLE, of Cumberland, Md.
MARGARET CAROLINE GERBER, of North Canton, Ohio
SUSAN HYATT, of Jersey City, N. J.
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MEREDITH FAWCETT KOOYMAN, of Baltimore, Md.
NANCY ELLEN KROUSE KRAUSS, of Baltimore, Md.
DONNA MEZGER LACROIX, of Baltimore, Md.
CARLENE CLASPER NELSON, of Baltimore, Md.
MARTHA NORTON, of Lincoln, Mass.
CAROL GERTRUDE SCHMIDT, of Marriottsville, Md.
BARBARA HAHN STALEY, of Baltimore, Md.
JANE STROUP, of Baltimore, Md.
PATRICIA ANNE VREELAND, of Baltimore, Md.
CHARLOTTE ELLEN LEE WILLIAMS, of Baltimore, Md.
INGRID LAMBORN WILSON, of Baltimore, Md.

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BACHELORS OF SCIENCE IN ENGINEERING

WILSON COLEMAN ADKINS, of Reisterstown, Md.
DENNIS IRA AYERS, of Baltimore, Md.
RONALD HARVEY BANE, of Baltimore, Md.
HENRY THOMAS BAUERNEFEIND, of Baltimore, Md.
WARREN JOSEPH BAYNE, of Baltimore, Md.
BERNARD BENNETT, of Baltimore, Md.
BELFORD JERRY BOLES, of Baltimore, Md.
JOHN ALFRED BORZATTI, of Baltimore, Md.
JOHN LEROY BOWERS, of Baltimore, Md.
JACK BURNS, of Ellicott City, Md.
NICHOLAS JOSEPH CALVANO, of Baltimore, Md.
CLARENCE LEROY CAMPBELL, of Baltimore, Md.

RONALD ANTHONY CANNATA, of Baltimore, Md.
DANIEL NICHOLAS CAPUTO, of Ellicott City, Md.
RICHARD LAWRENCE CASWELL, of Baltimore, Md.
THOMAS LEON CAVEY, JR., of Linthicum Heights, Md.
WILLIAM MARTIN CHISHOLM, of Baltimore, Md.
ALBERT RALPH CLARK, of Baltimore, Md.
ROGER WILLIAM CONNOR, of Baltimore, Md.
HARRY EDWARD CONWAY, of Baltimore, Md.
ALLEN EDWIN CROUT, of Glen Burnie, Md.
JOSEPH MICHAEL CUNNINGHAM, of Riviera Beach, Md.
ROBERT LEE DEATON, of Baltimore, Md.
ALTON EARL DIXON, of Towson, Md.

WILLIAM STEPHEN DVORNICKY, of Baltimore, Md.
 JAMES BERNARD ERDMAN, of Baltimore, Md.
 HERBERT BRAMWELL FARMER, of Cockeysville, Md.
 MICHAEL BENJAMIN FELDMAN, of Baltimore, Md.
 GEORGE JOSEPH FENNINGTON, of Glen Burnie, Md.
 JOHN WILLIAM FLAHERTY, of Bel Air, Md.
 CARL LAVERN FOGLE, of Bowie, Md.
 ANTHONY FRANCIS FORLENZA, of Baltimore, Md.
 LAWRENCE JOSEPH FRANCE, of Baltimore, Md.
 ROBERT HOMER FULLER, of Baltimore, Md.
 BERNARD GOODMAN, of Baltimore, Md.
 LAWRENCE LEE GOSNELL, of Kingsville, Md.
 CARROLL COSTER GRAY, of Baltimore, Md.
 DONALD WILLIAM GRIFFIN, of Baltimore, Md.
 DAY KAY GRIMES, JR., of Baltimore, Md.
 MORGAN TRIMBLE HALL, of Baltimore, Md.
 WALTER WILLIAM HAMMETT, of Sykesville, Md.
 HOWARD WHITMAN HANCOCK, of Baltimore, Md.
 SAMUEL JOSEPH HARDESTY, of Linthicum, Md.
 ROBERT LEROY HARROUN III, of Baltimore, Md.
 DAVID ALLAN HEDLAND, of Baltimore, Md.
 L. ALBERT HEMP, of Frederick, Md.
 JAMES HENRY HENDERSHOT, of Timonium, Md.
 LEWIS SEYLAR HEYSER, SR., of Linthicum Heights, Md.
 PETER J. HOET, of York, Pa.
 RICHARD ANTHONY HRADSKY, of Baltimore, Md.
 WILLIAM FRANCIS JANYSKA, of Baltimore, Md.
 JOHN KENNETH JARBOE, of Baltimore, Md.
 CHARLES AMBROSE JEDNORSKI, of Randallstown, Md.
 ROBERT THOMAS JENT, of Baltimore, Md.
 VERNON CLIFTON JETT, of Baltimore, Md.
 MAURICE P. JOHNSON, of Randallstown, Md.
 RAYMOND CHARLES JUNG, of Randallstown, Md.
 ROY ALLEN KAMPMEYER, of Timonium, Md.
 ROBERT JOSEPH KANE, of Baltimore, Md.
 MICHAEL JOHN KEDEL, of Baltimore, Md.
 RALPH J. KIBLER, of Baltimore, Md.
 GEORGE ALLEN KILGORE, of Baltimore, Md.
 JAMES DOUGLAS KNIFFIN, of Baltimore, Md.
 DAVID B. KRATZ, of Bowie, Md.
 JOSEPH CHARLES KRAUS, of Baltimore, Md.
 JOHN PHILIP LAMBERT, of Millersville, Md.
 ROLAND GEORGE LASCOLA, of Baltimore, Md.
 MICHAEL BENJAMIN LICHTIG, of Baltimore, Md.
 WALLACE ELLIOTT LOEWER, of Baltimore, Md.
 JOHN LOGIS, JR., of Baltimore, Md.
 IRVING MAGER, JR., of Baltimore, Md.
 ADAM FRANK MALINDA, of Baltimore, Md.
 AARON MALL, of Baltimore, Md.
 WALTER ADAM MARCINSKI, of Baltimore, Md.
 JAMES SCHAEFFER McCULLOUGH, JR., of Baltimore, Md.
 FRANCIS WALLACE McDONOUGH, of Baltimore, Md.
 WILLIAM THORNTON MCGRAW, of Monkton, Md.
 WILLIAM SAMUEL McQUAY, JR., of Baltimore, Md.
 BERNARD STARR MEAGHER, of Baltimore, Md.
 VERNON WALTER MIELKE, of Sykesville, Md.
 CHESTER ALBERT MILLER, of Baltimore, Md.
 DONALD ELLSWORTH MILLER, of Glen Burnie, Md.
 LAURENCE EDWARD MILLER, JR., of Baltimore, Md.
 ROY DOUGLAS MILLER, of Westminster, Md.
 FRED MITCHELL, of Manchester, England
 JAMES D. MURPHY, of Baltimore, Md.
 GEORGE LEONARD NEIDHARDT, JR., of Baltimore, Md.
 RICHARD DOUGLAS NEUMYER, of Reisterstown, Md.
 JOHN RICHARD NORTH, of Baltimore, Md.
 CHARLES RAY OSGOOD, of Forest Hill, Md.
 FRANCIS XAVIER OSWALD, of Glen Burnie, Md.
 ROBERT EDWARD OTT, of Baltimore, Md.
 MERLE CHARLES PEIFFER, of Joppa, Md.
 JAMES WILLIAM PERRY, of Baltimore, Md.
 JAMES THEODORE PETNIC, of Baltimore, Md.
 CHARLES JOSEPH PIRRELLO, of Baltimore, Md.
 LAWRENCE CHARLES PLUMHOFF, of Baltimore, Md.
 DAVID LINN POST, of Baltimore, Md.
 ALBERTO LUIS RIBAS, of Havana, Cuba
 JOHN GEORGE RIDGE, of Baltimore, Md.
 RICHARD ELIAS ROGERS, of Colonia, N. J.
 SHELDON ROSOFF, of Baltimore, Md.
 HAROLD DEAN ROSS, of Bel Air, Md.
 ALEXANDER JOSEPH ROSSBACH, of Baltimore, Md.
 BOBBY LEO ROSSON, of Baltimore, Md.
 DONALD WILLIAM RUMER, of Baltimore, Md.
 MICHAEL GEORGE SABA, of Glen Burnie, Md.
 FREDERICK JAMES SCHROEDER, of Lutherville, Md.
 FREDERICK ERNEST SHIRK, of Baltimore, Md.
 LOUIS SIEGEL, of Baltimore, Md.
 VINCENT SILHAN, of Baltimore, Md.
 EDWIN WALDEMAR SKOGLIN III, of Baltimore, Md.
 ROLAND EUGENE SMITH, of Baltimore, Md.
 LUIS RICARDO SOLOGUREN, of Baltimore, Md.
 GERARD EDWIN STREB, of Baltimore, Md.
 HOWARD GLENN STRINE, of Frederick, Md.
 KENNETH LESLIE STUART, of Baltimore, Md.
 BARNARD STANSBURY TARLETON, of Baltimore, Md.
 WILLIAM ROSS TAYLOR, of Baltimore, Md.
 PHILLIP RICHARD THORNE, of Ellicott City, Md.
 EDWARD VERNON TOPOLSKI, of Baltimore, Md.
 WILLIAM RICHARD TRUSSELL, of Lutherville, Md.
 DANIEL TSAMOURAS, of Baltimore, Md.
 GEORGE EMIL VARGO, of Baltimore, Md.
 EDMUND JOSEPH VITEK, of Glen Burnie, Md.
 CHARLES DOUGLAS WALTERS, of Baltimore, Md.
 ALBERT ARTHUR WHALEN, of Catonsville, Md.
 WILLIAM THOMAS WILLS, JR., Forest Hill, Md.
 WENDELL CARTER WORLEY, of Baltimore, Md.
 STANLEY JOSEPH WRISK, of Baltimore, Md.
 WALTER JUNIOR WYSOCKI, of Annapolis, Md.
 FRANK NICHOLAS XEDOS, SR., of Baltimore, Md.
 FRANCIS ANTHONY ZITO, of Baltimore, Md.
 ALBERT GEORGE ZORN, JR., of Baltimore, Md.

Graduating with Honors

DENNIS IRA AYERS
WARREN JOSEPH BAYNE
BELFORD JERRY BOLES
MICHAEL BENJAMIN FELDMAN
GEORGE JOSEPH FENNINGTON

WALTER WILLIAM HAMMETT
IRVING MAGER, JR.
WALTER ADAM MARCINSKI
CHESTER ALBERT MILLER, JR.
DAVID LINN POST

JOHN GEORGE RIDGE
MICHAEL GEORGE SABA
PHILLIP RICHARD THORNE
GEORGE EMIL VARGO
FRANCIS ANTHONY ZITO

MASTERS OF SCIENCE IN ENGINEERING

in the Evening College

with titles of essays

- ROGER LEE BALDWIN, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1961. Electrical Engineering. Pulse Compression and Practical Pulse Compression Systems.
- WALTER JOSEPH CIESLUK, JR., of Baltimore, Md., B. S. in E. E. Lehigh University, 1961. Electrical Engineering. Communications through Orbital Dipole Channels.
- LEO JAMES CLARK, JR., of Ellicott City, Md., B. E. S. The Johns Hopkins University, 1960. Electrical Engineering. A Simplified Technique for Design, Analysis and Test of a Linear Third-Order Control System Based on the Characteristics of the Step Response.
- THOMAS CHARLES GRISKEY, of Baltimore, Md., B. S. E. E. University of Pittsburgh, 1961. Electrical Engineering. Optimization of a Linear Array.
- PETER HENROTIN PINCOFFS, of Severna Park, Md., B. E. E. Cornell University, 1952. Electrical Engineering. Detection Probability of Partially Correlated Fluctuating Pulsed Signals.
- DANIEL JOSEPH SUMMERS, JR., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1959. Electrical Engineering. The Packing Density of Digital Data on Magnetic Tape.
- THOMAS EDWIN TREMAIN, of Laurel, Md., B. S. in E. E. University of Pittsburgh, 1956. Electrical Engineering. Digital Computer Simulation of Filters.

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MASTERS OF SCIENCE

in the Evening College

with titles of essays

- RAYMOND EDWARD ALBERT, JR., of Finksburg, Md., B. A. Western Maryland College, 1962. Management Science.
- RUDOLPH BERG, JR., of Baltimore, Md., B. S. University of Maryland, 1959. Management Science.
- CLARENCE WILLIAM BRUNCK, of Randallstown, Md., B. S. Ed. University of Cincinnati, 1955. Management Science.
- ROBERT LEE HICKERSON, of Baltimore, Md., B. S. Virginia Military Institute, 1958. Physics. A Precision X-ray Target Current Regulator for A. C. and D. C. Filament Power Supplies.
- STEPHEN JOSEPH KASPER, of Baltimore, Md., B. E. E. New York University, 1953. Management Science.
- RONALD LESSING, of Baltimore, Md., B. A. The Johns Hopkins University, 1959. Management Science.
- THOMAS FILLMORE MARBLE, JR., of Baltimore, Md., B. S. E. E. Washington University, 1958. Management Science.
- CHARLES GRANVILLE MASTERS, JR., of Ellicott City, Md., B. S. E. E. Duke University, 1961. Management Science.
- JOHN COPELAND MATTHEWS, of Hyattsville, Md., B. S. C. E. University of Maryland, 1961. Management Science.
- STEVEN KRAMER MORRISON, of Baltimore, Md., A. B. University of Pennsylvania, 1958. Physics. Theory and Application of the Mossbauer Effect to Classical Experiments in Relativity.
- GERALD CARY RAPPE, of Annapolis, Md., B. Ch. E. Cornell University, 1962. Management Science.
- J. PHILIP SHAMBAUGH, JR., of Huntington, N. Y., B. S. E. Princeton University, 1961. Management Science.
- JACK P. STOVALL, of Peabody, Kans., B. S. in M. E. University of Kansas, 1949. Management Science.
- LOUIS ALBERT WEISKITTEL, JR., of Baltimore, Md., B. S. University of Maryland, 1952. Management Science.
- THOMAS JOHN WHALEN, of Edgewood, Md., B. S. Ind. Mgt. Carnegie Institute of Technology, 1962. Management Science.

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MASTERS OF EDUCATION

- KATHRYN V. RILEY ALMOND, of Baltimore, Md., B. S. The Johns Hopkins University, 1959.
- NATHAN BARK, of Baltimore, Md., B. A. The Johns Hopkins University, 1950.
- NANCY ANNE BEIMLER, of Randallstown, Md., B. S. Thiel College, 1956.
- ELIZABETH BEAMER BERNOS, of Baltimore, Md., A. B. Western Maryland College, 1950.
- BERNARD STANLEY BLESSNER, of Wilkes Barre, Pa., A. B. King's College, Pennsylvania, 1960.
- BARBARA ANN CANBY, of Baltimore, Md., A. B. Wilson College, 1961.
- ELIZABETH ELLEN CRAIG, of Baltimore, Md., B. S. in Elem. Ed. Coppin State Teachers College, 1960.
- JANE WEST DOYLE, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1962.
- MARGARET LORRAINE DUGGER, of Baltimore, Md., B. S. Coppin State Teachers College, 1948.
- RONALD EUGENE ELWELL, of Baltimore, Md., B. S. University of Maryland, 1954.
- DOROTHY ELIZABETH HAYDEN FADER, of Baltimore, Md., A. B. Goucher College, 1935.
- RHONA TOSSMAN FREIMAN, of Baltimore, Md., B. A. University of Maryland, 1959.
- KATHERINE BISSERT GARBER, of Laurel, Md., A. B. Goucher College, 1959.
- WILLIAM LEONARD GEHRING, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- GERARD EDWARD GRAY, of Baltimore, Md., A. B. University of Notre Dame, 1963.
- JAMES EDWARD GRIFFIN, of Arnold, Md., B. A., Washington College, 1960.
- CAROLE A. HIDDEMEN, of Aberdeen, Md., A. B. Gettysburg College, 1963.
- MAIZIE JOHNS HILL, of Baltimore, Md., B. S. in Elem. Ed. Coppin State Teachers College, 1951.
- RUTH TAUB HOFFMAN, of Baltimore, Md., A. B. University of Maryland, 1949.
- JANE ETTICE JONES, of Baltimore, Md., B. A. Howard University, 1951.
- ALVIN KATZENSTEIN, of Baltimore, Md., B. S. The Johns Hopkins University, 1962.
- JANIS DIGGS LANGLEY, of Baltimore, Md., B. S. Coppin State Teachers College, 1961.
- DIANA RITA LEWIS, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1961.
- BARBARA BOWEN MACHAMER, of Baltimore, Md., A. B. Goucher College, 1955.
- JOYCE STUMPNER MAJEWSKI, of Baltimore, Md., B. S. University of Maryland, 1959.
- GERALD LEE MASEMORE, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- BRUCE CLOY MEADOWS, of Baltimore, Md., B. S. Nyack Missionary College, 1956.
- EDWARD HERMAN MITCHELL, of Towson, Md., B. S. State Teachers College, Salisbury, Md., 1962.
- AUDREY JOHNSON MOSES, of Baltimore, Md., B. A. Houghton College, 1962.
- ROBERT WARREN NORRIS, of Baltimore, Md., A. B. Harvard University, 1955.
- WILLIAM JOHN OEHLKERS, of Baltimore, Md., B. S. Ed. Concordia Teachers College, 1959.
- JACQUELINE ZEUCH PALMER, of Monkton, Md., B. A. University of Colorado, 1943.
- JOSÉ A. PROL GOMEZ, of McDonogh, Md., D. S. S. University of Havana, 1953.
- HENRY EDWARD RIECKS, of Forest Hill, Md., B. A. Washington College, 1958.
- ROLAND ANDREW RIES, of Westminster, Md., B. S. The Johns Hopkins University, 1937.
- MIRIAM SCHATZMAN, of Baltimore, Md., B. S. Winthrop College, 1927.
- NOMA OLIVER SCOTT, of Baltimore, Md., B. S. Morgan State College, 1953.
- JAY MONSEY SMITH, of Suitland, Md., B. A. The Johns Hopkins University, 1964.
- MAURICE STRAUSBAUGH, of York, Pa., A. B. Juniata College, 1950.
- RENA DEITSCH SUGAR, of Baltimore, Md., B. S. The Johns Hopkins University, 1962.
- GERALD E. SWARTZ, of Severna Park, Md., B. S. The University of Wisconsin, 1951.
- JOHN ALBERT SWEENEY, of Baltimore, Md., B. A. New York University, 1949; A. M., 1953.
- NELSON EUGENE SWEGLAR, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1962.
- CONSTANCE MAE TATE, of Baltimore, Md., B. S. Coppin State Teachers College, 1954.
- ALBIN HARRY TWARDOWICZ, of Baltimore, Md., B. S. Loyola College, 1934.
- ETHEL PATRICIA WALTERS, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- RAYMOND EDWARD WANNER, of Baltimore, Md., A. B. St. Mary's Seminary, 1955; S. T. B. University of Angers, 1959.

MASTERS OF LIBERAL ARTS

- GLORIA HAFER ALBRECHT, of Baltimore, Md., B. A. University of Maryland, 1963.
- ANNE DARLINGTON ANDREWS, of Brooklandville, Md., B. S. University of Maryland, 1952.
- STEPHEN BASARAB, of Baltimore, Md., B. S. The Johns Hopkins University, 1955.
- WANDA GREGORIUS BASARAB, of Baltimore, Md., B. S. The Johns Hopkins University, 1957.
- WALTER JOSEPH BLAIR, of Baltimore, Md., B. S. in Com. University of Virginia, 1940; LL. B., 1948.
- MARY HORTOP BREADY, of Baltimore, Md., A. B. Goucher College, 1946.
- FANE BARD BRENNER, of Baltimore, Md., A. B. Goucher College, 1961.
- ERNEST PATRICK BUNTZ, of McKenzie, Ala., B. S. Ind. Mgt. Alabama Polytechnic Institute, 1958.
- RONALD A. CHARTRAND, of Baltimore, Md., B. A. in Ed. Fairmont State College, 1962.
- JOHN YOUNG COLE, JR., of Bellingham, Wash., B. A. University of Washington, 1962; M. Libr., 1963.
- MICHAEL JOSEPH COLLINS, of Baltimore, Md., B. S. University of Scranton, 1962.
- SARAH KATHERINE CREW, of Baltimore, Md., B. S. The Johns Hopkins University, 1960.
- JOHN EDWIN DESCH, of Baltimore, Md., A. B. The Johns Hopkins University, 1926.
- MARY ANN FRYE, of Martinsburg, W. Va., A. B. Shepherd College, 1960.
- HELEN O'BOYLE GAINS, of Baltimore, Md., B. S. The Johns Hopkins University, 1940; M. Ed., 1962.
- JOEL IAN GLASSER, of Baltimore, Md., B. A. The Johns Hopkins University, 1958.
- HARRIS SIDNEY GOLDSTEIN, of Baltimore, Md., B. S. University of Illinois, 1955; M. D., 1959.
- SARA JANE SHEFFER GRISSINGER, of Shepherdstown, W. Va., A. B. Gettysburg College, 1941.
- DELMAS IVAN GRUVER, of Baltimore, Md., A. B. Franklin and Marshall College, 1947.
- DAVID HARGREAVE, of Havre de Grace, Md., B. S. Clarkson College of Technology, 1961.
- JOSEPH FRANCIS HEAPS, of Baltimore, Md., B. S. in Econ. Villanova University, 1955.
- FRANCES DAVIS HILDEBRAND, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1961.
- BARBARA ANN MARKS HOFFMAN, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- IVAR ROBERT HOLMQUIST, of Baltimore, Md., B. A. Augsburg College, 1952.
- DAVID SOLOMON HYMAN, of Baltimore, Md., B. S. University of Maryland, 1949; M. S. E. The Johns Hopkins University, 1960.
- LAWRENCE JOSEPH KIMMEL, JR., of Minersville, Pa., B. S. S. E. West Chester State College, 1962.
- CHARLES IRVING KRATZ, JR., of Baltimore, Md., A. B. University of Alabama, 1939.
- EDMOND PAUL LAZARUS, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1959.
- HAROLD LEON LEVIN, of Baltimore, Md., B. A. The Johns Hopkins University, 1961.
- WILLIAM LLOYD MCCRANEY, of Baltimore, Md., A. B. The American University, 1961.
- JANE EMILY MCFARLANE, of Roselle, N. J., S. B. Simmons College, 1963.
- CORA VIRGINIA PERRY, of Westminster, Md., A. B. Western Maryland College, 1936.
- PHILLIPS WINDSOR PETERS, JR., of Baltimore, Md., B. A. The Johns Hopkins University, 1962.
- NAN MERRICK RENDALL, of Boulder, Colo., B. A. University of Colorado, 1960.
- PAUL RICHARD RIVERA, of Baltimore, Md., B. A. The Johns Hopkins University, 1962.
- TAWNEY ALWYNNE SKORKO, of Baltimore, Md., A. B. University of Maryland, 1961.
- PAGE THACKER SMITH, of Baltimore, Md., A. B. Duke University, 1942.
- GEORGE HENRY STEELE, of Baltimore, Md., B. A. The Johns Hopkins University, 1959.
- GEORGE HOWARD STEWART, of Timonium, Md., B. S. in Genl. Engr. Georgia Institute of Technology, 1941.
- JOHN MURRAY WELCH, of Marblehead, Mass., M. D. University of Pennsylvania, 1916.
- LAWRENCE CHERMAK WHEATLEY, of Washington, D. C., B. A. University of Maryland, 1962.
- DAVID LAWRENCE WIBBELSMAN, of Baltimore, Md., B. A. The Johns Hopkins University, 1958.
- MARY ANN WICKWIRE, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1961.
- HELEN FLORINE WILLIAMS, of Baltimore, Md., B. A. Morgan State College, 1934; M. Libr. University of Washington, 1959.
- ALAN MURRAY WILNER, of Baltimore, Md., B. A. The Johns Hopkins University, 1958.
- NANCY ALBERT WOLF, of Brooklyn Heights, N. Y., A. B. Hollins College, 1956.
- FRANK ZACAMI, of Baltimore, Md., B. A. University of Maryland, 1964.

CERTIFICATES OF ADVANCED STUDY IN EDUCATION

- WILLIAM FRED BAXTER, JR., of Baltimore, Md., A. B. Guilford College, 1952; M. Ed. University of North Carolina, 1957.
- MARY CAMPER REDD, of Baltimore, Md., M. S. in Ed. University of Pennsylvania, 1951.
- FRANK COVER ROBEY, JR., of Baltimore, Md., A. B. Western Maryland College, 1957; M. Ed. Loyola College, 1963.
- SHIRLEY ELIZABETH WATKINS, of Baltimore, Md., B. S. Coppin State Teachers College, 1942; M. A. New York University, 1951.
- CHARLES RONALD WOESSNER, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1957; M. Ed. The Johns Hopkins University, 1962.

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MASTERS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

- ALAN JAY GILL, of Baltimore, Md., A. B. Syracuse University, 1957; M. D. State University of New York, 1962. Environmental Medicine (Audiology and Speech).
Unconditioned Galvanic Skin Response Magnitude as an Index of Frequency-Intensity Relationships in the Hearing of the Mouse.
- ANNABEL CHRISTINE LINDLEY, of Randallstown, Md., A. B. Gettysburg College, 1962. Environmental Health.
The Activity of Bromine against f2 Bacteriophage and its Host *Escherichia coli* K-12 under Various Aqueous Conditions.
- JOSE VARGAS MENA, of Monterrey, N. L., Mexico, Chem. University of Nuevo Leon, Mexico, 1957. Pathobiology. Experimental Studies on Hymenolepidid Cestodes in Unnatural Hosts.
- VANESSA CLOVER LORAIN CASIMIR WILSON, of Manchester, England, B. Sc. University of Reading, 1958. Pathobiology. The Localization and Distribution of Acetylcholinesterase in Two Species of Hymenolepidid Cestodes.
- YILMA MEKURIA, of Addis Ababa, Ethiopia, B. Sc. Haile Sellassie I University, 1962. Pathobiology. Laboratory Studies on the Biology of *Eretmapodites chrysogaster* Graham.

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DOCTORS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

- LLOYD MACNEIL BATES, of Baltimore, Md., B. Sc. in Arts University of New Brunswick, 1950; M. Sc. University of Saskatchewan, 1952. Radiological Science.
Some Physical Factors Affecting Radiographic Image Quality; Their Theoretical Basis and Their Measurement.
- ANTHONY VITO COLUCCI, of Baltimore, Md., B. S. Loyola University, 1961. Pathobiology.
A Study of Glycogen Metabolism in the Cestode *Hymenolepis diminuta*.
- EUGENE RODRIGUEZ, of Reisterstown, Md., B. S. Queens College, New York, 1954; Sc. M. The Johns Hopkins University, 1959. Microbiology.
Quantitative Studies of Antigen Accumulation at the Sites of Hypersensitivity Reactions in the Guinea Pig Skin.
- SETLUR RAMASWAMI SRINIVASARANGAN, of Madras, India, B. Sc. University of Madras, 1952; M. Sc. University of Bombay, 1958. Pathobiology.
Infection of Chicken Buffy Coat Macrophage Cultures with Chicken Sarcoma Virus.
- RONALD W. WARD, of Natrona Heights, Pa., B. S. in Education State Teachers College, Indiana, Pennsylvania; M. S. Ohio University, 1962. Pathobiology.
Ethology of the Paradise Fish, *Macropodus opercularis* (Anabantidae), with Experimental Studies of Agonistic Behavior.
- THOMAS READ WARRINER, of Saratoga, Calif., B. S. in Engineering California Institute of Technology, 1958; M. S. University of California, Berkeley, 1961. Environmental Health.
An Investigation of Virus Removal by Sewage Chlorination.

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MASTERS OF PUBLIC HEALTH

- MOZAYAN ALADJ, of Lanham, Md., M.D. University of Tehran, 1947.
- K. BASAPPA, of Mysore, India, M.B.B.S. University of Mysore, 1955; D.P.H. University of Calcutta, 1959.
- WILLIAM BODDIE ROGERS BEASLEY, of Hyden, Ky., B.S. The University of the South, 1943; M.D. University of Tennessee, 1949; D.T.M.&H. University of London, 1959.
- LINDA BREESE BRIAN, of Baltimore, Md., B.S. in Nursing University of Maryland, 1963.
- BONNIE BRITT, of Greenbelt, Md., B.S. in Nursing University of Maryland, 1964.
- PHILLIPE LOUIS CAVALIE, of France, M.D. University of Paris, 1950.
- DENNIS W. CHRISTENSEN, of Sandy, Utah, B.S. University of Utah, 1957; M.D., 1960.
- EDWARD PARKER CUTTER, of Clarksville, Tenn., A.B. Harvard University, 1934; M.D., 1938.
- ELIZABETH ANNE M. DI GIACOMO, of Indio, Calif., B.A. Jersey City State College, 1961.
- JOHN WILLIE KWAMINA DUNCAN, of Baltimore, Md., B.Sc. Eng. University of London, 1959; M.Eng. McGill University, 1964.
- GARY MASON EIDSVOLD, of Morris, Minn., B.A. St. Olaf College, 1960; M.D. University of Minnesota, 1964.
- ALCIDES ESTRADA ESTRADA, of Popayan, Cauca, Colombia, M.D. University of Cauca, 1962.
- TON THAT GIA, of Saigon, South Vietnam, M.D. University of Saigon, 1962.
- ARCHIE SIDNEY GOLDEN, of New Milford, Conn., B.A. University of Connecticut, 1953; M.D. University of Vermont, 1957.
- LEON GORDIS, of Baltimore, Md., A.B. Columbia University, 1954; M.D. State University of New York, 1958.
- JACK LANIUS GRAVES, of Sheffield, Ala., B.S.-Agric. Engin. The University of Tennessee, 1949.
- LUIS CESAR GUEDES ARROYO, of Buenos Aires, Argentina, M.D. University of Buenos Aires, 1961; D.P.H., 1963.
- NANCY VIRGINIA GWON, of New York, N.Y., A.B. Hunter College, 1960; M.D. State University of New York, 1964.
- JAMES A. HAALAND, of Salem, Oreg., B.A. Pacific Lutheran College, 1958; M.D. University of Oregon, 1962.
- LORRAINE HOFFMAN HAUK, of Buffalo, N.Y., B.S. in Nursing The University of Buffalo, 1959.
- CARL O. HELVIE, of Baltimore, Md., B.S. New York University, 1958; M.S. University of California, San Francisco Medical Center, 1961.
- DONALD JAMES HENDERSON, of Toronto, Ont., Canada, M.D. University of Western Ontario, 1964.
- PAUL V. HUMBERT, of Joliet, Ill., M.D. University of Illinois, 1963.
- ROBERT H. HUTCHESON, JR., of Nashville, Tenn., B.S. The University of Tennessee, 1954; M.D., 1955.
- DANIEL J. JOLY, of Baltimore, Md., M.D. University of Buenos Aires, 1945.
- SYNG WOOK KIM, of Seoul, Korea, M.D. Seoul National University, 1956.
- ALICE PATTERSON LATHAM, of Jesup, Ga., B.S. in P.H.N. The University of North Carolina, 1954.
- SOO HWA LEE, of Baltimore, Md., M.D. Soo Do Medical College, Korea, 1953.
- BERNARD LOURIE, of Kew Gardens, N.Y., M.D. New York Medical College, 1962.
- ROBERT WHITCOMB MACK, of Glencoe, Md., B.S. Davidson College, 1956; M.D. University of Pennsylvania, 1960.
- FRANCIS PATRICK MALONEY, of Pittsburgh, Pa., B.A. St. Vincent College, 1958; M.D. University of Pittsburgh, 1962.
- PHAMILA RAJESWARI MAXIMIN, of Ernakulam, Kerala, India, M.B.B.S. University of Kerala, 1958.
- CARL EDWARD MILLER, of Rockville, Md., D.V.M. Iowa State College, 1955.
- LEONARDO MUNOZ, of Santiago, Chile, M.D. University of Chile, 1958.
- YONG JAI PARK, of Seoul, Korea, M.D. Soo Do Medical College, Korea, 1962; M.P. H. Seoul National University, 1965.
- JAMES P. PAULISSEN, of Lutherville, Md., M.D. Loyola University, 1953.
- ANTONIO PINEDA PERLAS, of Quezon City, Republic of the Philippines, M.D. University of the Philippines, 1960.
- ROLAND L. PHILLIPS, of Baltimore, Md., B.A. Andrews University, 1959; M.D. Loma Linda University, 1964.
- SUSHEELA PONNIAH, of Wandiwash, Madras, India, M.B.B.S. University of Madras, 1951.
- FRANCES A. REEDER, of Cincinnati, Ohio, B.S.P. University of Cincinnati, 1954; M.D. The Ohio State University, 1962.
- JAMES WARREN RYAN, of Missoula, Mont., B.A. Montana State University, 1955; M.D. Harvard University, 1959.
- FERNANDO SANTOS SANCHEZ, JR., of Pasig, Rizal, Republic of the Philippines, M.D. University of the Philippines, 1959.
- MANI KUMAR SASHANKAR, of Darjeeling, West Bengal, India, M.B.B.S. University of Calcutta, 1954; D.P.H., 1959; C.H.E., 1962.

- ZOHAIK A. SEBAI, of Mecca, Saudi Arabia, M. B., B. Ch. Ain Shams University, Egypt, 1963; D. T. M. Bernhard Nocht Institute for Tropical Diseases, Germany, 1965.
- CLARENCE SKROVAN, of Grainger, Texas, A. B. The Catholic University of America, 1958; M. D. The University of Texas, 1964.
- JEANNE ELAINE SMITH, of Burnham, Pa., B. S. Nurs. University of Pennsylvania, 1959.
- VIRGINIA WHITMORE SMITH, of Newport News, Va., B. S. George Peabody College for Teachers, 1961.
- MILDRED T. SPENCE, of Fulondale, Ala., B. S. in Nursing The University of Alabama, 1963.
- THOMAS ELROD STEELE, of Palo Alto, Calif., A. B. Wabash College, 1958; M. D. University of Pennsylvania, 1962.
- JAMES H. STINEBISER, of Cantonment, Fla., B. S. University of Florida, 1957; M. D. University of Miami, 1961.
- JOHN MILES STIREWALT, of Waynesboro, Va., B. A. University of Virginia, 1948; M. D., 1951.
- EDNA LOUISE STUVER, of Greenbelt, Md., A. B. University of Denver, 1944; M. D. University of Colorado, 1946.
- TAKAICHIRO SUZUKI, of Osaka, Japan, M. D. Osaka University, 1962.
- CHARLES R. SWIFT, of Laughorne, Pa., M. D. The Hahnemann Medical College, 1947.
- JAMES BERNARD TENNEY, of Baltimore, Md., A. B. Oberlin College, 1955; M. D. The Hahnemann Medical College, 1960.
- FRANCES H. TRIMBLE, of Baltimore, Md., M. B., B. S. The University of Sydney, 1941.
- MARTIN IRA VICTOR, of Baltimore, Md., B. S. Massachusetts Institute of Technology, 1958; M. D. Duke University, 1962.
- THEODORE JAMES WACHS, of Minneapolis, Minn., M. D. The Creighton University, 1958.
- THEODORE R. WHATLEY, of Sipsey, Ala., B. S. Auburn University, 1954; M. D. Medical College of Alabama, 1958.
- ROBERT M. WIEDERSHEIM, of Geneva, Switzerland, M. D. Albert Ludwig University at Freiburg, Germany, 1950; Ph. D. University of Cape Town, South Africa, 1959.
- GABISIU AYODELE WILLIAMS, of Lagos, Nigeria, M. B. B. S. University of London, 1963.
- YUH TING YEN, of Peikang, Taiwan, Republic of China, B. M. National Taiwan University, 1964.

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DOCTORS OF PUBLIC HEALTH

with titles of theses

- HAROLD PAUL HALPERT, of Washington, D. C., B. A. New York University, 1932; A. M. University of Illinois, 1933; M. P. H. The Johns Hopkins University, 1964. Mental Hygiene.
Comprehensive Communications Aspects of State Mental Health Planning.
- RICHARD KUO-CHI HSIEH, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1957; M. S. E., 1961; M. P. H., 1965. Public Health Administration.
Evaluation of Hospital Medication Systems.
- KAZUYOSHI KAWATA, of Portland, Oreg., B. S. Oregon State University, 1949; M. S. C. E. University of Minnesota, 1950; M. P. H. University of California, Berkeley, 1958. Environmental Health.
The Effects of Sewage Stabilization Ponds on the Ova and Miracidia of *Schistosoma mansoni*.
- FREDERICK MARIA ZERZAVY, of Baltimore, Md., M. D. University of Zagreb, Yugoslavia, 1942; M. P. H. The Johns Hopkins University, 1961. Population and Family Health (Maternal and Child Health).
Factors Affecting Delayed Reunion after Postpartum Mother-Child Separation.
- LEWIS HENRY KULLER, of Baltimore, Md., A. B. Hamilton College, 1955; M. D. The George Washington University, 1959; M. P. H. The Johns Hopkins University, 1964. Chronic Diseases.
The Epidemiology of Sudden and Unexpected Death in Adults.
- MICHEL F. LECHAT, of Belgium, M. D. Catholic University of Louvain, 1952; M. P. H. The Johns Hopkins University, 1963. Epidemiology.
Genetic Polymorphism and Leprosy: A Study of Blood Groups of Leprosy Patients and Control Subjects in Cebu, The Philippines.
- GEORGE SOLOYANIS, of Baltimore, Md., B. A. New York University, 1949; M. S. The Pennsylvania State University, 1952; Ph. D. 1953; M. P. H. The Johns Hopkins University, 1965. Mental Hygiene.
A Psychiatric Case Register Study of Multiple Admissions to Maryland Psychiatric Facilities.

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MASTERS OF ARTS

in The School of Advanced International Studies

- FREDERICK JOHN ABRAMSON, of Seattle, Wash., B. A. Stanford University, 1964.
- STEVEN HOWARD ARNOLD, of Long Beach, Calif., A. B. Occidental College, 1964.
- BONITA DALE BAKER, of Glen Ellyn, Ill., B. A. Miami University, Ohio, 1964.
- MERLE SEBREAN BALDWIN, of Fort Wayne, Ind., B. A. Indiana University, 1964.
- ANDRÉS BARRETO-TORRES, of Bogotá, Colombia, D. Law and Pol. Sc. College of Our Lady of the Rosary, Colombia, 1962.
- BYRON L. BERNTSON, of Falls Church, Va., B. S. North Dakota State College, 1961.
- DOROTHY JEAN BLACK, of Glendale, Calif., B. A. Stanford University, 1964.
- GORDON JUDD BOCKNER, of Mamaroneck, N. Y., B. A. The Johns Hopkins University, 1961; LL. B. Yale University, 1964.
- KLAUS-DIETER BÖSE, of Bremen, Germany, B. A. Yale University, 1964.
- GEROLD VON BRAUNMÜHL, of Mainz, Germany, J. D. University of Mainz, 1962.
- JOAN ELLEN BROSIUS, of Worcester, Mass., B. A. Smith College, 1963.
- SAÛNE BARON CROCKER, of Bulawayo, Rhodesia, B. A. University of Capetown, 1961; B. A. (honors) 1962.
- DOUGLAS JONES CROWLEY, of Hamden, Conn., B. A. Yale University, 1963.
- JILL MEREDITH DAVIS, of Wellesley, Mass., B. A. Smith College, 1964.
- JERRY DE SAINT PAER, of Wheaton, Ill., B. A. North Central College, 1964.
- JOHN E. DILLER, of Norwich, Ver., B. A. Oberlin College, 1964.
- CHARLES FRANCIS DORAN, of Kilkenny, Minn., B. A. Harvard University, 1964.
- LOVETT Z. ELANGO, of Kumba, Cameroon, B. A. Bradley University, 1964.
- REGIS A. FACTOR, of Ellwood City, Pa., B. A. Washington and Jefferson College, 1959.
- PAUL FLAIM, of Baltimore, Md., B. A. The Johns Hopkins University, 1963.
- DOUGLAS FRANKLIN GARTHOFF, of Alexandria, Va., B. A. Princeton University, 1964.
- STANLEY GERSHMAN, of Norwalk, Conn., B. A. University of Connecticut, 1961.
- RITA K. GILBERT, of New York, N. Y., B. A. Hunter College, 1963.
- GARY P. GILLUM, of Alexandria, Va., B. S. Massachusetts Institute of Technology, 1961.
- ELISABETH MARTHA SABINE GIRRULAT, of Wermelskirchen, Germany, Referendar, University of Freiburg, 1964.
- JANICE LOUISE GOERTZ, of Hiawatha, Kans., B. A. Kansas State University, 1963.
- ALLAN M. GROVES, of Delmar, N. Y., B. A. University of Rochester, 1964.
- MATTHEW ARMSTRONG HAWES, of Washington, D. C., B. A. Yale University, 1963.
- CELESTE BRINGIER HERO, of New Orleans, La., B. A. Smith College, 1964.
- STEPHEN MICHAEL HIRST, of Miamisburg, Ohio, B. A. Miami University, Ohio, 1962.
- JESS N. HORDES, of New York, N. Y., B. A. Yeshiva University, 1963.
- H. RICHARD HURREN, of Logan, Utah, B. A. Utah State University, 1964.
- SYLVIA COLVIN JOHNSTONE, of Athens, Ga., B. A. University of Georgia, 1964.
- RICHARD JOHN JONES, of Webster Groves, Mo., B. A. Oberlin College, 1964.
- JOUNGWON A. KIM, of Seoul, Korea, B. A. Columbia University, 1962.
- IRENE LOUISE KÖHNCKE, of Vevey, Switzerland, B. A. Occidental College, 1963.
- STEPHEN LESTER LANDE, of New York, N. Y., B. A. Colgate University, 1963.
- JEAN KIRK LAUX, of Ithaca, N. Y., B. A. Cornell University, 1964.
- JAMES ALBERT LEACH, JR., of Davenport, Iowa, A. B. Princeton University, 1964.
- PETER ALBERT LEFFERTS, of Dundalk, Md., B. A. Amherst College, 1963.
- JONATHAN ALZAMORA LEONARD, of Hastings-on-Hudson, N. Y., B. A. Harvard University, 1963.
- PATRICK JUDE MCGOWAN, of Hollywood, Fla., B. A. University of the South, 1961.
- SANDY RAE MCKENZIE, of Honolulu, Hawii, B. A. University of Maryland, 1964.

- JOHN EDWARD McLAUGHLIN, of Dravosburg, Pa., B. A. Wittenberg University, 1964.
- ANN S. MELTZER, of Brookline, Mass., B. A. University of Massachusetts, 1963.
- VICTOR MESALLES, of Barcelona, Spain, B. A. Hartwick College, 1964.
- MARILYN MEYERS, of Winona, Minn., B. A. Southwestern-at-Memphis, 1964.
- DAVID LIGHTFOOT MILBANK, of McLean, Va., A. B. Princeton University, 1951.
- EDWARD L. MORSE, of Freeport, N. Y., B. A. The Johns Hopkins University, 1963.
- WALTER KENDALL MYERS, JR., of Washington, D. C., A. B. Brown University, 1963.
- LYNN KRIEGER MYTELKA, of Jersey City, N. J., B. A. Rutgers University, 1964.
- JAMES A. NATHAN, of Highland Park, Ill., A. B. Indiana University, 1964.
- ARTHUR DAVID NEIMAN, of Nanticoke, Pa., B. A. The American University, 1964.
- BYRON ALBERT NICHOLS, of Pendleton, Oreg., A. B. Occidental College, 1964.
- A. JAMES PANOS, of San Marino, Calif., A. B. Princeton University, 1964.
- GEORGE T. PARK, of Missoula, Mont., B. A. Montana State University, 1962.
- RICCARDO PATTI, of Rome, Italy, J. D. University of Rome, 1964.
- CHARLES SMITH PEARSON, of Washington, Conn., B. A. Middlebury College, 1960.
- GLENN PALEN PIERCE, of San Diego, Calif., B. S. F. S. Georgetown University, 1962.
- DAVID SHERIN RAYCROFT, of Brooklyn, N. Y., A. B. Georgetown University, 1961; LL. B. University of Pennsylvania, 1964.
- JOHN FLOYD RICHARD, of Darien, Conn., B. A. Harvard University, 1963.
- VINCENZO F. RUSSO, of Canicatti, Italy, D. Pol. Sc. University of Rome, 1963.
- ALBERTO SCHEPISI, of Rome, Italy, Laurea in Law, University of Rome, 1964.
- MELVIN R. SCHLEIN, of Elizabeth, N. J., B. A. Rutgers University, 1964.
- ELEN OLIVIA SCHWARZ, of Yonkers, N. Y., B. A. Barnard College, 1963.
- DAVID N. SHAPIRO, of Buffalo, N. Y., B. A. Colgate University, 1964.
- RONALD KENT SHELPS, of Cartersville, Ga., B. A. University of Georgia, 1964.
- JANE ELIZABETH SILVER, of Centerville, Tenn., B. A. Vanderbilt University, 1962.
- PETER L. SLOTTA, of Miami, Fla., A. B. Princeton University, 1964.
- LEWIS WELDON SNIDER, of Portland, Oreg., B. A. Portland State University, 1964.
- PETER NICHOLAS SOLARES, of Buenos Aires, Argentina, B. A. The Johns Hopkins University, 1964.
- ERICH SPITÄLLER, of Graz, Austria, J. D. University of Graz, 1963.
- ANN HOLLICK SULLIVAN, of Berkeley, Calif., B. A. University of California, Berkeley, 1963.
- JAMES JOSEPH SULLIVAN, of Bay Shore, N. Y., A. B. University of Notre Dame, 1964.
- SAMUEL CORSE TOWNSEND, of Skaneateles, N. Y., A. B. Hamilton College, 1960.
- ARNOLD SCOTT TURNER, of Baltimore, Md., Met. Engr., Colorado School of Mines, 1960.
- CHRISTOPHER GROVE WARD, of Chappaqua, N. Y., B. A. Hamilton College, 1964.
- DARNELL M. WHITT II, of Washington, D. C., A. B. Harvard University, 1959.
- MICHAEL LEWIS WINTERS, of Philadelphia, Pa., B. A. Pennsylvania State University, 1962.
- MITCHELL WOLFSON, JR., of Miami Beach, Fla., B. A. Princeton University, 1962.

DOCTORS OF PHILOSOPHY

in The School of Advanced International Studies

with titles of dissertations

ROBERT PURDUE CLARK, JR., of Houston, Texas, B. A. Tulane University, 1962; M. A. School of Advanced International Studies, The Johns Hopkins University, 1964.

The LAFTA Debate in Venezuela: A Test Case in Building Consensus.

JON BLYTHE McLIN, of Earle, Ark., B. S. Washington and Lee University, 1960; B. A. Oxford University, 1962.

Canada's Changing Alliance Policy, 1957-1964.

(2)

DOCTORS OF MEDICINE

MARTIN DAVID ABELOFF, of Shenandoah, Pa., B. A. The Johns Hopkins University, 1963.

RAYMOND DAVID ADELMAN, of Canton, Ohio, B. A. The Johns Hopkins University, 1962.

DUANE FREDERICK ALEXANDER, of Annapolis, Md., B. S. Pennsylvania State University, 1962.

JAMES PAGE APLINGTON, of Columbus, Ohio, A. B. Amherst College, 1962.

JOSEPH DOLBY BABB, of Ridgewood, N. J., A. B. Kenyon College, 1961.

FRANCES WATT BAKER, of Washington, D. C., B. A. The Johns Hopkins University, 1963.

LENOX DIAL BAKER, JR., of Durham, N. C., B. A. The Johns Hopkins University, 1963.

JOEL THOMAS MITCHELL BAMFORD, of Bronxville, N. Y., B. A. The Johns Hopkins University, 1963.

LEE RANDOL BARKER, of Baltimore, Md., A. B. Harvard University, 1962.

WILLIAM HALSEY BARKER, JR., of Baltimore, Md., A. B. Princeton University, 1962.

CYRIL BARNERT III, of Larchmont, N. Y., B. A. The Johns Hopkins University, 1963.

LEWIS CHARLES BECKER, of Pacific Palisades, Calif., B. A. The Johns Hopkins University, 1962.

WILLIAM GARY BECKER, of Naples, Fla., B. S. University of Florida, 1962.

KENNETH I. BERNS, of Shaker Heights, Ohio, B. A. The Johns Hopkins University, 1960; Ph. D. 1964.

MICHAEL TOBIAS BERNSTEIN, of Silver Spring, Md., B. A. The Johns Hopkins University, 1962.

HOWARD ELLIS BRAITMAN, of Lutherville, Md., A. B. Cornell University, 1961.

JOHN CABELL BRECKINRIDGE, of Ivy, Va., A. B. Harvard University, 1961.

ANDREW FULLER BROOKER, JR., of Vergas, Minn., B. A. The Johns Hopkins University, 1963.

PATRICK EDGAR BROOKHOUSER, of Missouri Valley, Iowa, B. S. Creighton University, 1962.

JOHN ALDEN BURKHOLDER, of Mentor, Ohio, A. B. Manchester College, 1962.

BRUCE MATTHEW CAMITTA, of Neponsit, L. I., N. Y., B. A. The Johns Hopkins University, 1963.

JAMES JOHNSTON HALE CAREY, of New York, N. Y., B. A. Yale University, 1955.

RICHARD LEE CLARK, of New Rochelle, N. Y., A. B. Oberlin College, 1962.

STEPHEN M. COHEN, of Highland Park, Ill., B. A. The Johns Hopkins University, 1963.

MARTHA SOPHIA CRANE, of Holyoke, Mass., A. B. University of Massachusetts, 1962.

JOSEPH L. DAUBEK, of San Jose, Calif., B. A. The Johns Hopkins University, 1963.

THOMAS EDWIN DIGBY, of Oak Harbor, Ohio, B. A. The Johns Hopkins University, 1963.

HARROLD TALLEY ELBERFELD, of Logan, Ohio, A. B. Vanderbilt University, 1962.

JAN ALFRED ELLIOTT, of Cincinnati, Ohio, A. B. Ohio Wesleyan University, 1962.

MELVIN H. EPSTEIN, of Brooklyn, N. Y., B. A. The Johns Hopkins University, 1963.

SHELDON M. FRANK, of Cleveland, Ohio, A. B. Swarthmore College, 1960; M. A. University of Pennsylvania, 1962.

- CARLETON THEODORE GARRETT, of Loudonville, N. Y., A. B. Lehigh University, 1962.
- THOMAS H. GARRETT, of Brooklandville, Md., A. B. Princeton University, 1961.
- PAUL MICHAEL GERTMAN, of Baltimore, Md., B. A. The Johns Hopkins University, 1963.
- ALLEN LOUIS GINSBERG, of Staten Island, N. Y., A. B. Princeton University, 1962.
- ROGER JOHN GSTALDER, of Larchmont, N. Y., B. S. Xavier University, 1962.
- FARAMARZ ISMAIL-BEIGI, of Mashad, Iran, A. B. Berea College, 1962.
- KENNETH ALLEN JOHNSON, of Fargo, N. Dak., B. S. North Dakota State University, 1962.
- JOSEPH KAPLAN, of Baltimore, Md., B. S. New York University, 1962.
- MURRAY ALAN KATZ, of Albuquerque, N. Mex., B. A. The Johns Hopkins University, 1963.
- DANIEL THOMAS KINCAID, of Newton Falls, Ohio, A. B. Wittenberg University, 1962.
- PETER OSCAR KWITEROVICH, JR., of Danville, Pa., A. B. College of the Holy Cross, 1962.
- ROBERT H. LEBOW, of Hillside, N. J., A. B. Harvard University, 1962.
- ALLAN THEODORE LEFFLER II, of Johnston, Iowa, B. S. Iowa State University, 1962.
- MARTHA JANE BRADFORD LEFFLER, of Scarsdale, N. Y., B. A. The Johns Hopkins University, 1963.
- RICHARD F. LEVINE, of Philadelphia, Pa., B. A. The Johns Hopkins University, 1962.
- RICHARD D. MAFFEZZOLI, of Morrisville, Pa., B. A. The Johns Hopkins University, 1962.
- HENRY BRANDIS MARSH, of Bethesda, Md., A. B. Harvard University, 1962.
- MARGARET ELIZABETH MAXWELL, of Northport, Ala., B. S. University of Alabama, 1962.
- ARTHUR JESSE MERRILL, JR., of Atlanta, Ga., A. B. University of North Carolina, 1962.
- WILLIAM CHARLES MILROY, of Ludlow, Mass., A. B. American International College, 1962.
- DAVID J. MISHELEVICH, of Pittsburgh, Pa., B. S. University of Pittsburgh, 1962.
- ROBB EDWIN MOSES, of Cuba, N. Y., A. B. Houghton College, 1962.
- DON HOWARD NICHOLSON, of Millington, Tenn., A. B. Stanford University, 1962.
- DAVID LEE PAGE, of Basking Ridge, N. J., A. B. Yale University, 1962.
- CLARENCE JAMES PETERS, of Odessa, Texas, A. B. Rice University, 1962.
- THOMAS HARRISON PRICE, of South Bend, Ind., B. S. University of Michigan, 1962.
- JOHN MOIR RAUENHORST, of Slayton, Minn., B. A. The Johns Hopkins University, 1963.
- JAVAD RAZANI, of Broojerd, Iran, B. A. The Johns Hopkins University, 1963.
- DAVID MARC RICIITER, of New York, N. Y., A. B. Columbia University, 1962.
- BRADLEY MORELAND RODGERS, of Louisville, Ky., B. A. Dartmouth College, 1963.
- DAVID STEWART ROWE, of Arlington, Va., B. A. The Johns Hopkins University, 1963.
- JANE EVE SMYTH ROWE, of Denver, Colo., A. B. Colorado State University, 1962.
- ANN-LOUISE SCHLESINGER, of Albany, N. Y., B. A. The Johns Hopkins University, 1963.
- RICHARD GORDON SENTER, of North Garden, Va., A. B., B. S. Carson-Newman College, 1962.
- JÜRGEN HUGO SEYER, of Bellwood, Ill., B. A. University of Illinois, 1962.
- JAMES WILLIAM SHAFER, of Bethesda, Md., B. A. Dartmouth College, 1963.
- STUART BEAL SILVER, of Philadelphia, Pa., B. A. The Johns Hopkins University, 1963.
- DONALD WARREN SIMBORG, of Dallas, Texas, B. S. University of Illinois, 1962.
- RODNEY D. SKOGLUND, of Silver Spring, Md., B. A. The Johns Hopkins University, 1962.
- STANLEY F. SLIWINSKI, JR., of Carnegie, Pa., B. A. the Johns Hopkins University, 1962; M. S. in Hyg., Univ. of Pittsburgh, 1963.
- HERBERT MORRIS SWICK, of Arlington, Va., B. A. The Johns Hopkins University, 1963.
- ROGER BERNARD THOMAS, JR., of Wilmington, Del., B. A. Dartmouth College, 1963.
- TIMOTHY MARTIN TUTHILL, of Tiffin, Ohio, B. S. Heidelberg College, 1962.
- THOMAS JAMES VANDERSALM, of Richland, Mich., B. S. Carnegie Institute of Technology, 1962.
- ANDREW PAUL WEINFELD, of Union, N. J., A. B. Rutgers University, 1962.
- CHARLES PATTON WILKINSON, of Norman, Okla., A. B. Stanford University, 1962.
- BYRN WILLIAMSON, JR., of Birmingham, Ala., A. B. Baylor University, 1962.

JAMES PHILLIP WILSON, of Allendale, N. J., B. S. Michigan State University, 1962.

W. STANLEY WILSON, of Indianapolis, Ind., B. A. The Johns Hopkins University, 1963.

ROBERT MARTIN WINSLOW, of New Ulm, Minn., B. S. University of Minnesota, 1962.

TAYLOR MALONE WRAY, of Nashville, Tenn., A. B. University of the South, 1962.

ROBERT STEVEN YOUNG, of Philadelphia, Pa., B. A. The Johns Hopkins University, 1963.

ANNA ZAGOLOFF, of Beacon, N. Y., B. A. The Johns Hopkins University, 1963.

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MASTERS OF ARTS IN TEACHING

KAAREN MARGARET ANDERSON, of Seneca Falls, N. Y., A. B. Vassar College, 1965.

EARL JOHN BALL III, of Collingswood, N. J., A. B. Middlebury College, 1965.

WILLIAM LOUIS BERENSON, of Bronx, N. Y., B. S. The City College of New York, 1964.

PATRICIA SCHWABE BEVERLY, of Oxon Hill, Md., A. B. Smith College, 1965.

ELLEN MARION BICK, of New York, N. Y., B. A. Brooklyn College, 1964.

SUSAN LOUISE BARSKEY BRANDES, of Montreal, Que., Canada, B. A. McGill University, 1965.

CAROLYN BRAUN, of Lewiston, N. Y., A. B. Oberlin College, 1964.

BARBARA JEAN BUCHANAN, of St. Marys, Ohio, A. B. Oberlin College, 1965.

CHARLES REID CALLANAN, of Baltimore, Md., A. B. Princeton University, 1949.

ANDREA LYNN CARON, of Albuquerque, N. Mex., A. B. Brandeis University, 1965.

MATTHEW EDWARD CLARK, of Hillsdale, N. J., A. B. Knox College, 1965.

KATHRYN ELEANOR DAVIS, of Hockessin, Del., A. B. Mount Holyoke College, 1965.

SUZANNE LOVELACE DENNEY, of Lexington, Ky., A. B. Randolph-Macon Woman's College, 1965.

BARBARA ANN EICHHORN, of Landing, N. J., B. A. Drew University, 1965.

EDWARD VINCENT ELENAUSKY, of New Philadelphia, Pa., B. A. LaSalle College, 1965.

SANDRA JEAN HOWE ELLIOTT, of Wilmington, Del., B. A. Ohio Wesleyan University, 1964.

LEWIS EDGAR FIKES, of Kettering, Ohio, A. B. Earlham College, 1965.

MARGERY EYERLY FLEIGH, of Hagerstown, Md., A. B. Sweet Briar College, 1964.

GEORGE IRVING GOVERMAN, of Brookline, Mass., A. B. Harvard University, 1965.

ANNE GRIGSBY, of Wilmington, Del., B. A. The College of Wooster, 1965.

PAUL CASHWELL GRUBBS, JR., of Mocksville, N. C., B. A. St. Andrews Presbyterian College, 1965.

BEATRICE GUTTENBERG, of Brooklyn, N. Y., B. A. Brooklyn College, 1964.

FRANCES ANN HALA, of Bayside, N. Y., A. B. Hope College, 1965.

DARRYL LYLE HESSEL, of Aurora, Ill., B. S. Beloit College, 1963.

GERALD ALLEN HURST, of Colorado Springs, Colo., B. A. University of Colorado, 1965.

ELIZABETH JOHNSON, of Lake City, S. C., B. A. Winthrop College, 1965.

KAREN DEE JORGENSEN, of Washington, D. C., B. A. Wellesley College, 1965.

FRANCES ANNE KAIMAN, of Kingsford, Mich., A. B. The University of Michigan, 1965.

DONNA POGGI KECK, of Williamstown, Mass., B. A. Elmira College, 1963.

JAMES CLYDE KECK, JR., of Fontana, Calif., B. S. University of California, Berkeley, 1960.

LINDA RUTH LOCHNER, of Frederick, Md., B. A. Wittenberg University, 1965.

GERALDINE CAROLE LONER, of Royal Oak, Mich., A. B. The University of Michigan, 1965.

PHILIPP MATHIAS MAERSCH, of Centerport, L. I., N. Y., B. A. University of Notre Dame, 1958.

MARY VIRGINIA MAY, of University Park, Md., A. B. Loretto Heights College, 1964.

- JOSEPH G. MAYER, of New York, N. Y., A. B. Harvard University, 1961.
- LINDA MOLLIN MCKELVY, of Akron, Ohio, B. S. The University of Akron, 1963.
- MARY ELIZABETH MURPHY, of South Orange, N. J., B. A. College of Saint Elizabeth, 1962.
- LOUISA FOULKE NEWLIN, of Washington, D. C., A. B. Radcliffe College, 1960.
- JOHN RIPLEY NICHOLSON, of Haddonfield, N. J., A. B. Harvard University, 1960.
- LINDA JANE NISENSEN, of Long Beach, N. Y., A. B. Mount Holyoke College, 1965.
- PHILIP MARTIN NYSTRAND, of Chicago, Ill., B. A. Northwestern University, 1965.
- ELIZABETH MEAD PIFER, of South Bend, Ind., B. A., Kalamazoo College, 1965.
- ROBERT EDWARD PROBST, of Baltimore, Md., B. A. Amherst College, 1964.
- MARY RENNE RANKIN, of Webster Groves, Mo., A. B. Smith College, 1965.
- STEPHEN MCMURTRIE RICKERT, of Washington, D. C., A. B. Princeton University, 1965.
- GEORGE WILLIAM RUTLER, of Katonah, N. Y., B. A. Dartmouth College, 1965.
- MARCUS JOHN SAEGROVE, of Mount Sterling, Wis., B. A. Luther College, 1965.
- NAOMI SCHINDLER, of Jamaica, N. Y., A. B. Mount Holyoke College, 1965.
- ELDEN EVERETT SCHNEIDER, JR., of Cleveland, Ohio, B. A. The College of Wooster, 1965.
- DONALD ELMORE SCHUMAN, of Binghamton, N. Y., A. B. Princeton University, 1965.
- GEORGE SLADE SCHUSTER, JR., of Rochester, Minn., B. A. Amherst College, 1961.
- KAREN JUDY SCOTT, of Arlington, Va., A. B. The George Washington University, 1964.
- MARCELLE CLAIRE SMART, of Livonia, Mich., A. B. The University of Michigan, 1965.
- FRANK JOSEPH SORIANO, of Cedar Knolls, N. J., B. A. The Johns Hopkins University, 1965.
- SUSAN ELIZABETH STEINMULLER, of New Shrewsbury, N. J., A. B. Goucher College, 1964.
- KAREN ANNE STEWART, of Minneapolis, Minn., B. A. Carleton College, 1965.
- SARAH LYNNE TRUMP, of Wooster, Ohio, B. A. Lawrence University, 1965.
- MICAH SAMUEL TSOMONDO, of Wedza, Southern Rhodesia, B. A. Hamline University, 1965.
- CARL FREDERICK WAGNER, of Baltimore, Md., B. A. William Marsh Rice University, 1965.
- TOBY RUTH BREMER WARHAFTIG, of Brooklyn, N. Y., A. B. Smith College, 1965.
- RONALD LESTER WERLEY, of Bethlehem, Pa., A. B. Muhlenberg College, 1965.
- EVELYNN HARUKO YAMASHITA, of Montclair, N. J., B. A. Elmira College, 1965.

(62)

MASTERS OF ARTS

with titles of essays

- EVANGELOS ANGELOS AFENDRAS, of Athens, Greece, B. A. The Johns Hopkins University, 1965. Linguistics.
- SUSANNE ELIZABETH ALBRECHT, of Amherst, Ohio, B. A. The College of Wooster, 1964. History.
The Role of Anglicans and Anglicanism in Boston Society, 1686-1764.
- JAMES ROBERT ANDREAS, of Baltimore, Md., B. A. Northwestern University, 1965. English.
- PETER JOHN ARMBRUST, of Buffalo, N. Y., B. A. Canisius College, 1965. German.
- DAVID BRUCE AXELROD, of Beverly, Mass., B. A. University of Massachusetts, 1965. Writing Seminars.
Alphabets of Things: Recent Poems.
- JUDITH MARY AYERS, of Staten Island, N. Y., B. A. William Smith College, 1965. Writing Seminars.
Two Stories with Long Titles.
- WILLIAM PREAS BANKS, of Clifton, Va., B. A. St. John's College, Maryland, 1964. Psychology.
- JEAN-JACQUES EMILE BELLIARD, of Calvados, France. International Studies.
International Law and Human Rights: Theoretical and Political Aspects.
- LEE BERMAN, of San Francisco, Calif., B. A. University of California, Berkeley, 1965. English.
- OLIVER LAFAYETTE BILLINGSLEA, of Camden, Miss., B. A. University of Mississippi, 1964. English.

- PAUL HERBERT BLACKMAN, of San Francisco, Calif., B. A. University of California, Riverside, 1964. Political Science. Nativism and the Muckrakers.
- ELIZABETH BLOCK, of New York, N. Y., A. B. Radcliffe College, 1965. English.
- WILLIAM CHRISTIAN BLOME, of Baltimore, Md., B. A. Towson State College, 1965. Writing Seminars. *Poems.*
- BARBARA IONE BROWN, of New York, N. Y., B. A. The City College of New York, 1963. Political Science. The Political Thought of H. L. Mencken, Inception—1923.
- SUE DIANE BURTON, of Massillon, Ohio, B. A. Denison University, 1965. Writing Seminars. *The Rocking Horse: A Play.*
- JOHN DOUGLAS CANFIELD, of Chevy Chase, Md., B. A. University of Notre Dame, 1963; M. A. T. Yale University, 1964. English.
- LINDALU COLLINS, of Morristown, N. J., A. B. Vassar College, 1965. Classics.
- STANLEY CLINTON COLLYER, of Stamford, Conn., B. S. Denison University, 1964. Psychology.
- CURTIS GERALD COOK, of Corning, N. Y., B. S. United States Air Force Academy, 1959. Political Science. The B-70, a Chapter in Defense Policy.
- SAMUEL GOULD CURTIS, of Bethlehem, Conn., B. A. Trinity College, Connecticut, 1962. Writing Seminars. *Vortex.*
- DALLAS WAYNE DAVIS, of Harvey Station, N. B., Canada, B. Sc. University of New Brunswick, 1965. Geology.
- RICHARD LEROY DEGERMAN, of Hughson, Calif., A. B. Stanford University, 1964. Psychology.
- ROBERT CHRISTOPHER SIBSON DOLMAN, of Worcester Park, Surrey, England, B. A. Cambridge University, 1965. English.
- DOUGLAS WARD DONIGIAN, of Ford City, Pa., B. S. in Chem. Carnegie Institute of Technology, 1964. Chemistry.
- JOHN WILLIAM DOUGLAS, of Chester, Pa., A. B. Lincoln University, Pennsylvania, 1964. Chemistry.
- CALLIOPE DOXIADIS, of Athens, Greece, B. A. Mills College, 1965. Writing Seminars. *Visions of the King and Other Stories.*
- KENNETH PAUL DRESSLER, of Akron, Ohio, B. S. The University of Akron, 1964. Chemistry.
- RONALD LEE EVANS DRISKO, of Bath, Maine, B. S. Eastern Nazarene College, 1964. Chemistry.
- M. CHESLEY DUNCAN, of Newtown Square, Pa., B. A. Wellesley College, 1965. Writing Seminars. *A Collection of Poems.*
- DAVID EHRLICH, of Merion, Pa., B. S. Philadelphia College of Textiles & Science, 1964. Writing Seminars. *A Problem of Consumption.*
- JOHN WILLIAM ELLWOOD, of New York, N. Y., B. A. Franklin and Marshall College, 1964. Political Science. The New York Liberal Party and its Relations with the Reform Democrats in New York City.
- A. FERDINAND ENGLE, of Nashville, Tenn. Romance Languages.
- CAROLYN R. FARB, of Baltimore, Md., B. A. in English Carnegie Institute of Technology, 1965; B. A. in Mathematics, 1965. English.
- DALE EDWARD FERN, of Baltimore, Md. Writing Seminars. *Ah! Bright Wings: A Drama in Two Acts.*
- CHARLES LOUIS IAN FINDLAY, of London, England, B. A. University of Reading, England, 1962. German.
- PETER GRAHAM FISH, of Ridgewood, N. J., A. B. Princeton University, 1960. Political Science. The Evolution of Federal Judicial Administration: Institutional Growth as a Response to Crises.
- FRANCES ROBERTA FRANKEL, of Miami Beach, Fla., A. B. University of Miami, Florida, 1962. Political Science. A Two-Party South?: The Case of Florida.
- GRANT ALAN FULTS, of St. Louis, Mo., B. A. University of Kansas, 1963; M. A. University of Oregon, 1965. English.
- PAUL J. GABRINER, of South Orange, N. J., A. B. Bard College, 1965. English.
- DONALD ALFRED GAROFALO, of Hartford, Conn., B. A. Trinity College, Connecticut, 1965. German.
- GORDON L. A. GENSLER, of Reading, Pa., A. B. Princeton University, 1965. English.
- JOSEPH C. GOODMAN, of Morris Plains, N. J., A. B. Rutgers University, 1964. Writing Seminars. *A Collection of Short Fiction.*
- RICHARD LANDOLIN GOTTWALD, of Detroit, Mich., A. B. The University of Michigan, 1963. Psychology.
- KATHLEEN MARIE GRIFFIN, of Chesterton, Ind., B. A. Mount Mary College, 1964. Writing Seminars. *Middle Men.*
- BERNARD ADOLPH GROPPER, of Baltimore, Md., B. S. University of Maryland, 1964. Psychology.
- DAVID MICHAEL GROSSMAN, of Sunnyside, N. Y., B. A. The City College of New York, 1964. History. The Chicago Conference on Trusts—1899.
- ELEANOR GUBINS, of Brooklyn, N. Y., B. A. Brooklyn College, 1964. Political Science. The Council of Economic Advisers: A Study of Congressional, Presidential and Executive Agency Expectations.

- BYRON CARLYLE HALL, JR., of Cincinnati, Ohio, B. S. University of Cincinnati, 1959. Physics.
Mössbauer Analysis of Meteorites.
- JOAN CAROLE HAND, of Jamaica, N. Y., A. B. Bard College, 1965. Writing Seminars.
Rescue Me from Silence and Other Stories.
- CELINE HATCHER, of Monterey, Calif., Ind., B. A. Mount St. Mary's College, California, 1962; M. A. Dominican College of San Rafael, 1963. English.
- THOMAS LEE HEACOX, of Altoona, Pa., B. A. The Pennsylvania State University, 1965. English.
- GERARD WILLIAM HEIM, of South Plainfield, N. J., B. A. St. John's University, New York, 1963. Classics.
- PAUL FAJVEL HOFFMAN, of Toronto, Ont., Canada, B. Sc. McMaster University, 1964. Geology.
- STEPHEN PORTER MERIWETHER HOWARD, of Frederick, Md., B. A. Beloit College, 1964. Writing Seminars.
Two Short Stories and Two Chapters of a Novel.
- JOHN EVERETT HUGHES, of Buffalo, N. Y., B. S. Cornell University, 1963. Oceanography.
Primary Production Measurements in the Upper Chesapeake Bay during the Summer, 1964.
- GEORGE CHRISTIAN JERNSTEDT, of Pittsburgh, Pa., B. S. in E. E. Carnegie Institute of Technology, 1963. Psychology.
- MICHAEL GEOFFREY JOHNSON, of Minneapolis, Minn., B. A. Carleton College, 1964. Psychology.
- RICHARD BRANDON KERSHNER, JR., of Silver Spring, Md. Writing Seminars.
Poems.
- MICHAEL KIMMEL, of Philadelphia, Pa., B. S. Temple University, 1962. Writing Seminars.
On Belay: A Novel.
- NANCY ROWENA KINGSBURY, of Arlington, Va., A. B. University of Miami, Florida, 1964. Psychology.
- ROBIN DONALD KINKEAD, of San Francisco, Calif., B. A. San Francisco State College, 1962. Psychology.
- MARTIN RUCKS KIRBY, of McGehee, Ark., B. A. Tulane University, 1965. Writing Seminars.
Three Stories.
- KENNETH PERRY LANDON, JR., of Washington, D. C., A. B. Wheaton College, 1965. Writing Seminars.
Two Stories and Twelve Poems.
- SANDRA SUTTON LANGNER, of Seguin, Texas, B. A. William Marsh Rice University, 1964. German.
- ROBIN ANN LAUTERBACH, of Lebanon, Ohio, B. A. St. Mary's College, Indiana, 1965. English.
- ARNOLD LESTER LEHMAN, of Freeport, N. Y., B. A. The Johns Hopkins University, 1965. Writing Seminars.
Eyes of Seagulls.
- MARJORIE ELKIND LEVINE, of New York, N. Y., A. B. Hunter College, 1965. Classics.
- JOYCE ROHR LILIE, of Huntington, W. Va., B. A. Marshall University, 1963. Political Science.
Legislative Liaison in the Office of Education: A Study in Congressional-Executive Relations.
- SHIRLEY ANN LUMPKIN, of Fayetteville, N. Y., B. A. Wesleyan University, 1965. English.
- JOHN MICHAEL LYNCH, of Linden, N. J., B. S. F. S. Georgetown University, 1960. Writing Seminars.
Merry Men Are We.
- LINDA BRODY LYONS, of New York, N. Y., B. A. Pembroke College, 1963. Biology.
- DONALD AARON MANKIN, of Philadelphia, Pa., B. S. in E. E. Drexel Institute of Technology, 1964. Psychology.
- KEVIN JOHN McCABE, of Milton, Mass., A. B. Boston College, 1963. Political Economy.
A Study of Stock Splits.
- ELLIOT GREGOR McINTIRE, of Barstow, Calif., B. A. University of California, Riverside, 1963. Geography.
The Northern Periphery Culture of the American Southwest.
- ATHOL ERSKINE MEDER, of Dunedin, New Zealand, B. Sc. Geol. University of Otago, 1964; B. Sc. Chem. 1965.
- MARINA IRIS MERCADO, of New York, N. Y., A. B. Hunter College, 1964. International Studies.
The International Legal Theory of Alejandro Alvarez.
- WILLIAM JOHN THOMAS MITCHELL, of Saginaw, Mich., B. A. Michigan State University, 1963. English.
- GARY EDWARD MOORE, of Beaver Falls, Pa., B. A. The Johns Hopkins University, 1965. Writing Seminars.
New and Used Poems.
- SISTER MARY ROSALIE MOORE, S. P., of St. Mary-of-the-Woods, Ind., A. B. St. Mary-of-the-Woods College, 1938; M. F. A. Catholic University, 1959. Art.
An Analysis of the Iconography of St. Joseph in the Nativity and Adoration of the Magi Scenes of Some Fifteenth Century Paintings in Northern Europe and in Italy, c. 1420-1450.
- ELIZABETH KOHN MOSER, of Baltimore, Md. Geography.
The Geographic Distribution of Fire Department Services in Baltimore, Maryland.
- REINHOLD CHRISTOPHER MUELLER, of St. Paul, Minn., B. A. College of St. Thomas, 1962. History.
- F. KEVIN MURPHY, of Oroville, Calif. Writing Seminars.
Notes toward a Novel.
- PETER MARIUS NELSON, of Greenwich, Conn., A. B. Boston University, 1964. Philosophy.
- CHRISTEL NIEROBISCH, of Berlin, Germany, B. A. Southern Oregon College, 1965. German.

- PETER MICHAEL NORTON, of Baltimore, Md., B. A. The Johns Hopkins University, 1964. Writing Seminars.
The Death of Harlequin: Poems.
- GÜNER ÖZTUNA, of Turkey, B. S. Columbia University, 1965. Writing Seminars.
Arch (omnium-gatherum): A Collection of Poems.
- IRA LAWN PEARLMAN, of Baltimore, Md., B. A. University of California, Los Angeles, 1964. Art as Applied to Medicine.
The Venous Supply of the Uterus and Adnexa of the Rhesus Monkey (*Macaca mulatta*).
- JAMES HARRISON RAMSDEN, of Glen Burnie, Md., B. S. United States Military Academy, 1958. Chemistry.
- EDITH CARLSON REESE, of Wakefield, Mass., A. B. Barnard College, 1964. Geography.
Methods of Supermarket Location Analysis: A Case Study.
- CHRISTOPHER SYMONDS RHINES, of Glastonbury, Conn., B. A. Amherst College, 1961. Political Science.
The French Executive in the Constitution of 1791.
- LARRY MARSHALL SAMS, of Bloomfield, Ky., B.S. in Com. University of Kentucky, 1961. Writing Seminars.
Piece for an Empty Bottle.
- TEODORO MACAPAGAL SANTOS, of Pulilan, Bulacan, Republic of the Philippines, B. S. in Geol. University of the Philippines, 1961. Geology.
- LORRAINE COOGAN SCARPA, of Derby, Conn., B. A. Manhattanville College of the Sacred Heart, 1964. Psychology.
- SUSAN CAROLE SCHLUDERBERG, of Baltimore, Md., A. B. Gettysburg College, 1965. Writing Seminars.
Fiction and Poetry.
- EARL GEORGE SCHREIBER, of Roxbury, N. Y., B. A. State University of New York, Albany, 1965. English.
- SARA LEE SILBERMAN, of Lebanon, Pa., B. A. Pembroke College, 1963. History.
- ROBERT DENISON SMITH, of Baltimore, Md., A. B. Rutgers University, 1963. Oceanography.
Subsurface Circulation in West African Waters between 15° N and 1° N.
- PAULINE ANDRIA SPRINGER, of Atlanta, Ga., B. A. Vanderbilt University, 1963. Biology.
- THOMAS HERBERT STAHEL, S. J., of Greenwood, Miss., B. S. Georgetown University, 1959; M. A. Yale University, 1960; Lic. Phil. St. Louis University, 1965. English.
- GORDON MCNETT STEWART, of Chatham, N. J. German.
- STEPHEN PARKS STRICKLAND, of Washington, D. C., A. B. Emory University, 1956. Political Science.
The Origins and Consequences of Subcommittee Unity: An Analysis of Labor-HEW Appropriations Bills, 1954-1965.
- PETER MICHAEL SULLIVAN, of Bayonne, N. J., B. S. St. Peter's College, New Jersey, 1960. German.
- ALVIN ISAAC THALER, of Baltimore, Md., A. B. Columbia University, 1959. Mathematics.
- JEAN ELISABETH TORCOM, of Park Ridge, Ill., B. A. Colorado College, 1964. Political Science.
Minority Leadership in the United States Senate.
- HUGO VALDIVIA-AMPUERO, of Lima, Peru. Geology.
- ARTHUR LEE VOGELSANG, of Towson, Md., B. A. University of Maryland, 1965. Writing Seminars.
For Poets and Their Wives and Other Poems.
- WALTRAUD ROSA WALZ, of Basel, Switzerland, B. A. West Virginia Wesleyan College, 1963. Political Science.
The Political Thought of Albert Camus.
- SOPHIA CHUNG-LING LIU WANG, of Taipei, Taiwan, China, B. S. National Taiwan University, 1960. Chemistry.
- LEONORE BROOK LOFT WEISS, of Mt. Vernon, N. Y., B. A. Pembroke College, 1964. Romance Languages.
- LOREN EARL WILKINSON, of Albany, Oreg., A. B. Wheaton College, 1965. Writing Seminars.
Windimskalyah.
- ROBERT LOUIS WINTERS, of Omaha, Nebr., B. A. The Creighton University, 1964. English.
- PENELOPE JOAN WISE, of Kingston, Ont., Canada, B. Sc. Queen's University, 1965. Geology.
- **WILLIAM JOSEPH WOMER, of Altoona, Pa., B. A. The Pennsylvania State University, 1965. English.
- ROBERT STUART ZELENKA, of Dallas, Texas, B. A. William Marsh Rice University, 1965. English.
- NICHOLAS ZILL II, of New York, N. Y., A. B. Columbia University, 1963. Psychology.

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** Posthumously

DOCTORS OF PHILOSOPHY

with titles of dissertations

- JOHN NORMAN ABELSON, of Tacoma, Wash., B. S. in Physics Washington State University, 1960. Biophysics.
The Anatomy of the T5 Bacteriophage DNA Molecule.
- PETER BROWNELL ARMSTRONG, of Baltimore, Md., B. S. The University of Rochester, 1961. Biology.
On the Physiology of Cell Adhesion.
- LAURE AURELIAN, of Ramat-Gan, Israel, M.Sc. Tel-Aviv University, 1962. Microbiology.
Non-Permissiveness in Mammalian Cells Infected with Herpes Simplex Virus.
- LOUISE GUÉNO POORMAN BAENNINGER, of Short Hills, N. J., B. A. New York University, 1961. Psychology.
Comparison of Behavioral Development in Socially Isolated and Non-Isolated Rats.
- RONALD BAENNINGER, of Upper Montclair, N. J., B. E. Stevens Institute of Technology, 1959; M. S. in Psychology Carnegie Institute of Technology, 1962. Psychology.
Contrasting Effects of Fear and Pain on Mouse-killing by Rats.
- JAMES PATRICK BAGGOTT, of Milwaukee, Wis., B. S. Marquette University, 1962. Physiological Chemistry.
The Association of TPNH Cytochrome c Reductase with Substrate and Cofactors.
- ALAN STUART BAHLER, of Irvington, N. J., B. S. in E. E. Newark College of Engineering, 1957; M. S. in E. E., 1959. Biomedical Engineering.
A Quantitative Investigation into the Dynamics of an *in vitro* Mammalian Muscle.
- RUTH A. BARI, of Silver Spring, Md., B. A. Brooklyn College, 1939; M. A. The Johns Hopkins University, 1943. Mathematics.
Absolute Reducibility of Maps of at most 19 Regions.
- BURTON HENRY BARTLEY, of Laurens, Iowa, B. S. Iowa State College, 1962; M. A. The Johns Hopkins University, 1964. Chemistry.
Carbon-14 Tracer Studies of the Secondary Reactions in the Catalytic Cracking of n-Hexadecane.
- JACOB BECHER, of Newark, N. J., B. A. Rutgers University, 1957. Physics.
Energy Levels of Rare Earth Configurations and the Spectrum of ErIII.
- FREDERICK MARTIN BOMSE, of New York, N. Y., B. S. Antioch College, 1961. Physics.
Resonance Analysis in K^+p Reactions at 2.26 Bev/c.
- HERBERT FRANK BROOKS, of Dallas, Texas, B. A. North Texas State College, 1955; M. A. 1956. Romance Languages.
Deliciarum Arbiter: Guez de Balzac the Critic.
- BYRON WILLIAM BROWN, of Baltimore, Md., B. A. Cornell University, 1960. Political Economy.
Comparing Economic and Engineering Estimates of the Production Function.
- HOMER OBED BROWN, JR., of Baltimore, Md., B. A. The University of Oklahoma, 1959; M. A. 1962; M. A. The Johns Hopkins University, 1964. English.
The Early Fiction of James Joyce: The Biography of a Form.
- WILLIAM JOHN BRYA, of Chicago, Ill., B. E. S. The Johns Hopkins University, 1960. Electrical Engineering.
The Dynamic Interaction between Paramagnetic Ions and Resonant Phonons in a Bottlenecked Lattice.
- MORGAN MALLORY BUCHNER, JR., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1961. Electrical Engineering.
Coding for Numerical Data Transmission.
- MORTON LEON BURDICK, of Chicago, Ill., B. S. The University of Chicago, 1962. Biology.
A Test of the Capacity of Chick Embryonic Cells to Home after Vascular Dissemination.
- ALEXANDER FULLER BURR, of Jamestown, N. D., B. S. Jamestown College, 1953; M. A. University of Edinburgh, 1958. Physics.
Least Squares Evaluation of Atomic Energy Levels Based on Improved X-Ray Wavelengths and Photoelectron Data.
- CHARLES HERRICK CARLIN, of Rockford, Ill., B. A. Carthage College, 1961; M. A. The Johns Hopkins University, 1963. Chemistry.
Structural Analyses in the Dithizone Series.
- WILLIAM JEWELL CARTER, of La Center, Ky., B. S. Georgia Institute of Technology, 1959. Physics.
The Spectrum of Er IV.
- HERBERT HORACE CLARK, of Deadwood, S. Dak., B. A. Stanford University, 1962; M. A. The Johns Hopkins University, 1964. Psychology.
On the Use and Meaning of Prepositions.
- LINDA BETH COHEN, of Forest Hills, N. Y., B. S. Queens College, New York, 1962. Physiological Chemistry.
Turnover of Protein and Phospholipid Components of Hepatic Endoplasmic Reticulum in Normal and Phenobarbital-treated Rats.
- JAMES ARTHUR COLE, of Albany, N. Y., B. S. Union College, 1961. Physics.
Multiple Pion Productive in πp Reactions at 5.5 Gev/c.

- WAYNE F. DAUGHERTY, JR., of Falls Church, Va., B. A. Long Beach State College, 1960. Biology.
Fish Lactate Dehydrogenase: Ontogeny and Phylogeny.
- PAUL FREDERICK DELESPINASSE, of Honolulu, Hawaii, B. A. Willamette University, 1961; M. A. The Johns Hopkins University, 1963. Political Science.
The Monarchical Institution in Constitutional Democracy.
- THOMAS ROBERT DETWYLER, of Jackson, Mich., B. S. University of Michigan, 1960. Geography.
Forest Vegetation Environment and Processes in the Ontonagon Area, Michigan.
- IAN GORDON DONALDSON, of Lower Hutt, New Zealand, B. Sc. University of New Zealand, 1953; M. Sc. 1955. Mechanics.
Convection in a Stably Stratified Viscous Fluid Heated Non-uniformly from Below.
- ED SMITH DORMAN, of Memphis, Tenn., B. S. Southwestern at Memphis, 1958. Physics.
Concentration Effects and Oscillator Strengths in Pr.Cl.
- RICHARD NOEL DRAPER, of Baltimore, Md., B. S. Baldwin-Wallace College, 1959. Mathematics.
Intersection Theory in Complex Analytic Geometry.
- DONNA HARDY DUCKWORTH, of Baltimore, Md., B. A. The Florida State University, 1957; M. A. T. The Johns Hopkins University, 1959. Biology.
Biochemical and Genetic Studies of a Virus-Induced Deoxynucleotide Kinase.
- ROBERT WALDEN DUNDON, S. J., of Iron Mountain, Mich., A. B. St. Louis University, 1960; M. A. The Johns Hopkins University, 1963. Chemistry.
The Kinetics of the Ag (II)-Tl (I) Reaction in Nitric Acid.
- ANDRÉ ARMAND-ALFRED DUPONT, of Montreal, Que., Canada, B. Sc. A. Montreal University, 1956; B. Ph., 1958. Physics.
Spectrum of Doubly Ionized Samarium, Sm III.
- FRED YOSHIHIRO EDAMURA, of Vancouver, B. C., Canada, B. Sc. University of Alberta, 1960; M. A. The Johns Hopkins University, 1962. Chemistry.
Preparation of Some Stereospecifically Deuterated Clovane and Caryolane Derivatives.
- DOMINIC GARDINER BOWLING EDELEN, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1954; M. S. E., 1956. Mechanics.
The Invariance Groups for Hamiltonian Systems of Partial Differential Equations.
- CHARLES HERBERT ELLIS, JR., of Baltimore, Md., B. A. Swarthmore College, 1962. Biology.
Genetic Control of Sea Urchin Development: A Chromatographic Analysis of Protein Synthesis in the *Arbacia punctulata* Embryo.
- RUTH ANN EL SAFFAR, of Oak Ridge, Tenn., B. A. Colorado College, 1962. Romance Languages.
Distance and Control in *Don Quijote*: a Study of Narrative Technique.
- ELMER GEORGE ERDMAN, JR., of Hanover, N. H., A. B. Dartmouth College, 1961. Romance Languages.
Source, Sense, and Structure: An Approach to the Sonnets of Lope de Vega.
- FREDERICK CHRISTIAN EVERING, JR., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1958; M. S. E., 1960. Electrical Engineering.
A Study of One Mechanism of Diffraction Anomalies at Microwave Frequencies.
- GERALD ERIC FINLEY, of Toronto, Ont., Canada, B. A. University of Toronto, 1955; M. A., 1957. Art.
The Interpretation of Topographical Views by English Artists during the Late Eighteenth and Early Nineteenth Centuries.
- **WILLIAM HENRY FLEMING II, of Augusta, Ga., B. S. University of Georgia, 1951; M. D. Medical College of Georgia, 1955. Biology.
Purification and Some Properties of Bacteriophage T6r-Induced Deoxycytidine Monophosphate Deaminase: A Regulatory Enzyme.
- WILLIAM JAY GARLAND, of Jackson, Ga., A. B. Emory University, 1962. Philosophy.
Whitehead's Concept of Actuality.
- NORMAN JAMES GHARRITY, of Beloit, Wis., A. B. Northwestern University, 1958. Political Economy.
The Use and Non-Use of Patented Inventions.
- HOWARD LESLIE GILLARY, of Flushing, N. Y., A. B. Oberlin College, 1961. Biology.
Quantitative Electrophysiological Studies on the Mechanism of Stimulation of the Salt Receptor of the Blowfly.
- RICHARD DONALD GONZALEZ, of Buenos Aires, Argentina, B. Ch. E. Rensselaer Polytechnic Institute, 1961; M. A. The Johns Hopkins University, 1963. Chemistry.
The Reaction of Hydrogen Atoms with Adsorbed Species.
- ANGEL GONZALEZ-ARAUZO, of Mexico City, Mexico, B. A. University of Barcelona, 1939; M. A. Edinburgh University, 1946. Romance Languages.
Patologia Finisecular: La Sociedad Doliente en La Novela Galdosiana.
- FRANCIS STANLEY GRUBAR, of Washington, D. C., B. A. University of Maryland, 1948; M. A., 1949; M. A. The Johns Hopkins University, 1952. Art.
William Caton Woodville.

** Posthumously

- STEPHEN DENISON HAUSCHKA, of Buffalo, N. Y., B. A. Amherst College, 1962. Biology.
Collagen and the Differentiation of Skeletal Muscle in vitro.
- NANINE SCOT HENDERSON, of Rockville, Md., B. A. Pembroke College, 1961. Biology.
Intracellular Distribution and Genetic Control of Multiple Molecular Forms of Enzymes of Carbohydrate Metabolism.
- NOAH HERSHKOWITZ, of New York, N. Y., B. S. Union College, 1962. Physics.
The Mössbauer Effect of the Second Excited State of Fe⁵⁷.
- ALICE SHIH-HOU HUANG, of Gibsonia, Pa., B. A. The Johns Hopkins University, 1961; M. A., 1963. Microbiology.
Infective and Defective Particles of Vesicular Stomatitis Virus: Identification, Inhibition of Host RNA Synthesis and Interfering Activity.
- SHIRO IMAI, of Kobuchizawa, Yamanashi, Japan, B. Sc. Hokkaido University, Japan, 1953; M. Sc., 1955; B. A., 1959. Psychology.
Classification of Sets of Stimuli with Different Stimulus Characteristics and Numerical Properties.
- ROBERT JOSEPHS, of Philadelphia, Pa., B. S. University of Illinois, 1959; M. Sc. The Hebrew University of Jerusalem, 1963. Biology.
Physical Chemical Studies on the Formation of Myosin Filaments.
- ROBERT MELROY KELLOGG, of New York, N. Y., B. M. E. The City College of New York, 1955; M. E. E. Syracuse University, 1961. Mechanics.
Evolution of a Spectrally Local Disturbance in a Grid-Generated Turbulent Flow.
- CHARLES BROWN KIMMEL, of Baltimore, Md., B. A. Swarthmore College, 1962. Biology.
Lysosomes in the Spleen of the Chick Embryo: (1) Development and Properties; (2) Changes during the Graft-versus-Host Reaction.
- JEROME RICHARD KIRK, of Urbana, Ill., B. A. Reed College, 1960. Social Relations.
Cultural Diversity and Character Change at Carnegie Tech.
- RALPH HERMAN KUMMLER, of Phoenixville, Pa., B. Ch. E. Rensselaer Polytechnic Institute, 1962. Chemical Engineering.
Collision Induced Self Quenching of I₂ (²πu₀⁺).
- WILLIAM HENRY FRAZER KUYKENDALL, of Charlotte, N. C., A. B. Davidson College, 1956. Near Eastern Studies.
Egyptian Religious Activity in Palestine and Syria in the 2nd and 3rd Millennia B. C.
- HERBERT ROBERT KWASNIK, of Brooklyn, N. Y., A. B. Brooklyn College, 1957; M. A. The Johns Hopkins University, 1961. Chemistry.
Tricyclic Norbornyl Analogs.
- DONALD ROSS LAMPE, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1960; M. S. California Institute of Technology, 1961. Electrical Engineering.
The Orbach Process for Chromium in Rutile.
- LAURENCE ARMINIO PEREIRA LEITE, of Chevy Chase, Md., M. A. The Johns Hopkins University, 1955. Art.
Cycles of the Legend of St. Agatha.
- BARRY LENTNEK, of Baltimore, Md., A. B. Brooklyn College, 1960. Geography.
A Geography of the Subsistence Economy of El Llano, Aguascalientes, Mexico.
- JAMES ANTHONY LEONE, of Detroit, Mich., B. S. University of Cincinnati, 1961; M. A. The Johns Hopkins University, 1963. Chemistry.
An Electron Spin Resonance Study of X-Ray Irradiated Binary Mixtures of Conjugated Ring Systems and Alcohols.
- HARALD RICHARD LEUBA, of Phoenix, Ariz., B. S. New Mexico State University, 1958; M. S. The George Washington University, 1963; M. A. The Johns Hopkins University, 1964. Psychology.
The Concept of Availability and a Test of Symmetry in Paired Associates.
- MARVIN LONDON, of Arlington, Va., A. B. Dartmouth College, 1961. Psychology.
Directionality of Orderings.
- VINCENT CHARLES MANGANIELLO, of Jersey City, N. J., A. B. St. Peter's College, New Jersey, 1959. Physiological Chemistry.
A Study of the Relationship between Ribosomes and the Endoplasmic Reticulum during Protein Synthesis. Characterization and Distribution of Newly Synthesized Protein Appearing in the Microsomal Membranes.
- EUGENE MARSEGLIA, of Washington, D. C., B. A. The George Washington University, 1960. Art.
The Architecture of Sta. Maria della Steccata in Parma.
- JAMES STEPHEN MARSH, of Rayland, Ohio, A. B. Marietta College, 1958. Physics.
Ising Chain Statistics and Magnetic Phases in Rare Earth Trichlorides.
- CLYDE EUGENE MARTIN, of Timonium, Md., A. B. Indiana University, 1941. Social Relations.
Marital and Coital Factors in Cervical Cancer.
- THOMAS FRANCIS MCDANIEL, of Baltimore, Md., B. A. University of Richmond, 1951; B. D. Eastern Baptist Theological Seminary, 1955; M. A. University of Pennsylvania, 1956. Near Eastern Studies.
Philological Studies in *Lamentations*.

- MYRA ELLEN MOSS MILBURN, of Palo Alto, Calif., B. A. Pomona College, 1958. Philosophy.
Benedetto Croce's Two Theories of Truth.
- RAYMOND EDWIN MILLER, of Cincinnati, Ohio, B. S. Xavier University, Ohio, 1959. Physics.
High Resolution Emission Vegard-Kaplan Bands and Absolute Energy of the $A^3\Sigma^+$ State of Nitrogen.
- WILLIAM MARVIN MITCHELL, of Nashville, Tenn., B. A. Vanderbilt University, 1957; M. D., 1960. Biology.
Purification and Characterization of Two Proteolytic Enzymes from *Clostridium histolyticum*.
- VERNON KENJI MIYAMOTO, of Honolulu, Hawaii, B. A. The Johns Hopkins University, 1960. Physiological Chemistry.
D. C. Electrical Properties of Lipid Bilayer Membranes.
- JAMES LOOMIS MUNOZ, of Denver, Colo., A. B. Princeton University, 1961. Geology.
Synthesis and Stability of Lepidolites.
- FRANK BRUSH MURRAY, of Baltimore, Md., B. A. St. John's College, Maryland, 1960; M. A. T. The Johns Hopkins University, 1961. Education.
Some Factors Related to the Conservation of Illusion-Distorted Lengths by Primary School Children.
- ALLEN HOWARD NEIMS, of Baltimore, Md., A. B. University of Chicago, 1957; S. B., 1957; M. D. The Johns Hopkins University, 1961. Physiological Chemistry.
D-Amino Acid Oxidase. I. Mechanism of Action. II. Inhibitory Processes.
- JOHN BROWN NEWMAN, of Baltimore, Md., B. S. University of North Carolina, 1944; M. S. 1952. Physics.
On the Spectral Behavior of the Cesium Uranyl Nitrate Crystal.
- RICHARD GREGORY NEWTON, of Endicott, N. Y., A. B. Harpur College of the State University of New York, 1954. Romance Languages.
The Date Assumed for Dante's Allegorical Journey.
- FRANCIS VALENTINE O'CONNOR, of College Park, Md., B. A. Manhattan College, 1959; M. A. The Johns Hopkins University, 1960. Art.
The Genesis of Jackson Pollock.
- LAWRENCE ANDREW O'NEILL, of Baltimore, Md., B. S. E. E. University of Maryland, 1956; M. E. E. Catholic University of America, 1959. Electrical Engineering.
Adaptive Detection and Representation of Signals.
- GEORGE STUART PATTERSON, JR., of Baltimore, Md., S. M. Massachusetts Institute of Technology, 1959. Mechanics.
Walks on a Random Binary Velocity Field.
- JOHN FINLEY PORTER, JR., of Upperco, Md., B. S. University of Alabama, 1950; M. S., 1956. Physics.
Energy Transfer between Excited States of Ho^{3+} in $LaCl_3$.
- WILLIAM RICHARD POWELL, of Garrison, Md., B. E. Cornell University, 1959. Physics.
Stark Broadening of AI and AII Lines at High Electron Concentrations.
- GARY ARTHUR PRINZ, of Cleveland, Ohio. B. S. University of Pittsburgh, 1960. Physics.
An Analysis of Spectra Resulting from Systems of Coupled Nd^{3+} Ions.
- KENNETH BIRGER PYLE, of State College, Pa., A. B. Harvard University, 1958. History.
The New Generation: Young Japanese in Search of National Identity, 1887-1895.
- DONALD J. RANDAZZO, of Brooklyn, N. Y., B. S. Polytechnic Institute of Brooklyn, 1960. Physics.
Magnetic Studies on Erbium and Terbium in Gadolinium Trichloride.
- CHARLES WILLSON RECTOR, of Baltimore, Md., S. B. University of Chicago, 1949; M. S. Franklin and Marshall College, 1959. Physics.
Electron Paramagnetic Resonance and Optical Spectra of $CaF_2:Er^{3+}$.
- JAMES RICHARD REEDER, of Greenbrier, Tenn., B. E. Vanderbilt University, 1955. Electrical Engineering.
Techniques for the Resolution of Overlapping Waveforms.
- RAYMOND JOSEPH RENNARD, JR., of Philadelphia, Pa., B. S. St. Joseph's College, Pennsylvania, 1961; M. A. The Johns Hopkins University, 1963. Chemistry.
Olefin Hydrogenation and Hydrogen-Deuterium Equilibration over Palladium.
- ENLOE THOMAS RITTER, of Memphis, Tenn., B. S. Southwestern at Memphis, 1961. Physics.
Mössbauer Effect Following Coulomb Excitation of Fe^{57} .
- JOHN ROGER ROTH, of Mankato, Minn., A. B. Harvard University, 1961. Biology.
Histidine Regulatory Mutants in *Salmonella typhimurium*.
- ROYAL ROUSSEL, of Baltimore, Md., B. A. Rice University, 1959; M. A., 1961. English.
The Metaphysics of Darkness: A Study in the Development of Conrad's Fiction.
- INA ROSEN RUBENSTEIN, of Orange, Conn., B. A. University of California, Los Angeles, 1958; M. A. The Johns Hopkins University, 1963. Education.
An Experimental Study of the Effect of a Creative Problem Solving Course on the Creativity and Intelligence Test Scores of Fourth Grade Children from Three Different Socio-Economic Levels.
- GRETCHEN SCHABTACH, of Schenectady, N. Y., B. S. McGill University, 1960; M. A. The Johns Hopkins University, 1963. Psychology.
Interocular and Interhemispheric Transfer in the Domestic Chick.

- WALTER SCHATZBERG, of Baltimore, Md., B. A. St. John's College, Maryland, 1954; M. A. The Johns Hopkins University, 1957. German.
Scientific Themes in the Popular Literature and the Poetry of the German Enlightenment, 1720-1760.
- MIGUEL ANTONIO SCHON, of Caracas, Venezuela, A. B. University of Michigan, 1956; M. A. 1958. Anatomy.
The Muscular System of the Howling Monkey.
- JOHN JOSEPH SCOCCA, of Philadelphia, Pa., B. A. The Johns Hopkins University, 1961. Biology.
The Control of Respiration by Phosphate and Adenosine di phosphate.
- MICHAEL JOSEPH SCOTTO, of Baltimore, Md., B. S. Polytechnic Institute of Brooklyn, 1951; M. S. 1953. Physics.
Precursor Radiation in Electromagnetic Shock Tubes.
- PHILLIP HUGH SCRIBNER, of Wichita, Kans., B. A. University of Colorado, 1961. Philosophy.
A Critical Appraisal of Methodological Individualism.
- DAVID MILLER SEGAL, of Baltimore, Md., B. A. Oberlin College, 1961. Biology.
Enzymatic and Hydrogen Exchange Studies on the Structure of Myosin.
- JOSEPH ANDREW SHALIKA, of Baltimore, Md., B. A. The Johns Hopkins University, 1961. Mathematics.
Representations of the 2×2 Uni-Modular Group over Local Fields.
- WILLIAM NORMAN SHARPE, JR., of Chapel Hill, N. C., B. S. The North Carolina State College of Agriculture and Engineering, 1960; M. S. 1961. Mechanics.
The Portevin-Le Chatelier Effect in Aluminum Single Crystals and Polycrystals.
- TETSUJI SHIODA, of Tokyo, Japan, B. S. University of Tokyo, 1962; M. S. 1964. Mathematics.
On the Graded Ring of Invariants of Binary Octavics.
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ACADEMIC DRESS

THE custom of wearing academic dress stems from the Middle Ages, when scholars were also clerics and wore the costume of their monastic order. The hood was originally a cowl attached to the gown which could be slipped over the head for warmth. The cap, originally round, later became the square mortar-board as we see it today.

Today the cap is the same for all American degrees, although the recipient of a doctoral degree is entitled to wear a gold tassel. The gown varies for the respective degrees. The Bachelor's gown is worn closed and can be distinguished by its long, pointed sleeves. The Master's gown is designed to be open with the arms worn through the slits in the elbows of the sleeves. The Doctor's gown, also worn open, has full, bell-shaped sleeves with three horizontal bars stitched across the upper arm. There is a velvet panel draped around the neck and stitched down the front edges. This velvet trimming may be either black or the same color as the velvet border of the hood.

The hood also varies for the respective degrees. The Bachelor's and Master's hoods are of the same design, pointed at the base. The Bachelor's hood is three feet long; the Master's hood is three and one half feet long. The Doctor's hood is four feet long, of fuller shape and rounded at the base.

The hood is bordered with velvet, the color of which indicates the field of study in which the degree was earned:

- Dark bluePhilosophy
- Light blueEducation
- OrangeEngineering
- Gold-yellowScience
- GreenMedicine
- Salmon pinkPublic Health
- PinkMusic
- PurpleLaws
- WhiteArts and Letters

The silk lining of the hood represents the institution which granted the degree. If more than one degree is held, the gown and hood of the higher or highest degree is worn. The linings seen in today's academic procession may include:

- | | |
|--|---|
| <p style="text-align: center;">BLACK</p> <p>Black, old gold chevron..... Johns Hopkins</p> | <p style="text-align: center;">PURPLE</p> <p>Purple, gold chevron.....Northwestern
PurpleNew York
University</p> |
| <p style="text-align: center;">BLUE</p> <p>Light blue, white chevron.....Columbia
Dark blue.....Yale
Blue with white chevron.....Duke
Dark blue, two orange chevrons..Illinois
Light blue, two white chevrons..North Carolina</p> | <p style="text-align: center;">RED</p> <p>Bright red.....Wisconsin
Plum, with scarlet.....London
MaroonChicago
CrimsonHarvard
Carnelian, two white chevrons...Cornell
CardinalStanford
Red, tri-chevron in center.....Heidelberg</p> |
| <p style="text-align: center;">GOLD</p> <p>Old gold, maroon chevron.....Minnesota
Old gold.....Iowa
Gold, blue chevron.....California
GoldVirginia</p> | <p style="text-align: center;">YELLOW</p> <p>Dandelion yellow.....Rochester
Maize, azure blue chevron.....Michigan
Yellow and white.....Sorbonne</p> |

THE UNIVERSITY ODE

Truth guide our University
And from all error keep her free;
Let Wisdom yield her choicest treasure,
And Freedom reach her fullest measure;
Oh, let her watchword ever be
The truth of God will make you free,
Will make you free!

THE UNIVERSITY MOTTO

Veritas vos liberabit.

The truth shall make you free.
—St. John 8:32

