



THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND

Conferring of Degrees
at the close of the eighty-eighth academic year



JUNE 9, 1964
Keyser Quadrangle
Homewood

ORDER OF PROCESSION

The Graduates

Marshals

JAMES H. CARPENTER
CARL F. CHRIST
JOHN W. GRYDER
WILLIAM H. HUGGINS
JOSEPH E. JOHNSON
RICHARD A. MACKSEY

J. HILLIS MILLER
ELIEZER NADDOR
ALVIN NASON
PHILIP B. TAYLOR
CHARLES M. WYLIE
THEODORE R. F. WRIGHT

*

The Faculties

Marshals

ANDRÉ T. JAGENDORF and JOHN WALTON

*

The Deans, The Trustees and Honored Guests

Marshals

NATHAN EDELMAN and M. GORDON WOLMAN

*

The Chaplain

The Presentor of the Honorary Degree Candidate

The Commencement Speaker

The President of the University

Chief Marshal

WALTER S. KOSKI

*

For the Presentation of Diplomas

Marshals

MAURICE J. BESSMAN
FREDERICK T. SPARROW

EDWIN S. MILLS
W. KELSO MORRILL

*

Ushers

JOHN HENRY GLASCOCK, *Chief Usher*
HERBERT BETTER
JAMES WILLIAM CAMPBELL
BENJAMIN JOSEPH COHEN
GEORGE ROBERT DOENGES
DAVID GORDON FISKE

THOMAS JEROME HARTKA
CHARLES RICHARD HILLMAN
MATTHEW HENG LIANG
CLARENCE D. LONG III
RAYMOND LEE RILEY
FRANCIS CHARLES SZOKA

ORDER OF EVENTS

Milton Stover Eisenhower, President of the University, presiding

*

PROCESSIONAL

PROCESSIONAL FROM "JUDAS MACCABEUS" — GEORGE FREDERIC HANDEL

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

The Rt. Reverend Harry Lee Doll

Episcopal Bishop of Maryland

*

O CANADA

THE STAR-SPANGLED BANNER

THE UNIVERSITY ODE

*

CONFERRING OF HONORARY DEGREE

Lester Bowles Pearson

Presented by Robert W. Tucker

*

ADDRESS

Lester Bowles Pearson

Prime Minister of Canada

*

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 • DOCTORS 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
DOCTOR 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 the Christian R. and Mary F. Lindback

AWARDS FOR DISTINGUISHED TEACHING

The President of the University

*

CHARGE TO GRADUATES

The President of the University

*

BENEDICTION

*

RECESSIONAL

MARCH IN G — J. JONGEN

*The audience is requested to remain standing after the Benediction
until the faculties and 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 faculty to attend a reception on Keyser Quadrangle immediately following the Commencement Exercises. In case of rain the reception will be held in Levering Hall.

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 blue	Philosophy
Light blue	Education
Orange	Engineering
Gold-yellow	Science
Green	Medicine
Salmon pink	Public Health
Pink	Music
Purple	Laws
White	Arts 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>BLACK</p> <p>Black, old gold chevron.....Johns Hopkins</p>	<p>PURPLE</p> <p>Purple, gold chevron.....Northwestern Purple, New York University</p>
<p>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>RED</p> <p>Bright red.....Wisconsin Plum, with scarlet.....London Maroon, Chicago Crimson, Harvard Carnelian, two white chevrons...Cornell Cardinal, Stanford Red, tri-chevron in center.....Heidelberg</p>
<p>GOLD</p> <p>Old gold, maroon chevron..... Minnesota Old gold.....Iowa Gold, blue chevron.....California Gold, Virginia</p>	<p>YELLOW</p> <p>Dandelion yellow.....Rochester Maize, azure blue chevron.....Michigan Yellow and white.....Sorbonne</p>

CANDIDATES FOR DEGREES

BACHELORS OF ARTS

- PETER JANNEY ADAMS, of Locust Valley, N. Y.
THOMAS SNOWDEN AHERN, of Baltimore, Md.
JAMES NELSON ALBERT, of Great Neck, N. Y.
LARRY EDWARD ALESSI, of Baltimore, Md.
JAMES CREW ALEXANDER, of Pittsburgh, Pa.
JOHN ARMY, of Malvern, Pa.
ROBERT EDWARD APPEGARTH, of Baltimore, Md.
BRUCE EUGENE ARMIGER, of Baltimore, Md.
DONN FORD BARRETT, of Baltimore, Md.
WILLIAM THEODORE BECK, of Westbury, N. Y.
ROBERT LAWRENCE BECKMAN, of Bridgeport, Conn.
WILLIAM EARL BENJAMIN, of Wheat Ridge, Colo.
THOMAS HART BENTON, of Southbury, Conn.
PHILIP BERGER, of Stamford, Conn.
JAMES DAVID BERNSTEIN, of Rye, N. Y.
LAWRENCE W. BIERLEIN, of Dayton, Ohio
HARRY ALAN BIGLEY, Jr., of Doylestown, Pa.
PAUL BLACK, of Silver Spring, Md.
SIDNEY ROBERT BLOCK, of Baltimore, Md.
JOSEPH DANIEL BODAK, JR., of Ansonia, Conn.
DON PHILIPPE BOURQUE, of Babylon, N. Y.
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EMORA THOMAS BRANNAN, of Baltimore, Md.
WALTER STEPHENS BROENING, JR., of Baltimore, Md.
DANIEL A. BRONSTEIN, of New York, N. Y.
MAURICE S. BROOKHART III, of Oakland, Md.
DEWITT CLINTON BROWN III, of Kings Park, L. I., N. Y.
JAY CLARK BROWN, of Inglewood, Calif.
WILSON JENKINS BROWNING, JR., of Norfolk, Va.
LEON STONE BRYAN, JR., of Columbia, S. C.
RONALD KEITH BURKHOLDER, of San Clemente, Calif.
MICHAEL CLIFFORD BURSTEIN, of Silver Spring, Md.
DAVID LEE CALDON, of Cheshire, Conn.
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ROBERT CHRISTOPHER CARROLL, of Baltimore, Md.
JAMES A. CASAGRANDE, of Manasquan, N. J.
GABRIEL EUGENE CECI, of Milwaukee, Wis.
DONALD WILLIAM CHADWICK, JR., of Washington, Conn.
WILLIAM ALAN CHALSON, of Lawrence, N. Y.
STEVEN EDWARD CHAUM, of Encino, Calif.
PAUL LARSON CHELLO, of Guilford, Conn.
ARTHUR BEECHER CHIVVIS, JR., of New Canaan, Conn.
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PAUL COOPER CLIFFORD, JR., of Baltimore, Md.
RANDOLPH LUCAS COCKEY, JR., of Baltimore, Md.
THOMAS WILLIAM COFFEEN, of Pikesville, Md.
ALBERT PAUL COHEN, of Snow Hill, Md.
MILTON WALTER COLE, of Silver Spring, Md.
ROGER DAVID COLEMAN, of Middlesex, N. J.
CORNELIUS FRANCIS COLL III, of McAdoo, Pa.
RICHARD ANTHONY COMPISI, of Baltimore, Md.
BRUCE STEWART COPELAND, of Little Rock, Ark.
EDWARD COPELAND, of Baltimore, Md.
ANTHONY JOSEPH CRISALLI, of Baltimore, Md.
EDWARD DANGEL III, of Chestnut Hill, Mass.
CHARLES MICHAEL D'ANGELO, of Marlborough, Mass.
DANIEL REEVES DAVIDSON, of Evanston, Ill.
JOSEPH SPEED DAVIES, of Bethesda, Md.
RICHARD LESLIE DAVIES, of Sacramento, Calif.
RANSOM J. DAVIS, of Baltimore, Md.
MARK ASTON DAWBER II, of Philadelphia, Pa.
DAVID LEROY DEEVER, of Baltimore, Md.
DENNIS MICHAEL DELEO, of Baltimore, Md.
WILLIAM STEINLE DE ROSSET, of Clarendon Hills, Ill.
HOWARD BYRON DICKLER, of Chicago, Ill.
RAYMOND FELIX DIFRONZO, of Waterbury, Conn.
JEFFREY ROUSE DIVER, of Waukegan, Ill.
WILLIAM HARVEY DOBELLE, of Baltimore, Md.
DENNIS FRANKLIN DUNDAS, of New York, N. Y.
CHARLES ALEXANDER DUNNING, JR., of Baltimore, Md.
JOSEPH WILLIAM EDGERTON, JR., of Arlington, Va.
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WILLIAM NOEL EINOLF, of Poughkeepsie, N. Y.
ARTHUR NELSON EISENBERG, of Mt. Vernon, N. Y.
DONALD EDWARD EITEL, of Baltimore, Md.
GEORGE ROBERT ELDER, of Lancaster, Pa.
HOWARD SCOTT ENDE, of Malverne, N. Y.
THOMAS WALTER ENGEL, of Ballston Lake, N. Y.
STEVEN MARTIN ERLANGER, of Rye, N. Y.
WILLIAM JOSEPH EVITTS, of Arlington, Va.
HARRY ALLEN FINLEY, of Indian Harbour Beach, Fla.
DENNIS MARK FINNERTY, of Westfield, N. J.
MICHAEL EDWIN FLACK, of Great Neck, N. Y.
JAMES JOSEPH FOSTER, of Baltimore, Md.
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FRANK KADER GRANT, of Baltimore, Md.

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 MARC FARREL GREENBAUM, of Gates Mills, Ohio
 EDWARD DAVID GREENBERG, of Washington, D. C.
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 FRANKLIN LEROY HYSON, of Glen Burnie, Md.
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 ROBERT BENTON SEIPLE, of Baltimore, Md.
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 ISSAM JOHN SHAKER, of Cleveland, Ohio
 SANFORD SHAPIRO, of Baltimore, Md.
 FRANCIS HORT SHARP, JR., of Bridgeton, N. J.
 DAVID JOSEPH SHAW, of Baltimore, Md.
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 EDDIE DOUGLAS SILER, of Atlanta, Ga.
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 EVAN SILVERSTEIN, of Johnstown, Pa.
 JAMES ELBERT SIMMONS, JR., of Virginia Beach, Va.
 CRAIG LASALLE SMITH, of Fort Pierce, Fla.
 JAY MONSEY SMITH, of Suitland, Md.
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 IRVING ALAN SMOKLER, of Detroit, Mich.
 PETER N. SOLARES, of Buenos Aires, Argentina
 JAY ARNOLD SOLTZ, of Baltimore, Md.
 RONALD HARVEY SPECTOR, of Pittsburgh, Pa.
 STEPHEN J. SPECTOR, of Philadelphia, Pa.
 JEFFREY ALLAN SPENCER, of Richmond, Ind.
 ATHAN JOHN SPEROPOULOS, of Miami, Fla.
 JACK R. SPIEGELMAN, of Suffern, N. Y.

NICKOLAS GEORGE STAFFA, JR., of Baltimore, Md.
 LANCE PRESTON STEAHLY, of Scott Depot, W. Va.
 FREDERICK RHODE STODDARD, of Coral Gables, Fla.
 ALAN HARDING STRAHLER, of Leonia, N. J.
 RAYMOND ARTHUR STURNER, of Bethesda, Md.
 ROBERT JON SWANSON, of Huntington Bay, N. Y.
 RICHARD CARLYLE SWARTZ, of Severna Park, Md.
 CLARENCE EICHH TAKEUCHI, of Baltimore, Md.
 STUART DICKSON TENNEY, of Baltimore, Md.
 PETER S. THOMPSON, of Newtown, Pa.
 RICHARD MINOR TIMMS, JR., of Elyria, Ohio
 THOMAS HERMAN TROPP, of Elmira, N. Y.
 BALDWIN BETTS TUTTLE, of Pleasantville, N. Y.
 JOHN ANTHONY TYLER, of Baltimore, Md.
 JOHN SUTHERLAND URBANETTI, of Manchester, Conn.
 STEPHEN JAMES VALIS, of Baltimore, Md.
 ALLEN STEELE VALL-SPINOSA, of Bellevue, Wash.
 DAVID CHARLES WARHEIT, of San Jose, Calif.
 RICHARD D. WASNICH, of Montpelier, Ohio
 RICHARD EWING WEBSTER, of Baltimore, Md.
 MARK JUSTIN WEISS, of Elkins Park, Pa.
 ROVAN VERNON WERNSDORFER, of Baltimore, Md.
 RICHARD MERRILL WHEELER, of Arlington, Va.
 RICHARD TERRILL WHITE, of Norfolk, Va.
 THEODORE BAIRD WIEHE, JR., of Cincinnati, Ohio
 JOSEPH RAYMOND WOLFSON, of Baltimore, Md.
 DARRYL KWOCK HING WONG, of Honolulu, Hawaii
 RIAN MERRITT YAFFE, of Baltimore, Md.
 KEITH ELLIOTT YOUNG, of Baltimore, Md.
 DANIEL IHOR ZAVIS, of Cullen, Md.

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Graduating with General Honors

LARRY EDWARD ALESSI
 JAMES CREW ALEXANDER
 JOHN ALMY
 WILLIAM EARL BENJAMIN
 PHILIP BERGER
 PAUL BLACK
 SIDNEY ROBERT BLOCK
 EMORA THOMAS BRANNAN
 MAURICE S. BROOKHART, III
 MILTON WALTER COLE
 CORNELIUS FRANCIS COLL, III
 RANSOM J. DAVIS
 WILLIAM STEINLE DE ROSSET
 THOMAS WALTER ENGEL
 WILLIAM JOSEPH EVITTS
 JAMES JOSEPH FOSTER
 JEFFREY R. GRANETT

ROBERT ALAN GREENWALD
 CARROLL WILFORD GROVER
 RICHARD C. HESS, JR.
 STEPHEN ANDREW HOWLETT
 JEFFREY HUGH KAIMOWITZ
 DARRAGH KEITH KASAKOFF
 NICHOLAS MICHAEL KATZ
 RICHARD GUTMAN KATZ
 ROBERT LAWRENCE KUHN
 ALAN MICHAEL LITKE
 JOHN JOSEPH LUCIDO
 MICHAEL EDWARD MAKOVER
 BARRY ALAN MARKS
 GLENN RICHARD MARKUS
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 SANFORD DAVIS MINKIN
 JAMES ANTHONY MOSSO

DAVID FARNHAM MUNRO
 JAMES F. NABWANGU
 IRVIN BERTRAM NATHAN
 PETER MICHAEL NORTON
 STEPHEN ERNEST PELZ
 RONALD STEPHEN POTOTSKY
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 JEFFREY JAMES RICHTER
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 ATHAN JOHN SPEROPOULOS
 NICKOLAS GEORGE STAFFA, JR.
 RICHARD MERRILL WHEELER
 JOSEPH RAYMOND WOLFSON
 RIAN MERRITT YAFFE

Graduating with Departmental Honors

JAMES CREW ALEXANDER
 JOHN ALMY
 WILLIAM EARL BENJAMIN
 MAURICE S. BROOKHART, III

Mathematics
 Chemistry
 History
 Chemistry

JAY CLARK BROWN
 DOUGLAS N. CLARK
 MILTON WALTER COLE
 RANSOM J. DAVIS

Biology
 Mathematics
 Physics
 Political Science

JEFFREY M. EICHENGREEN	Psychology	DAVID DEAN MEYERSON	Romance Languages
THOMAS WALTER ENGEL	Chemistry	DAVID FARNHAM MUNRO	Chemistry
JAMES JOSEPH FOSTER	English	PETER MICHAEL NORTON	English
JEFFREY HUGH KAIMOWITZ	Classics	STEPHEN ERNEST PELZ	History
GEORGE AARON KAPLAN	Psychology	JEROME S. PUSKIN	Physics
NICHOLAS MICHAEL KATZ	Mathematics	JEFFREY JAMES RICHTER	History
RICHARD GUTMAN KATZ	Chemistry	DAVID STANLEY SACHS	Mathematics
MICHAEL SEIBERT KOPPISCH	Romance Languages	EDDIE DOUGLAS SILER	Romance Languages
MICHAEL RICHARD LAV	Political Economy	CRAIG LASALLE SMITH	Chemistry
BARDIN CHARLES LEVAVY	English	PETER N. SOLARES	History
MICHAEL JOSEPH LEVIN	History	NICKOLAS GEORGE STAFFA, JR.	Physics
ALAN MICHAEL LITKE	Physics	JOSEPH RAYMOND WOLFSON	Physics
BARRY ALAN MARKS	Classics		

BACHELORS OF ENGINEERING SCIENCE

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BRENT GULLEN BARKER, of Beltsville, Md.	ARTHUR THOMAS MASON, of McDaniel, Md.
GEORGE BAWROSKI, of Baltimore, Md.	ERNEST BURTON MILLER, of Annapolis, Md.
HARRIS JOEL BELMAN, of Baltimore, Md.	FREDERICK ANDREW MOORE, of Rockville, Md.
MICHAEL HENRY BLENK, of Port Washington, N. Y.	PATRICK LEACH MULLARKY, of Seattle, Wash.
MICHAEL RUBENS BLOOMBERG, of Medford, Mass.	WILLIAM HARVEY O'CONNOR III, of Towson, Md.
BERNARD GEORGE BRUNE, of Baltimore, Md.	JOHN FRANCIS PANOWICZ, of Baltimore, Md.
JAMES ROBERT BRYA, of Chicago, Ill.	HARRY DAVISON PARKS, of Pittsburgh, Pa.
JOSEPH JOHN BUDELIS, of Baltimore, Md.	FRANCIS XAVIER PARR, of Baltimore, Md.
JAMES RONALD CHAMPION, of East McKeesport, Pa.	HAROLD PETER JOSEPH PAZOUREK, JR., of Baltimore, Md.
WILLIAM GREGORY CHARAKLIS, of Annapolis, Md.	DAVID ALLAN PERLMAN, of Fairfax, Va.
PHILIP THOMAS CIONI, of Cumberland, Md.	EDWARD ANTON PESCATELLO, of Scarsdale, N. Y.
RONALD DOMINIC DARONE, of Baltimore, Md.	ALBERT HOWARD PLITT III, of Baltimore, Md.
WILLIAM AUSTIN DEMPSEY III, of Denton, Md.	EDWARD MONCURE PORTNER, JR., of St. Leonard, Md.
ANDREW MILLER DIETRICH, JR., of Westminster, Md.	ROBERT EUGENE RAMSBERG, of Frederick, Md.
LUTHER SAMUEL DITMAN, JR., of Baltimore, Md.	WILLIAM WAYNE RAUKKO, of Baltimore, Md.
ROBERT SHANNON DONALDSON, of Silver Spring, Md.	ARTHUR BRIAN RENN, of North East, Md.
DENNIS OWEN DONNELLY, of Cedar Grove, N. J.	WILLIAM THOMAS LILES ROMEI, of Baltimore, Md.
REUBEN ELCO EAVES, of Baltimore, Md.	LAWRENCE KENNETH SAUNDERS, of Elkton, Md.
PAUL ERNEST EHLE, of Annapolis, Md.	JAMES ROSS SCAVONE, of Baltimore, Md.
WILLIAM DENNIS EKLOF, of Baltimore, Md.	DAVID KEITH SCHMALZER, of Parkton, Md.
STEPHEN MICHAEL ENGEL, of Camp Hill, Pa.	HOMER RANDOLPH SCHWARTZ, of Baltimore, Md.
DONALD WARREN FAHEY, of Baltimore, Md.	CHARLES ANTON SHIVODER III, of Baltimore, Md.
STEVEN JOEL GITOMER, of Pennsauken, N. J.	EUGENIJUS MINDAUGAS SILGALIS, of Baltimore, Md.
WILLIAM DOWNER GLENN, JR., of Memphis, Tenn.	ARTHUR LARRY SMITH, of Baltimore, Md.
ARTHUR LOUIS GREENBERG, of Mamaroneck, N. Y.	MILTON MICHAEL SOMERS, JR., of Baltimore, Md.
STANLEY JENS HAAVIK, of Annapolis, Md.	ROBERT ALAN STARR, of Adelphi, Md.
PETER VILAS HANKS, of North Bennington, Vt.	WILLIAM GEORGE STOEWER, of Baltimore, Md.
JOHN DENNIS HERGENROEDER, of Baltimore, Md.	CHARLES JOSEPH STUMP, JR., of Baltimore, Md.
GEORGE FREDERICK HOBDAY, of Baltimore, Md.	ROBERT LEROY SWARTS, of Dunellen, N. J.
RICHARD EARLE HUMPHREY, of Baltimore, Md.	DONALD LEE SWEAT, of Baltimore, Md.
ROBERT JOSEPH JAWORSKI, of Baltimore, Md.	RICHARD JOSEPH TAYLOR, of Kokomo, Ind.
RAYMOND BERNARD JOHNSON, JR., of Baltimore, Md.	JAMES DIXON TRENCHARD, JR., of Baltimore, Md.
ALEXANDER EDWIN KARU, of McLean, Va.	SIDNEY TRIEGER, of Baltimore, Md.
JAMES GIBBONS KELLY, of Baltimore, Md.	ROBERT EDWARD ULANOWICZ, of Baltimore, Md.
CHARLES ROBERT KILBY, of Colora, Md.	ZEV ULLMANN, of Haifa, Israel

JOHN ALBERT WEAVER, of Baltimore, Md.
THOMAS CLIFTON WEAVER, of Baltimore, Md.
MICHAEL ALAN WEISSMAN, of Alexandria, Va.
GEORGE JOSEPH WHITE, JR., of Baltimore, Md.

JOHN D. WHITE, JR., of Emmitsburg, Md.
THOMAS SCUDDER WINSLOW III, of Riverdale, N. Y.
WILLIAM JOSEPH WISEMAN, JR., of Mamaroneck, N. Y.
JAMES JOHN ZALOUDEK, JR., of Baltimore, Md.

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Graduating with Honors

JOSEPH JOHN BUDELIS
STEVEN JOEL GITOMER

EDWARD MONCURE PORTNER, JR.
MILTON MICHAEL SOMERS, JR.
JOHN D. WHITE, JR.

ROBERT EDWARD ULANOWICZ
ZEV ULLMANN

MASTERS OF SCIENCE IN ENGINEERING

with titles of essays

CHARLES ALLEN BAYENS, of Chicago, Ill., B. Ch. E. University of Detroit, 1961. Chemical Engineering.

The Ignition Processes of a Liquid Bipropellant.

WILLIAM THOMAS BUNDICK, of Hampton, Va., B. E. E. University of Virginia, 1959. Electrical Engineering.

An Experiment for Measuring Thermal Resistor Noise.

STEPHEN ROBERT CANTOR, of Brighton, Mass., B. S. E. E. Tufts University, 1961. Electrical Engineering.

Character Recognition of English Letters and Arabic Numerals.

ROBERT CODNER CARLSON, of Red Bank, N. J., B. M. E. Cornell University, 1962. Operations Research and Industrial Engineering.

Minimization of Conflict Cost in Scheduling.

JOHN A. DEFILIPPI, of Manchester, Conn., B. S. Northwestern University, 1961. Sanitary Engineering and Water Resources.

Economics of Open Channels for Transporting Treated Sewage.

ENRIQUE DOMINGUEZ-OROZCO, of Caracas, Venezuela, Civil Engineer Central University of Venezuela, 1961. Sanitary Engineering and Water Resources.

Anaerobic Digestion of Hog Manure.

NORMAN FARBER, of Bayonne, N. J., A. B. Rutgers University, 1962. Operations Research and Industrial Engineering.

On the Fixed-Charge Transportation Problem.

CARLOS SANTOS FIALLOS, of Tegucigalpa, Honduras, B. E. S. The Johns Hopkins University, 1960. Operations Research and Industrial Engineering.

An Index of Susceptibility to Staphylococcal Infections in Post-Operative Wounds.

THOMAS LOUIS GABRIELE, of York, Pa., B. S. in E. E. Lehigh University, 1962. Electrical Engineering.

Binary Shift Registers as Logic Elements in Decision-Making Systems.

FREDDY ENRIQUE GONZALEZ-VALDIVIESO, of Caracas, Venezuela, Civil Engineering Central University of Venezuela, 1963. Sanitary Engineering and Water Resources.

A. B. S. in Sewage Lagoons and Mosquito Production.

ALLAN LEO GUTJAHN, of Middletown, N. J., B. S. University of Washington, 1961. Operations Research and Industrial Engineering.

An Algorithm for the Line Balancing Problem.

RAMI HOFSEH, of Brooklyn, N. Y., B. S. Polytechnic Institute of Brooklyn, 1963. Electrical Engineering.

The Optical Maser and Communications.

JAMES HERALD KELLEY, JR., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1961. Operations Research and Industrial Engineering.

Sheared Plate Providing—A Case Study.

WILLIAM CULVERWELL McDONNELL, of Baltimore, Md., B. A. Washington College, 1952. Sanitary Engineering and Water Resources.

The Use of the Uncontrolled Growth Model in the Planning of the Green Spring and Worthington Valleys of Baltimore County, Maryland.

WILLEM MIDDELHOVEN, of Delft, Holland, B. A. Technological University of Delft, 1959. Operations Research and Industrial Engineering.

Analysis and Reorganization of a Central Supply Delivery System.

- ANDREWS AYIM MIREKU, of Nkwatia, Ghana, B. of C. E. Cornell University, 1963. Sanitary Engineering and Water Resources.
Comparative Model Studies on Sedimentation.
- JORGE DE JESUS ORTIZ C., of San Jose, Costa Rica. Operations Research and Industrial Engineering.
Some Linear Statistical Models for the Selection of Medical Students.
- ROBERTO RIBEIRO, of Lima, Peru, B. Eng. National University of Engineers, Lima, Peru, 1960. Sanitary Engineering and Water Resources.
Effects of Effluent of the Sewage Treatment Plant at Washington, D.C., on the Algae Blooms in the Potomac River.
- MILTON ROGERS, of Baltimore, Md., B. A. Brooklyn College, 1941. Mechanics.
Analog Computer Research into the Energy-Exchange between Gases and Solids.
- GOPAL SUBRAMANIAN, of Madras, India, B. Sc. University of Madras, 1958; B. Sc. (Tech), 1960. Chemical Engineering.
Chemical Kinetics in Solution, Reaction of Benzoic Acid with Benzotrichloride in Benzyl Chloride.
- ROBERT ARCHER SWANSON, of Baltimore, Md., B. S. in M. E. Duke University, 1960. Mechanics.
Ultrasonic Attenuation Changes during Deformation of Aluminum Single Crystals.
- JOHN PHILIP WAGNER, of Trenton, N. J., B. S. St. Joseph's College, Philadelphia, Pa., 1961. Chemical Engineering.
An Experimental Study of Charge Generation in Flow of Heptane through Filters.
- ALEXANDER WHITNEY, JR., of Baltimore, Md., B. C. E. University of Delaware, 1956. Sanitary Engineering and Water Resources.
Methodology of an Urban Mass Transit Study.
- ELOY HUMBERTO ZEA, of Cali, Colombia, Civil Engineer National University, Bogotá, Colombia, 1956. Sanitary Engineering and Water Resources.
Release of Phosphates in Activated-Sludge Treatment Plants.

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DOCTORS OF ENGINEERING

with titles of dissertations

- RALPH EDWARD PASCERI, of Philadelphia, Pa., B. of Ch. E. Villanova University, 1959. Chemical Engineering.
The Size Distribution of Atmospheric Aerosols.
- DAN CONNOR ROSS, of Rockville, Md., B. S. E. E. Purdue University, 1946; M. S. E. E., 1949. Electrical Engineering.
Vector and Tensor Algebra of Signals Applied to Satellite Navigation.

(2)

BACHELORS OF SCIENCE

- ALICE MYRTLE AMOSS, of Baltimore, Md.
HERMAN GUSTAV ERNST ANSCHUETZ, of Baltimore, Md.
OLGA MAICHER BAUER, of Baltimore, Md.
ELMER LEROY BAYNE, of Baltimore, Md.
DOROTHY MARGARET BECKER, of Baltimore, Md.
JAY WILBUR BELL, of Baltimore, Md.
LEONARD HAROLD BESDIN, of Baltimore, Md.
LEON THOMAS BONNER, JR., of Falls Church, Va.
EDWARD JOHN BROGAN, of Baltimore, Md.
- LENA IORIO BROWN, of Elkridge, Md.
RAYMOND ALOYSIUS BULLINGER, of Baltimore, Md.
JOSEPH VICTOR BURNE III, of Baltimore, Md.
FREDERIC ARNOLD CAPLAN, of Baltimore, Md.
ALMA MOORE COLLINS, of Towson, Md.
RICHARD SHERWOOD DAVIS, of Hanover, Md.
IDA MAY DEVESE, of Baltimore, Md.
FRANK JOSEPH DOBRY, of Baltimore, Md.
ANNA BUCHKO DOLAN, of Baltimore, Md.

WILLIAM WIGHT DONOVAN, of Ellicott City, Md.
 CALVIN J. DORN, of Baltimore, Md.
 JEAN KLITCH ELDRIDGE, of Baltimore, Md.
 DONALD BENNETT ELLIOTT, of Baltimore, Md.
 MARY ANN WAGNER FOSQUE, of Baltimore, Md.
 FERDINAND ALFRED FOUNTAIN, of Baltimore, Md.
 MARY ELIZABETH FOY, of Freehold, N. J.
 HELEN CUSHEN FREE, of Baltimore, Md.
 FRANCIS GILBERT FRENCH, of Baltimore, Md.
 HARRIET SCHWARTZMAN FRENKIL, of Pikesville, Md.
 HARRIETT ELIZABETH SHANKS GABLE, of Towson, Md.
 REGINALD HOOKER GARRETT, of Baltimore, Md.
 EDWARD PAUL GEER, of Baltimore, Md.
 JOHN IGNATIUS GERMERSHAUSEN, of Baltimore, Md.
 BILL HARBOR GILES, of Baltimore, Md.
 PHILIP BERNHARDT GLEISNER, of Baltimore, Md.
 MARY GRACE ALEXANDER GORDON, of Baltimore, Md.
 SYDNEY SUE TRUITT GREEN, of Baltimore, Md.
 LEWIS HENRY GROSS, of Baltimore, Md.
 MARLENE MARTIN HELM, of Towson, Md.
 NANCY MAIN HENLEY, of Baltimore, Md.
 ROBERT RANDOLPH HOLLAND, of Baltimore, Md.
 ALFRED A. JEFFRIES, of Baltimore, Md.
 ANNE MARGARET M. JENNINGS, of Baltimore, Md.
 DOROTHY ALICE THIRASHER JERALD, of Baltimore, Md.
 ALBIN DANIEL KACALA, of Baltimore, Md.
 JAMES JOSEPH KEATING, of Baltimore, Md.
 GEORGE FREDERICK KETTEL, Jr., of Baltimore, Md.
 STANLEY PAUL KOPS, of Baltimore, Md.
 DENNIS JOHN LAFFERTY, of Baltimore, Md.
 VIRGINIA BANES LAYFIELD, of Princess Anne, Md.
 JOHN VERNON LENTZ, of Timonium, Md.
 KLAUS WILHELM LINDENBERG, of Baltimore, Md.
 JOSEPH LIPAVSKY, of Baltimore, Md.
 ARTHUR ROSS MACFADDEN, of Ellicott City, Md.

JOHN JOSEPH MAERZ, of Baltimore, Md.
 ROBERT LEE MARSHNER, of Baltimore, Md.
 RAYMOND NEIL MCCANDLESS, of Towson, Md.
 HELEN SHEA MCMAHON, of Lutherville, Md.
 VIVIAN RUTH MERCER, of Baltimore, Md.
 INRE MESZAROS, of Budapest, Hungary
 PATRICIA KERNS MESZAROS, of Cumberland, Md.
 HELEN WEBER MILLER, of York, Pa.
 HENRY ROSS MILLER, of Manchester, Md.
 JULIUS BENJAMIN MILLER, of Baltimore, Md.
 GORDON SOLOMON MILLS, of Reisterstown, Md.
 RICHARD N. NATHANSON, of Baltimore, Md.
 BARBARA ANN WHITE O'CONNELL, of Baltimore, Md.
 LILA BACKMAN O'MEARA, of Towson, Md.
 *ALFESE MABREY PARKER, of Baltimore, Md.
 MARGERY ANN KOLKER PEYTON, of Towson, Md.
 WAYNE ALLAN RAY, of Baltimore, Md.
 ELIZABETH PHILLIPS RIEGEL, of Baltimore, Md.
 ROBERT GEORGE ROTHGABER, of Baltimore, Md.
 JOHN NICHOLAS RUTH, Jr., of Baltimore, Md.
 RAYMOND RYBARCZYK, of Baltimore, Md.
 MARGARET JANE SCHELLER, of Baltimore, Md.
 PHYLLIS NORA SHACTER, of Baltimore, Md.
 BLAIR IRVIN SHIRK, of Baltimore, Md.
 DANIEL SHNIDMAN, of Rochester, N. Y.
 IRWIN LEON SNYDER, of Woodlawn, Md.
 VICTORIA LEE STILES, of Baltimore, Md.
 THEODORE JOSEPH STOCKUS, of Baltimore, Md.
 IVAR ERNEST STRAND, Sr., of Baltimore, Md.
 MARY THEODORA PENN STREHLER, of Baltimore, Md.
 LILLIAN MAE ROBINSON STUDER, of Glen Burnie, Md.
 PALMER EUGENE TOME, of York, Pa.
 NORMAN FRANCIS TULP, of Ellicott City, Md.
 WAYNE SHRIVER WARNER, of Baltimore, Md.
 NORMA FORSYTH WILLIAMS, of Baltimore, Md.

* Posthumously

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Graduating with Honors

JEAN KLITCH ELDRIDGE
 FRANCIS GILBERT FRENCH
 HARRIETT ELIZABETH SHANKS GABLE
 REGINALD HOOKER GARRETT

PATRICIA KERNS MESZAROS
 HENRY ROSS MILLER
 BARBARA ANN WHITE O'CONNELL

BACHELORS OF SCIENCE IN NURSING

MARY JO ANDREWS, of New York, N. Y.
 SUSAN B. BARTLETT, of Juneau, Alaska
 JANICE MARIE BECK, of Baltimore, Md.
 ROBIN JACQUES BREITENECKER, of Westchester, Pa.
 EILEEN M. COLLINGWOOD, of Baltimore, Md.
 SUSAN ANN DAVIS, of Baltimore, Md.

BARBARA PICKEL DANIEL, of Baltimore, Md.
 BEVERLY KINSMAN EANES, of Dobbs Ferry, N. Y.
 ANN VERNETTA FITZGERALD, of Marshfield, Mass.
 SUSAN HUFERT, of San Antonio, Texas
 JOAN TUNNICLIFFE HURLOCK, of Pikesville, Md.
 JOAN DOROTHY MASEK, of Baltimore, Md.

LINDA JANE MAURER, of Baltimore, Md.
JEANNE DOUGHERTY McCLOSKEY, of Baltimore, Md.
JAN MARIE MCGHEE, of Baltimore, Md.
RUTH WEISS PARR, of Baltimore, Md.
JUDITH SALMON, of Havre de Grace, Md.
MARGARET FULK SEAVER, of Baltimore, Md.

ELLEN ANN SMITH, of Baltimore, Md.
LINDA JANE ZACK TARR, of Laurel, Md.
JODELL UMTHUN, of Baltimore, Md.
BETSY ANN WHITE, of Wausau, Wis.
DONNA GRIEVE WILKINSON, of Baltimore, Md.

(23)

BACHELORS OF SCIENCE IN ENGINEERING

WILLIAM LEROY ALBAN, of Baltimore, Md.
CARL JAMES AMREIN, of Baltimore, Md.
ALFONS ANDRIEJAUSKAS-ANDRES, of Baltimore, Md.
ARTIE DALE ASHBY, JR., of Baltimore, Md.
ROBERT RICHARD AULHOUSE, of Glen Burnie, Md.
ALAN ROBERTSON BALLMAN, of Baltimore, Md.
ROBERT BENJAMIN BARTLETT, of Baltimore, Md.
CHARLES RAY BAUER, of Baltimore, Md.
ROBERT WILLIAM BEASMAN, of Baltimore, Md.
ROBERT JESSE BETZ, of Ferndale, Md.
JOHN FRANCIS BILLING, of Glen Burnie, Md.
BING C. BOCK, of Baltimore, Md.
MICHAEL ERNEST CALDWELL, of Annapolis, Md.
JOSEPH CHARLES CALLAHAN, of Baltimore, Md.
RONALD EDWARD CARDER, of Hanover, Md.
JAMES WILLIAM CAUSEY, of Baltimore, Md.
WILLIAM ROY CHOKRAN, of Ellicott City, Md.
LAWRENCE JOSEPH CLARKE, JR., of Baltimore, Md.
WILLIAM FRANKLIN CLARKE, of Baltimore, Md.
FRANK BURRUS COCKRELL, of Clarksville, Md.
GARY CHARLES COMSTOCK, of Arlington, Va.
RICHARD THEODORE COX, of Baltimore, Md.
JOSEPH COLEMAN CRINER, of Annapolis, Md.
JOHN BALLANTINE DASH, of Glen Burnie, Md.
DWIGHT WORTH DAVIS, of Towson, Md.
ANGELO JOSEPH DI FONZO, of Baltimore, Md.
JAMES BURGESS DIGGS, JR., of Baltimore, Md.
RAYMOND JOHN DURAN, of Lutherville, Md.
KENNETH HARLAN EARLE, of Baltimore, Md.
THOMAS HAYES EDDY, JR., of Pasadena, Md.
DONALD GENE EVANS, of Severn, Md.
THOMAS ROBERT FILES, of Glen Burnie, Md.
CONRAD LEONARD FOCHT, of Baltimore, Md.
SHERMAN CHESTER GARRISON, of Randallstown, Md.
WILLIAM FRANCIS GAYHARDT, of Baltimore, Md.
NORMAN EUGENE GERBER, of Towson, Md.
GEORGE CLAUDE GINGHER, JR., of Baltimore, Md.
PAUL THOMAS HADDOCK, of Baltimore, Md.
WILLIAM THOMAS HARTKA, of Baltimore, Md.
HENRY A. HARTLEY, JR., of Baltimore, Md.
JOHN JAMES HARTLOVE, of Baltimore, Md.
LOUIS PHILIP HEHL, of Catonsville, Md.
THOMAS EDMUND HIMES, of Towson, Md.
CHARLES OLIVER HOFFMAN, of Baltimore, Md.

HOLLEN BUSEY HOFFMAN, JR., of Baltimore, Md.
JOHN JAMES HUBER, of Baltimore, Md.
DAVID LEE JACKSON, of Baltimore, Md.
MELVIN EDGAR JACOB, of Baltimore, Md.
WILLIAM RICHARD JAIRETT, of Baltimore, Md.
ROBERT FRANKLIN KANTNER, of Glen Burnie, Md.
FRANCIS JOSEPH KEEFE, of Baltimore, Md.
JAMES PHILLIPS KEENE, of Baltimore, Md.
DOUGLAS WAYNE KEGLEY, SR., of Portsmouth, Ohio
ELTON CLARE KERR, of W. Hyattsville, Md.
JAMES LOUIS KILCHENSTEIN, JR., of Baltimore, Md.
LEE FRANKLIN KOLAKOWSKI, of Baltimore, Md.
HERMAN WILLIAM KOLETSCHE, of Baltimore, Md.
WALTER JOSEPH KOTERWAS, of Baltimore, Md.
JOHN KRAYNIAK, JR., of N. Severna Park, Md.
ANDREW KRIVOS, of Baltimore, Md.
WALTER KRZYMOWSKI, of Lutherville, Md.
WILLIAM KOONTZ LEE III, of Owings Mills, Md.
WILLIAM FRANCIS LOGAN, of Towson, Md.
LESLIE RANKIN LONG, JR., of Baltimore, Md.
CARVEL LEWIS LUCAS, of Baltimore, Md.
JOSEPH ALBERT LURZ, JR., of Baltimore, Md.
THOMAS RICHARD MACDONALD, of Baltimore, Md.
DONALD KENT MACKENZIE, JR., of Lutherville, Md.
CLARE JOSEPH MAGUIRE, JR., of Baltimore, Md.
WILLIAM FREDERICK MEINECKE, of Baltimore, Md.
LEO FRANCIS MEYER, JR., of Baltimore, Md.
DONALD HENRY MOHR, of Perry Hall, Md.
JOHN VICTOR MURPHY, of Catonsville, Md.
EARL JACKSON OWINGS, JR., of Ellicott City, Md.
JAMES LOUIS PARRISH, JR., of Baltimore, Md.
CHARLES ROBERT PEARMAN, of Baltimore, Md.
ERNST ROBERT PEMSEL, JR., of Ellicott City, Md.
CHARLES LEE PERRY, JR., of Baltimore, Md.
DONALD JOSEPH PETERS, of Baltimore, Md.
HOWARD HARDEN PETERSON, of Baltimore, Md.
ROBERT HOYLE PHILLIPS, of Baltimore, Md.
EDWARD MICHAEL PIECHOWIAK, of Baltimore, Md.
JOSEPH LEONARD PIETROWIAK, of Baltimore, Md.
PAUL LEON POJAWIS, of Baltimore, Md.
LEWIS EMIL PORTER, of Baltimore, Md.
THOMAS WILLIAM POTTHAST, of Baltimore, Md.
RONALD EMERSON PRYBA, of Linthicum Heights, Md.
LESLIE RAJKAY, of Baltimore, Md.

EDWARD CAPLES REICHERT, of Monkton, Md.
 EDWARD DONALD REILLY, of Baltimore, Md.
 PETER PATRICK RICCI, of Baltimore, Md.
 DONALD GEORGE RIDGELY, of Baltimore, Md.
 EDWIN LEE RINEHART, of Baltimore, Md.
 RICHARD JEROME RIOUX, of Baltimore, Md.
 DANIEL NELSON ROBINSON, of Baltimore, Md.
 JOHN JOSEPH ROSENBERGER, of Baltimore, Md.
 WALTER ANTHONY RUDNICKI, JR., of Baltimore, Md.
 GEORGE GERARD RUPPERT, of Baltimore, Md.
 EDWARD FRANKLIN SAWYER, of Baltimore, Md.
 FREDERICK GEORGE SCHIESSER, of Baltimore, Md.
 LIONEL PHILIP SCHINDLER, of Baltimore, Md.
 BRUCE GORDON SCHMICKLEY, of Baltimore, Md.
 WALTER SCHIMITZ, of Baltimore, Md.
 THOMAS JEROME SCHULTZ, of Baltimore, Md.
 GEORGE DOWELL SCHWARTZ, JR., of Baltimore, Md.
 GEORGE EDWARD SEBECK, of Baltimore, Md.
 KENNETH HOPKINS SEBRA, of Perry Hall, Md.
 GEORGE FERDINAND SEIDL, JR., of Baltimore, Md.

ALBERT VALENTINE SHANE, JR., of Baltimore, Md.
 SAMUEL GODFREY SHEPHERD, JR., of Pasadena, Md.
 GEORGE DELROY SHOULENBERGER, of Baltimore, Md.
 EDGAR LEE SITTLER, of Timonium, Md.
 JOHN JOSEPH STAMM, of Baltimore, Md.
 EDWARD CARL SUEHLE, JR., of Baltimore, Md.
 ANDREW BELA SZINAY, of Baltimore, Md.
 RICHARD HENRY THOM, of Ellicott City, Md.
 JAMES ALBERT TRESS, of Baltimore, Md.
 HERMAN MATTHEW TURNER, of Arnold, Md.
 ROBERT EUGENE VANLANINGHAM, of Baltimore, Md.
 WILLIAM CHARLES VON NORDECK, of Perry Hall, Md.
 JAMES EMERY VOYTKO, of Baltimore, Md.
 WALLACE DONALD WALKER, of Baltimore, Md.
 DARL WILLETT, JR., of Ellicott City, Md.
 GEORGE WESLEY WILT, of Baltimore, Md.
 JOHN THOMAS WOODWARD, of Baltimore, Md.
 JAMES MARVIN WRIGHT, of Baltimore, Md.
 RAYMOND ROBERT WRIGHT, of Baltimore, Md.
 FREDERICK CHESTER ZIELINSKI, of Baltimore, Md.

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Graduating with Honors

JOHN BALLANTINE DASH
 DONALD GENE EVANS
 CONRAD LEONARD FOCHT
 HOLLEN BUSEY HOFFMAN, JR.
 DOUGLAS WAYNE KEGLEY, SR.

ELTON CLARE KERR
 WALTER KRZYMOWSKI
 JAMES LOUIS PARRISH, JR.
 JAMES EMERY VOYTKO
 RAYMOND ROBERT WRIGHT

MASTERS OF SCIENCE IN ENGINEERING

in McCoy College

with titles of essays

JOHN MELVILLE COTTON, JR., of Owings Mills, Md., A. B. Harvard University, 1951. Electrical Engineering
 A Submillimeter Superheterodyne Receiver and Measurement System.

DAVID WILLIAM KERR, of Baltimore, Md., B. S. in E. E. Texas College of Arts and Sciences, 1958. Electrical Engineering.
 A Minimum Energy Filter Approximation.

GARY LEE KRATZ, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1958. Electrical Engineering.
 Implementation of Universal Logic.

JULIUS LASZLO LEVATICH, of Baltimore, Md., B. E. E. Rensselaer Polytechnic Institute, 1955. Electrical Engineering.
 Critical Review of the Main Line of Twilight Region Radio Propagation Development Outside the United States.

ALVIN WILLIAM MOELLER, of Baltimore, Md., B. S. E. E. Milwaukee School of Engineering, 1953. Electrical Engineering.

The Effect of Ground Reflection on the Measurement Capabilities of an Antenna Test Range.

DALE LOUIS SCHULER, of Towson, Md., B. E. S. The Johns Hopkins University, 1961. Electrical Engineering.

Confinement of a Plasma by Radio-Frequency Electromagnetic Waves and Their Use as a Diagnostic Tool.

DAVID PURNELL TICE, of Baltimore, Md., B. S. in E. E. Swarthmore College, 1957. Electrical Engineering.

An Approximate Theory of Radar Detection.

DAVID WILLIAM WALSH, of Glen Burnie, Md., B. S. in E. E. Gonzaga University, 1958. Electrical Engineering.

An Analysis of Tropospheric Refractive Error Compensation.

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MASTERS OF SCIENCE

in McCoy College

with title of essay

- WILLIAM WALTER BARBER, of Catonsville, Md., B. S. Howard University, 1949. Physics.
Survey of Techniques for the Determination of the Masses and the Mean Lifetime of Elementary Particles.
- MARTIN CHRIS BURGASSER, of Cincinnati, Ohio, M. E. University of Cincinnati, 1961. Management Science.
- JOHN THOMAS JOHNSON, of Baltimore, Md., B. S. The Johns Hopkins University, 1958. Management Science.
- WILFRED JEROME ROESLER, of Baltimore, Md., A. B. Loyola College, 1956. Management Science.
- THOMAS ANTHONY RONZETTI, of Flushing, N. Y., B. E. E. Manhattan College, 1960. Management Science.
- VERNON EDWIN UNGER, JR., of Lutherville, Md., B. E. S. The Johns Hopkins University, 1957. Management Science.

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MASTERS OF EDUCATION

- EVELYN WIELAND ALLWELL, of Baltimore, Md., B. S. The Johns Hopkins University, 1933.
- JOHN MILO BENSER, of Baltimore, Md., B. A. Iowa State Teachers College, 1957.
- TERRY DAVIDSON BILLER, of Baltimore, Md., B. S. in Ed. State Teachers College, Towson, Md., 1954.
- LOUISE PARKER BROOKE, of Towson, Md., B. S. State Teachers College, Salisbury, Md., 1937.
- ANNA CROWTHER CELLA, of Towson, Md., B. S. State Teachers College, Towson, Md., 1952.
- JANNETE LAKE DATES, of Baltimore, Md., B. S. Coppin State Teachers College, 1958.
- DOLORES JOANNE DEARDORFF, of Severna Park, Md., B. S. State Teachers College, Towson, Md., 1954.
- JULES MAX DE FRIES, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1951.
- GLORIA JOSEPHINE CROMWELL EBERSOLE, of Towson, Md., A. B. Mt. St. Agnes College, 1959.
- HELEN M. LOUGHRIE ETOWSKI, of Baltimore, Md., B. S. The Johns Hopkins University, 1958.
- HARRY EVERETT EVANS, of Towson, Md., B. S. University of Maryland, 1961.
- MARY LOUISE KING FISHPAW, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1957.
- ELEANOR HANNA FITZGERALD, of Towson, Md., B. S. Elem. Ed. West Chester State College, Pa., 1960.
- MAXINE OWENS GASKINS, of Baltimore, Md., B. S. Coppin State Teachers College, 1952.
- CHARLOTTE HOLSEY HARPER, of Baltimore, Md., B. S. Morgan State College, 1955.
- JOHN HARRISON HILKER, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1949.
- PATRICIA SHIPLEY HOOK, of Brooklandville, Md., B. S. The Johns Hopkins University, 1954.
- ETHEL CHELF HOOKER, of Parkville, Md., B. S. State Teachers College, Towson, Md., 1959.
- WILLIE EDWARD HUBER, of Snow Hill, N. C., A. B. East Carolina College, 1959.
- HARRIET ELIZABETH HURST, of Baltimore, Md., A. B. Goucher College, 1948.
- POPI FRANGAKIS KALATHAS, of Baltimore, Md., A. B. West Liberty State College, W. Va., 1953.
- ETHEL DACEWICZ KOUGL, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1959.
- JUNE HENRIETTA LAWRY, of Baltimore, Md., B. S. The Johns Hopkins University, 1959.
- CHARLES LEROY LEISURE, of Baltimore, Md., B. A. The Johns Hopkins University, 1960.
- VIRGINIA WHITE LELAND, of Baltimore, Md., B. S. The Johns Hopkins University, 1943.
- DORIS JEAN LEVI, of Baltimore, Md., A. B. Morgan State College, 1949.

- JOHN ALBION LOVEJOY, of Baltimore, Md., A. B. Asbury College, 1950; S. T. B. Westminster Theological Seminary, 1951.
- DOROTHY WOHRNA MARTIN, of Baltimore, Md., B. S. The Johns Hopkins University, 1961.
- BEULAH FORMEY MAXWELL, of Baltimore, Md., A. B. Livingstone College, 1948.
- FRANK LYNN MAYER, of Baltimore, Md., A. B. Western Maryland College, 1958.
- DIANA RENSHAW MCGRAW, of Baltimore, Md., A. B. Boston University, 1960.
- ARLINE MCNUTT, of Baltimore, Md., B. A. Park College, 1946; M. A. The Kansas City Art Institute and School of Design, 1948.
- ANN HOFFMAN MELANSON, of Drexel Hill, Pa., A. B. Park College, 1944.
- WREN B. MOESSBAUER, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1949.
- MILAGROS CASTRO MORELOS, of Easton, Md., B. S. E. University of Santo Tomas, 1957.
- MARGUERITE EHRIHART MULLER, of Baltimore, Md., B. S. University of Maryland, 1952.
- THELMA VIRGINIA PEREGOY, of Towson, Md., B. S. The Johns Hopkins University, 1950.
- DOROTHY BROSIUS POWELL, of Baltimore, Md., B. S. University of Maryland, 1942.
- INEZ JOHNSON REED, of Baltimore, Md., B. S. Morgan State College, 1943.
- GEORGE LOUIS RUPPERSBERGER, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1958.
- DAVID EUGENE RYER, of Timonium, Md., A. B. Washington and Lee University, 1951.
- EDWARD CHARLES ST. LAWRENCE, of Randallstown, Md., B. A. University of Maryland, 1962.
- RUTH HERZ STONEMAN, of Baltimore, Md., B. S. Teachers College, Columbia University, 1946.
- FRANCES DILLAWAY TOMPKINS, of Baltimore, Md., A. B. Western Maryland College, 1941.
- BETTE SHOCKLEY TOPP, of Baltimore, Md., A. B. Wheaton College, 1950.
- FLORENCE MAYERBERG UDEL, of Baltimore, Md., B. S. University of Maryland, 1946.
- MARIE UREY WALKER, of Towson, Md., B. S. State Teachers College, Towson, Md., 1951.
- JO WRIGHT WHITTEN, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.

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MASTERS OF LIBERAL ARTS

- WILLIAM BENTHALL BRISTOR, of Baltimore, Md., B. S. The Johns Hopkins University, 1953.
- ARTHUR SAMUEL CHESLOCK, of Baltimore, Md., The Johns Hopkins University, 1961.
- CLAYTON DEMAREST, JR., of Baltimore, Md., B. S. United States Naval Academy, 1918.
- ABRAHAM FOX, of Rockdale, Md., B. S. The Johns Hopkins University, 1949.
- THELMA SAUSAMAN HINEGARDNER, of Baltimore, Md., B. A. Manchester College, 1926.
- YERBY ROZELLE HOLMAN, of Ruxton, Md., A. B. Duke University, 1936.
- LEROY ALLEN KELLEY, of Lutherville, Md., B. S. The Johns Hopkins University, 1962.
- HORACE LEHNEIS, of Catonsville, Md., B. S. The Johns Hopkins University, 1939.
- GEORGE JOSEPH NANDOR, of Charleroi, Pa., B. S. University of Maryland, 1955.
- CHARLES ALBERT NOON, JR., of Lutherville, Md., B. S. The Johns Hopkins University, 1960.
- MARGARET REYNOLDS PARKS, of Relay, Md., A. B. University of Maryland, 1940.
- CHARLES ARTHUR REES, of Fairview, Oreg., B. S. Portland State College, 1961.
- JOSEPH WAYNE SHOEMAKER, of Emmitsburg, Md., B. A. The College of William and Mary, 1931; B. S. L. S. Carnegie Institute of Technology, 1939.
- LILLIAN BLANCHE STEVENS, of Baltimore, Md., B. Sc. University of Nebraska, 1943; M. Ed. University of Maryland, 1954.
- EDWARD DANIEL STONE, JR., of Baltimore, Md., A. B. Western Maryland College, 1922; D. D. S. Dental School, University of Maryland, 1925.
- VERNON ROY UZZELL, of Joppa, Md., B. S. The Johns Hopkins University, 1957.
- WILLIAM STANSBURY WHEATLEY, JR., of Baltimore, Md., B. A. E. University of Virginia, 1961.

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CERTIFICATES OF ADVANCED STUDY IN EDUCATION

RUTHETTA LIPPY GILGASH, of Towson, Md., B. A. Western Maryland College, 1940; M. A. Columbia University, 1952.

EVA HARRIET GOFF, of Baltimore, Md., A. B. Goucher College, 1955; M. A. Columbia University, 1963.

DOROTHE BOOZE JOHNSON, of Baltimore, Md., A. B. Morgan State College, 1949; M. A. Fisk University, 1951.

DOROTHY WOOD STERN, of Baltimore, Md., B. S. Coppin State Teachers College, 1953; M. Ed. The Johns Hopkins University, 1959.

MARGARET BRANDON YATES, of Baltimore, Md., B. S. Maryland State Teachers College, Bowie, Md., 1945; M. Ed. The Johns Hopkins University, 1959.

(5)

MASTERS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

ALAN DEXTER ANTOINE, of Baltimore, Md., B. S. The University of Wisconsin, 1962. Pathobiology.

Studies on the Production and Assay of the Mycobacterial Growth Factor: Mycobactin.

MARSHALL DINOWITZ, of Baltimore, Md., B. S. University of Maryland, 1960. Pathobiology.

Studies on Regressing Rous Sarcomas.

RALPH W. LEE III, of Baltimore, Md., B. S. University of Maryland, 1951. Epidemiology.

Isolation and Analysis of Three Plaques Isolated from Strain TL443 of West Nile Virus.

GEORGIA BENEDICT MERRILL, of Baltimore, Md., B. S. N. The Catholic University of America, 1959; M. P. H. The Johns Hopkins University, 1963. Mental Hygiene.

An Exploratory Study of How Husbands Manage when Their Wives Are Hospitalized with a Schizophrenic Illness and There Are Children in the Home.

CHARLES KENNETH MILLS, of Baltimore, Md., B. S. Morgan State College, 1956. Pathobiology.

Immunochemical Studies of Incubation Products of *Trichinella spiralis* and Their Role in Immunity.

FRANCISCO SALIDO-RENGELL, of Mexico, D. F., Mexico, M. D. National Autonomous University of Mexico, 1958. Pathobiology.

Cytochemical Studies of Cell Cultures Infected with Rous Sarcoma Virus.

ELEANOR FUMIE YAMASHITA, of Kurtistown, Hawaii, B. A. Milwaukee-Downer College, 1960. Biochemistry.

Some Biological Studies on the Specificity of the Renaturation of Thermally Denatured *Hemophilus influenzae* DNA.

(7)

DOCTORS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

CHARLES ANELLO, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1958; Sc. M. The Johns Hopkins University, 1962. Biostatistics.

Some Applications of Stochastic Processes.

ROBERT LEE ELDER, of Newburgh, Ind., B. S. in Public Health Indiana University, 1953; M. S. in Public Health The University of North Carolina, 1955; B. S. Oregon State College, 1958. Radiological Science.

Non-Photo-Reactivating Repair of Ultraviolet Damage in *Micrococcus lysodeikticus* and *Hemophilus influenzae* Transforming-DNA.

ALICE ELEANOR GIFFORD, of Baltimore, Md., A. B. The Woman's College of the University of North Carolina at Greensboro, 1935; M. N. Yale University, 1938; M. P. H. The Johns Hopkins University, 1961. Chronic Diseases.

An Epidemiological Study of Cerebrovascular Strokes.

SUSHIL KUMAR GILOTRA, of Delhi, India, B. Sc. (Hons) Panjab University, 1954; M. Sc. (Hons.), 1956. Pathobiology (Medical Entomology).

Genetics and Physiology of Dieldrin Resistance in *Anopheles albimanus* Wiedemann.

- RONALD HARRY GOODING, of Edmonton, Alta., Canada, B. Sc. University of Alberta, 1957; M.A. The Rice Institute, 1960. Pathobiology (Medical Entomology).
Proteinases in the Midgut of Adult *Aedes aegypti* (Linnaeus) and *Culex fatigans* Wiedemann.
- R. GLENN JONES, of New York, N. Y., B. S. in Medicine The University of Nebraska, 1949. Environmental Medicine (Audiology and Speech).
Central Integration of Dichotic Filtered Speech by Hearing-Impaired Persons.
- AKLILU LEMMA, of Addis Ababa, Ethiopia, B. A. The University of Wisconsin, 1960. Pathobiology.
The Extracellular Cultivation of Species of the Genus *Leishmania* with Special Reference to the Effects of Temperature on Morphology and Reproduction.
- EDMOND ANTONY MURPHY, of Baltimore, Md., M. B., B. Ch., B. A. O. The Queen's University of Belfast, 1948; M. D., 1952. Biostatistics.
An Exploration of Some Effects of Incomplete Penetration on the Ascertainment of Recessive Characteristics.
- WILLIAM CARL WHEELER, of Frederick, Md., B. S. in Bacteriology The University of North Carolina, 1949; M. S. in Public Health, 1951. Pathobiology.
Nonpulmonary Mycobacteria. Similarities of Growth Requirements on Bacteriological Media and within Mammalian Cells.
- ANTHONY JOHN READING, of Sydney, Australia, M. B., B. S. The University of Sydney, 1957; M.P.H. The Johns Hopkins University, 1961. Pathobiology.
Individual Differences in Behavior and Growth in Inbred Mice.
- HUGH THOMAS SPENCER, of Lynchburg, Va., B. S. in Chem. Engr. Virginia Polytechnic Institute, 1958; M. S., 1960. Biochemistry.
Defined Conditions for the Induction of Competence in *Hemophilus influenzae* Populations.
- K. SUBRAHMANIAM, of New Delhi, India, B. Sc. Banaras Hindu University, India, 1954; M. Sc., 1957. Biostatistics.
On Some Uses of Linear-Mixed Models, Spectral Methods and Theory in the Statistical Analysis of Growth Curves.
- STEPHEN ARNOLD WEINSTEIN, of Baltimore, Md., M. A. The Johns Hopkins University, 1961. Environmental Medicine.
Behavioral Techniques in the Evaluation of Chemical and Sensory Stimuli in the Regulation of Respiration.

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MASTERS OF PUBLIC HEALTH

- CHUNDAMANNIL ALEXANDER ALEXANDER, of Kumbanad, India, M. B., B. S. University of Madras, 1958.
- ESTHER ELEANOR BACON, of Hawarden, Iowa, B. S. Morning-side College, 1957.
- CAROLYN ANN BANGHART, of Hyden, Ky., B. S. State Teachers College, Loch Haven, Pa., 1948; B. S. in Nursing The Johns Hopkins University, 1953.
- EMMA LUZUM BARBARICH, of Leonardtown, Md., M. D. Slovak University, Czechoslovakia, 1945.
- C. GOTTFRIED BAUMANN, of Linthicum Heights, Md., B. S. University of North Dakota, 1957; M. S., 1959; B. S. Med. and SLA, 1960; M. D. University of Maryland, 1962.
- GEORGE MILTON BERG, of Caribou, Maine, A. B. Clark University, 1950; M. D. Tufts University, 1954.
- JOHN JAMES BIANCO, of Towson, Md., B. S. Muhlenberg College, 1937; M. D. Temple University, 1941.
- HENRY VAN AMBERG BIELSTEIN, of Dayton, Ohio, B. A. and B. S. Otterbein College, 1955; M. D. University of Cincinnati, 1959.
- DONALD BUCKEY BOND, of Berkeley, Calif., A. B. Western Maryland College, 1938; M. D. University of Maryland, 1948.
- FREDERIC W. BRENNWALD, of Takoma Park, Md., M. D. University of Bern, 1946.
- JOSEPH HERBERT BRITTON, of Richmond, Va., B. S. Virginia Polytechnic Institute, 1947; M. D. Medical College of Virginia, 1951.
- LELAND CAMPBELL BROWN, of Henderson, Ky., A. B. Denison University, 1950; M. D. Northwestern University, 1954.
- JOHN FRANCIS CADDEN, JR., of Baltimore, Md., M. D. University of Maryland, 1959.
- JOHN WILLIAM CASHMAN, of Dickerson, Md., S. B. The University of Chicago, 1944; M. D., 1946.

- MOHAMED TAHIR DABBAGH, of Saudi Arabia, M. B., B. Ch. Cairo University, 1954.
- HERALDO DEL CASTILLO, JR., of Manila, Republic of the Philippines, M. D. University of Santo Tomas, Philippines, 1959.
- JOY DELEON, of New York, N. Y., B. S. in Nurs. The University of Wisconsin, 1956.
- JOHN JOSEPH DEMPSEY, of Reisterstown, Md., B. A. The Catholic University of America, 1957; M. S. W., 1961.
- ZVONIMIR DUIĆ, of Pula, Yugoslavia, M. D. University of Zagreb, 1952.
- CLARA LOUISE DUNCAN, of Hyattsville, Md., B. S. in Nurs. University of Maryland, 1963.
- DONALD CHARLES ELDER FERGUSON, of Baltimore, Md., B. S. (L. A. S.) University of Illinois, 1955; M. S. University of Pittsburgh, 1959; Ph. D., 1961.
- VICTOR JAMES FERRARI, JR., of Fort Smith, Ark., M. D. University of Arkansas, 1957.
- JONATHAN E. FINE, of Brookline, Mass., B. A. Swarthmore College, 1954; M. D. Yale University, 1962.
- HARVEY ROY FISCHMAN, of Baltimore, Md., B. A. Brooklyn College, 1941; D. V. M. Middlesex University, 1944; D. V. Ecole Nationale Veterinaire d'Alfort, France, 1950.
- JOHN W. GALES, of Galax, Va., B. S. Southern Methodist University, 1940; M. D. Baylor University, 1943.
- MELITA C. GESCHE, of Funchal, Madeira, Portugal, M. D. University of Lisbon, 1957.
- JOSE LOZANO GONZALEZ, of Laredo, Tex., B. S. in C. E. University of Notre Dame, 1950.
- JANET HALE, of Knoxville, Tenn., B. S. in Nurs. The Florida State University, 1957.
- HAROLD PAUL HALPERT, of Washington, D. C., B. A. New York University, 1932; A. M. University of Illinois, 1933.
- KATHRYN ANNE HUXTABLE, of Lakewood, Ohio, M. D. Yale University, 1959.
- KANJI IIO, of Matsuyama, Japan, M. D. Kyoto University, 1952; Dr. M. Sc., 1960.
- ASMA KHAN, of Karachi, Pakistan, M. B., B. S. University of Madras, 1948.
- ROCH SELIM KHAZEN, of Beirut, Lebanon, M. D. French University of Medicine, Lebanon, 1957.
- LEWIS H. KULLER, of Woodmere, L. I., N. Y., A. B. Hamilton College, 1955; M. D. The George Washington University, 1959.
- SANG KEUN LEE, of Kwangju, Korea, M. D. Chonnam National University, Korea, 1956.
- FRANK RUDOLF MARK, of Glen Burnie, Md., B. A. New York University, 1948; M. D. University of Bern, 1954.
- CECIL LLOYD MINTON, of Waco, Tex., B. S. Southern Methodist University, 1955; M. D. Baylor University, 1959.
- VICTOR PAGE OWEN, of Jarratt, Va., B. S. Randolph-Macon College, 1938; M. D. Medical College of Virginia, 1942.
- JAIME QUEVEDO, of Cali, Colombia, M. D. Universidad del Valle, Colombia, 1961.
- RONALD LEE RICKETTS, of Rockville, Md., B. S. University of Maryland, 1961; D. V. M. University of Georgia, 1962.
- PEDRO RIVERA-NIEVES, of Aguas Buenas, Puerto Rico, B. S. Ph. University of Puerto Rico, 1951; M. D., 1957.
- NORMAN CLIFTON RUTTER, JR., of Richmond, Va., B. S. The College of William and Mary in Virginia, 1953; D. D. S. Medical College of Virginia, 1959.
- MOHAMMED SAADATNEJADI, of Shiraz, Iran, M. D. University of Shiraz, 1958.
- LAIRD FABER SCHALLER, of Brookfield, Ill., B. S. University of Illinois, 1959; M. D., 1961.
- MARGARET LEE SHERRARD, of Baltimore, Md., B. A. Seton Hill College, 1945; M. D. University of Maryland, 1949.
- SANG WHAN SONG, of Seoul, Korea, M. D. Yonsei University, Korea, 1958.
- JEANNETTE R. SPERO, Franklin Square, L. I., N. Y., B. S. New York University, 1952; M. A., 1959.
- A. J. WILHELM SPITZ, of Cambridge, England, M. D. University of Vienna, 1940; D. T. M. & H. London School of Hygiene and Tropical Medicine, 1949.
- JOE H. TRICKEY, JR., of Fort Worth, Tex., B. A. The University of Texas, 1954; M. D., 1960.
- HARVEY N. VANDEGRIFT, of Ventnor, N. J., B. S. (A. & S.) University of Delaware, 1938; M. D. Duke University, 1942.
- CARLOS NATHANIEL VICENS, of Guaynabo, Puerto Rico, B. S. University of Puerto Rico, 1948; M. D. University of Maryland, 1952.
- THOMAS S. WALLACE, JR., of Louisville, Ky., M. D. University of Louisville, 1951.
- CAROLINE MCCOY WHITE, of New Rochelle, N. Y., B. S. Columbia University, 1962.
- RUTH MARGARET WHITE, of Loma Linda, Calif., B. S. in Nurs. Educ. Washington Missionary College, 1946; M. S. in Nurs. University of California, Los Angeles, 1957.
- SIEGFRIED WOLFF, of Baltimore, Md., M. A. The Johns Hopkins University, 1961.
- YOUNG SUN YUN, of Seoul, Korea, M. D. Yonsei University, Korea, 1947.

DOCTORS OF PUBLIC HEALTH

with titles of theses

- CHARLES EDWARD ALEXANDER, JR., of Washington, D. C., B. A. Yale University, 1951; M. D. University of Pennsylvania, 1955; M. P. H. The Johns Hopkins University, 1959. Chronic Diseases.
On the Epidemiology of Chronic, Idiopathic Ulcerative Colitis.
- MOHAMED FAKHR EL DIN MOHAMED EL SAWY, of Cairo, Egypt, U. A. R., M. B., B. Ch. Cairo University, 1951; M. P. H. High Institute of Public Health, Egypt, 1958. Pathobiology (Medical Entomology).
The Relation of Inorganic Salts and Osmotic Pressure to Survival of Larvae of Different Species of Mosquitoes.
- HAMMAM MOHAMMED HAMMAM, of Assiut, Egypt, U. A. R., M. B., B. Ch. Cairo University, 1952; M. P. H. High Institute of Public Health, Egypt, 1960. Epidemiology.
Antigenic Variation among Strains of West Nile Virus in Relation to Their Geographical Distribution.
- GENEVIEVE E. MURRAY MATANOSKI, of Glen Burnie, Md., A. B. Radcliffe College, 1951; M. D. The Johns Hopkins University, 1955; M. P. H., 1962. Epidemiology.
The Epidemiology of Streptococcal Infections in a Selected Population.
- BARUCH MODAN, of Tel Aviv, Israel, M. D. The Hebrew University of Jerusalem, 1958; M. P. H. The Johns Hopkins University, 1962. Chronic Diseases.
The Relationship between Polycythemia Vera and Leukemia.

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MASTERS OF ARTS

in The School of Advanced International Studies

- ELIZABETH ANNE ADKINS, of Circleville, Ohio, B. A. Western College for Women, 1961.
- REBECCA ARNOLD, of Garden City, L. I., N. Y., B. A. Wells College, 1962.
- ENRIQUE AROCENA, of Montevideo, Uruguay, Dr. J. S. University of Montevideo, 1961.
- KIRBY LAMAR BAKER, of Chevy Chase, Md., A. B. Harvard University, 1957.
- PAUL REX BEACH, of Olathe, Kans., B. A. Kansas State University, 1962.
- GÜLÇİN AYSE BECER, of Istanbul, Turkey, B. A. Mount Holyoke College, 1961.
- RICHARD J. BENTLEY, of Fond du Lac, Wis., B. A. University of Wisconsin, 1962.
- ROBERT BRENTON BETTS, of Monrovia, Calif., B. A. College of William and Mary, 1962.
- DAVID STUART BROWNING, of Amarillo, Texas, B. A. The University of Texas, 1960; LL. B., 1962.
- ROBERT CLIFFORD CARR, of Oberlin, Ohio, B. A. Harvard University, 1962.
- ELIZABETH ANNE CARTER, of Plainfield, N. J., B. A. Smith College, 1961.
- CHARLES O. CECIL, of Richmond, Calif., B. A. University of California, 1962.
- JOHN B. CHILDERS, of Fairfield, Iowa, B. A. DePauw University, 1962.
- ROBERT P. CLARK, JR., of Houston, Texas, B. A. Tulane University, 1962.
- WILLIAM KYLER CRAVEN, of Savannah, Ga., B. A. George Washington University, 1958.
- JAMES LAWSON DUDLEY, of Westhampton Beach, N. Y., A. B. Williams College, 1962.
- JOSÉ ROBERTO DURÁN Y TAMEZ, of Mexico City, Mexico, Lic. University of Mexico, 1960.
- MARTHA S. FERNANDEZ, of Bogotá, Colombia, B. A. University of the Andes, 1962.
- ABBE FESSENDEN, of Philadelphia, Pa., B. A. Barnard College, 1962.
- JUDITH E. FINNEMORE, of Bournemouth, England, B. A. University of Oxford, 1962.
- MICHAEL MARKOFF GEORGE, of New York, N. Y., B. A. Harvard University, 1960.
- CARMEN B. GRAYSON, of Edmonton, Alta., Canada, B. S. F. S. Georgetown University, 1962.

- OTTO GRIMM, of Roth Bei Nürnberg, Germany, Dr. iur. University of Erlangen, 1960.
- DANIEL HEADRICK, of Evreux, France, B. A. Swarthmore College, 1962.
- FRANZ HORNER, of Bruck Pinzgau, Austria, Lic. University of Fribourg, 1960.
- ROBERT WYATT HULL, of Washington, D. C., B. A. Yale University, 1962.
- NANEEN M. HUNTER, of Montclair, N. J., B. A. Smith College, 1961.
- LESLIE A. JANKA, of Fontana, Calif., B. A. University of Redlands, 1962.
- GARY STODDARD JUDD, of Meridian, Idaho, B. A. The American University, 1962.
- JOHN JANIS KADILIS, of Washington, D. C., A. B. Harvard University, 1961.
- ELIZABETH SUSAN KING, of Merced, Calif., B. A. Pomona College, 1962.
- CLAUDE E. KOPROWSKI, of Wynnewood, Pa., A. B. Princeton University, 1962.
- KENTON EARL LAMMERS, of Salem, Oreg., B. S. United States Air Force Academy, 1962.
- RONALD JOHN LOEW, of Manhattan Beach, Calif., B. S. Lewis and Clark University, 1956; LL. B. Willamette University, 1959.
- DIETER MARTIN MAHNCKE, of Atlanta, Ga., B. A. University of North Carolina, 1962.
- LOIS ANN MARTIN, of Dearborn, Mich., B. A. Michigan State University, 1962.
- KEVIN PARKINSON McGRATH, of Bay Shore, N. Y., B. S. F. S. Georgetown University, 1962.
- THOMAS MUZZY MILLINGTON, of Saddle River, N. J., B. A. Williams College, 1961.
- ROBERT LELAND MOTT, of Napa, Calif., B. A. Stanford University, 1962.
- HOWARD MURAD, of Teaneck, N. J., B. A. New York University, 1961.
- DONALD K. PARSONS, of Los Angeles, Calif., B. A. University of Southern California, 1961.
- RUSSELL EUGENE PARTA, of New York Mills, Minn., B. A. St. Olaf College, 1962.
- GILBERT STERLING PEIRCE, of Cleveland, Ohio, B. A. Brown University, 1962.
- HESTER HONE PHELPS, of Ashfield, Mass., B. A. Sarah Lawrence College, 1962.
- CHARLES R. PLANCK, of Arlington, Va., B. A. Oberlin College, 1962.
- ALAN J. POLANSKY, of Lorain, Ohio, B. A. Western Reserve University, 1962.
- THOMAS D. POTTER, of Hebron, Nebr., B. A. Nebraska Wesleyan University, 1962.
- RANDOLPH REED, of Washington, D. C., A. B. Princeton University, 1962.
- JOEL A. RISCH, of New York, N. Y., B. A. The City College of New York, 1962.
- RICHARD PHILIP SCHICK, of Detroit, Mich., B. A. Wayne State University, 1961.
- GRETCHEN SCHIELE, of Minneapolis, Minn., B. A. Grinnell College, 1961.
- KENNETH SCHLOSSBERG, of Brookline, Mass., B. A. Rochester University, 1961; M. S. Columbia University, 1962.
- SIMON H. SERFATY, of New York, N. Y., B. A. Hunter College, 1963.
- SALLY SLAUGHTER, of Stillwater, Minn., B. A. Carleton College, 1956.
- ROBB EVAN SMITH, of Grosse Pointe, Mich., B. A. University of Rochester, 1961.
- JOHN HUNTER STRASBURGER, of Dallas, Texas, B. A. University of Texas, 1959; LL. B., 1961.
- ROBERT RICHARD SULLIVAN, of Chicopee Falls, Mass., B. S. Boston College, 1959.
- GERALD E. SUSSMAN, of Hyattsville, Md., B. S. Georgetown University, 1959; LL. B., 1962.
- AMARA SUTAYAUDOM, of Bangkok, Thailand, LL. B. University of Therasat, 1951.
- ROBERT EUGENE TERKHORN, of Battle Creek, Mich., B. A. Wesleyan University, Connecticut, 1958; LL. B. University of Michigan, 1962.
- LUCIANO TOPI, of Rome, Italy, Laurea in law, University of Rome, 1962.
- JOHN M. TRUM, of Sherborn, Mass., B. S. F. S. Georgetown University, 1962.
- MARGARET CAROLYN TWINEM, of Mt. Isa, Queensland, Australia, B. A. University of Colorado, 1962.
- CHARLES HAILE TWINING, of Glen Arm, Md., B. A. University of Virginia, 1962.

BRUCE MARK VAN WYK, of Kalamazoo, Mich., B. A. Oberlin College, 1962.

GEORGE LOUIS VÁSQUEZ, of Lima, Peru, B. A. Harvard University, 1962.

MARJORIE D. WAGNER, of Wilmington, Del., B. A. Ohio Wesleyan University, 1962.

CHARLES BELLAMY YOUNG, of Canton, Conn., B. A. Yale University, 1962.

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DOCTOR OF PHILOSOPHY

*in The School of Advanced International Studies
with title of dissertation*

JAMAL A. SA'D, of Beirut, Lebanon, B. A. American University of Beirut, 1953; M. A. University of Virginia, 1955.
The Emergence of Syria and Lebanon, 1920-1946.

(1)

DOCTORS OF MEDICINE

GERALD ALLEN ACKER, of New York, N. Y., B. S. Columbia University, 1961.

JOSEPH MORRIS ALMAND, JR., of Detroit, Mich., B. A. Emory University, 1960.

RONALD PAUL BENJAMIN, of Pittsburgh, Pa., B. A. Washington and Jefferson College, 1960.

GARY BIRNBAUM, of New York, N. Y., B. A. Hobart College, 1960.

CARL E. BREDENBERG, JR., of Milford, Conn., B. A. The Johns Hopkins University, 1962.

PHILANDER BOWEN BRISCOE, JR., of Baltimore, Md., A. B. Princeton University, 1960.

JAMES ROBERT BROWN, of Pompano Beach, Fla., B. A. Duke University, 1960.

JACQUES R. CALDWELL, of White Plains, N. Y., B. A. The Johns Hopkins University, 1961.

JAMES WALTER CARTER, of Lubbock, Texas, B. A. The Johns Hopkins University, 1961.

PETER BERNARD CINELLI, of New York, N. Y., A. B. College of the Holy Cross, 1960.

CHARLES FRANCIS CLARK, of Breckinridge, Colo., B. A. Emory University, 1960.

CLIFTON RANCE CLEAVELAND, of Columbia, S. C., A. B. Duke University, 1958; M. A. St. John's College, Oxford University, 1961.

RICHARD LOUIS COHEN, of Baltimore, Md., B. A. Duke University, 1960.

L. BRYAN COTTON, JR., of Elkridge, Md., B. A. The Johns Hopkins University, 1961.

HARRY DENNISTON CREWS, of Wauchula, Fla., B. S. University of Florida, 1960.

HAROLD EUGENE CROSS, of Goshen, Ind., B. A. Goshen College, 1960.

JOAN CLAIRE ČUČEK, of San Francisco, Calif., A. B. Stanford University, 1959.

LUDWIG MICHAEL DEPPISCH, of Elmhurst, N. Y., B. A. Fordham University, 1960.

EUGENE MICHAEL EDYNAK, of Chester, Pa., B. A. The Johns Hopkins University, 1961.

JAMES MELTON ERRICO, of Suffern, N. Y., B. A. The Johns Hopkins University, 1961.

ELLEN EVANS, of Baltimore, Md., A. B. Vassar College, 1957.

OSCAR THOMAS FEAGIN, of University, Miss., B. A. University of Mississippi, 1959.

MARTIN S. FEIGENBAUM, of New York, N. Y., B. A. The Johns Hopkins University, 1961.

MICHAEL FREUND, of Brooklyn, N. Y., A. B. Princeton University, 1960.

CORNELIA WRIGHT MORRISON FRIEDMAN, of Park Ridge, Ill., B. A. The Johns Hopkins University, 1961.

- JAMES FRANKLIN FRIES, of Chico, Calif., A. B. Stanford University, 1960.
- JAMES CLAIBORNE ALLRED FUCHS, of Aiken, S. C., A. B. Princeton University, 1960.
- JAMES EDWARD GLASSER, of Wheaton, Ill., B. S. Wheaton College, 1960.
- THEODORE JOHN HAHN, JR., of Baltimore, Md., A. B. Princeton University, 1960.
- BEVRA YVONNE HANNAHS, of Columbus, Ohio, B. S. Ohio State University, 1960.
- PAUL DOUGLAS HART, of Provo, Utah, B. S. Brigham Young University, 1960.
- MARTIN STANLEY HIRSCH, of Kew Gardens, N. Y., A. B. Hamilton College, 1960.
- LEROY E. HOOD, of Great Falls, Mont., B. S. California Institute of Technology, 1960.
- DAVID FRANCIS HYATT, of Marcellus, N. Y., B. S. Syracuse University, 1960.
- CHARLES FRANK JOHNSON III, of Watertown, Conn., A. B. Princeton University, 1960.
- VAUGHAN AMBROSE JOHNSON, of Dayton, Ohio, B. S. Wittenberg College, 1958; M. A. The Johns Hopkins University, 1959.
- THOMAS MICHAEL JOVIN, of Baltimore, Md., B. S. California Institute of Technology, 1960.
- LARRY ROBERTS KIRKLAND, of Columbus, Ga., B. S. University of Alabama, 1959.
- JOEL HIRSH KRAMER, of Baltimore, Md., B. A. The Johns Hopkins University, 1960.
- LEO EDWARD KREUZ, of Chisholm, Minn., B. A. Harvard University, 1960.
- HARRISON MILLER LAZARUS, of Baltimore, Md., A. B. Princeton University, 1960.
- STEWART LEIBOWITZ, of Richmond Hill, N. Y., B. A. Amherst College, 1960.
- MICHAEL LESCH, of Richmond Hill, N. Y., B. A. Columbia University, 1960.
- DAVID CARL LEVIN, of New York, N. Y., A. B. Cornell University, 1955.
- A. DOUGLAS LOGUE, of Maywood, N. J., B. S. Yale University, 1960.
- JAMES C. LONGCOPE, of Cheltenham, Pa., A. B. Dartmouth College, 1959.
- DOUGLAS WILLIAM MACRAE, of Bay City, Mich., B. A. The Johns Hopkins University, 1961.
- WILLIS CROCKER MADDREY, of Roanoke Rapids, N. C., B. S. Wake Forest College, 1960.
- JAMES JOSEPH MARR, of Hamilton, Ohio, B. S. Xavier University, 1959.
- MICHAEL JOSEPH MASTRANGELO, of Phoenixville, Pa., B. S. Villanova University, 1960.
- KEITH R. McCLOSKEY, of Akron, Ohio, B. S. University of Illinois, 1960.
- MICHAEL TERRY McENANY, of Cedar Rapids, Iowa, A. B. Brown University, 1960.
- STANLEY A. MENDOZA, of McKeesport, Pa., B. A. The Johns Hopkins University, 1961.
- JON KEITH MEYER, of Springfield, Ill., B. A. Dartmouth College, 1960.
- JOSEPH MICHON, JR., of Schenectady, N. Y., B. S. College of the Holy Cross, 1960.
- JAY DENNIS MORTON, of Akron, Ohio, B. S. Akron University, 1960.
- RICHARD LOUIS POPP, of Indianapolis, Ind., B. A. The Johns Hopkins University, 1960.
- GERALDINE KEATING POWELL, of Flushing, N. Y., B. A. The Johns Hopkins University, 1960.
- KENNETH ELWOOD QUICKEL, JR., of Camp Hill, Pa., A. B. Dartmouth College, 1961.
- RANDOLPH BROOKS REINHOLD, of Newburgh, N. Y., A. B. Princeton University, 1960.
- PAUL LEWIS RICHTER, of New York, N. Y., A. B. Columbia University, 1959.
- MARTIN C. ROBSON, of Lancaster, Ohio, B. A. The Johns Hopkins University, 1961.
- STEVEN A. ROSENBERG, of New York, N. Y., B. A. The Johns Hopkins University, 1961.
- A. RALPH ROSENTHAL, of Pittsburgh, Pa., B. A. The Johns Hopkins University, 1960.
- ANTOINETTE D. SCOTT, of Rochester, Minn., A. B. University of California (Los Angeles), 1960.
- DALLAS EDWARDS SMITH, of Tunstall, Va., B. A. Virginia Military Institute, 1960.

- EARL ROBERT SNODGRASS, of Leavenworth, Kans., B. A. The Johns Hopkins University, 1959.
- WARD MICHAEL TERRY, of Staten Island, N. Y., B. A. The Johns Hopkins University, 1961.
- ROBERT CAMPBELL THOMPSON, of Larchmont, N. Y., B. S. California Institute of Technology, 1960.
- GARLAND LEIGH TRUITT, JR., of Newark, Del., B. A. Oberlin College, 1960.
- CHARLES WARD VAN WAY III, of Washington, D. C., B. A. Yale University, 1960.
- MARSHALL WILLIAM WEBSTER, JR., of Pittsburgh, Pa., B. S. Pennsylvania State University, 1960.
- MARK EDWARD WILLIAMSON, of Washington, D. C., B. A. The Johns Hopkins University, 1961.
- RICHARD J. WYATT, of Highland Park, Ill., B. A. The Johns Hopkins University, 1961.
- DENNIS JAY ZEITLIN, of Highland Park, Ill., B. A. University of Illinois, 1960.

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MASTERS OF ARTS IN TEACHING

- MARY JO ALLEMAN, of Monterey Park, Calif., B. A. Brigham Young University, 1963.
- ROBERT CHARLES ASHTON, of Somerville, N. J., A. B. Rutgers University, 1962.
- NANCY ETTA AWBREY, of Dalton, Ga., B. A. The University of North Carolina, 1960.
- MAUREEN AVERY BLEWETT, of Baltimore, Md., B. A. Willemette University, 1961.
- PETER WESLEY BLEWETT, of Baltimore, Md., B. A. Willemette University, 1961.
- LYDIA RAGUET BUTLER, of Mount Desert, Me., A. B. Radcliffe College, 1963.
- ANDREW JOHN CALLAGHAN, of Bronx, N. Y., B. A. Fordham University, 1962.
- CHARLES WILLISTON CAMP, of Southampton, Mass., B. S. in Ch. E. University of Massachusetts, 1963.
- SARAH STOKES CUMMING, of Nashville, Tenn., B. A. Agnes Scott College, 1963.
- GENE MAXWELL DAVIDSON, of Bedford, Va., A. B. Randolph-Macon Woman's College, 1963.
- ROBERT CAROL DOUGLAS, of Kansas City, Kans., B. A. The University of Kansas, 1962.
- SANDRA HERTHA DOUGLAS, of Newton, Mass., B. A. Wellesley College, 1963.
- EDWARD CLARK EDGIN, of Madison, Tenn., B. A. The University of the South, 1962.
- SARAH JANE FAILE, of New Canaan, Conn., A. B. Connecticut College, 1963.
- MICHAEL JOSEPH FRONING, of Kennett Square, Pa., B. S. in Mathematics University of Notre Dame, 1963.
- SARA WILLARD GLENN, of Clinton, S. C., A. B. King College, 1963.
- MELVYN HIRSH GOLDBERG, of Baltimore, Md., B. A. The Johns Hopkins University, 1963.
- ATHENE SCHIFFMANN GOLDSTEIN, of Baltimore, Md., A. B. Barnard College, 1963.
- FLORENCE MIRIAM GRAUPE, of New York, N. Y., B. A. The City College of New York, 1963.
- BARBARA SUSAN GUM, of Pen Argyl, Pa., B. S. Muhlenberg College, 1963.
- WILLIAM JOSEPH HALLAM, of Baltimore, Md., A. B. Tufts College, 1954.
- JOAN ELIZABETH HASLINGER, of Greenbelt, Md., A. B. Trinity College, Washington, D. C., 1963.
- GRETCHEN EUNICE HAUG, of Manhasset, N. Y., B. A. Vassar College, 1961.
- HAZEL ELIZABETH HOLLENBECK, of East Rutherford, N. J., B. A. Wells College, 1962.
- MICHAEL DAVID HONKER, of Myerstown, Pa., A. B. Lafayette College, 1962.
- SUZANNE ELIZAETH HOWELLS, of Hanover, Pa., A. B. Mount Holyoke College, 1963.
- RICHARD JOHN JENKINS, of Gibbstown, N. J., A. B. Rutgers University, 1962.
- JANICE HELEN JILKA, of Denver, Colo., B. S. Colorado College, 1960.
- SUSAN CAROL JORDAN, of New Rochelle, N. Y., B. A. University of Maine, 1963.
- CECILE BAER JOSEPHS, of Brooklyn, N. Y., A. B. Barnard College, 1963.

- MARCIA SHEVA KAPLAN, of Newark, N. J., B. A. Elmira College, 1963.
- GALE ALICE KEANE, of Bayville, N. Y., B. A. Marquette University, 1963.
- NANCY KATHRYN KEEN, of Wilmette, Ill., B. A. Rosary College, 1963.
- SALLY REBA VEXLER KLEIN, of Annapolis, Md., A. B. Swarthmore College, 1962.
- MINNIE EIKO KOMAGOME, of Honolulu, Hawaii, B. A. University of Hawaii, 1963.
- BONNEE LEE LAURIDSEN, of Storm Lake, Iowa, B. A. Luther College, 1963.
- MICHAEL-ANN LEVINE, of Harrisburg, Pa., B. A. Elmira College, 1963.
- LORA GRAHAM LUNT, of Orono, Me., A. B. Swarthmore College, 1962.
- MARY SUSAN MAGES, of White Plains, N. Y., A. B. Manhattanville College of the Sacred Heart, 1962.
- ANNA EUFEMIA MANCINO, of Waterbury, Conn., B. A. College of New Rochelle, 1963.
- FRANCIS ROSS CLOUGH MARBURY, of Trussville, Ala., B. A. The University of the South, 1963.
- KATHERINE ROSE MCCREADY, of Johnstown, Pa., B. A. Wittenberg University, 1963.
- JOHN NOBLE MCDANIEL, of Herndon, Va., B. A. Hampden-Sydney College, 1963.
- THOMAS ROBB MCDANIEL, of Herndon, Va., B. A. Hampden-Sydney College, 1963.
- DEE ANN MIMS, of Gainesville, Fla., A. B. Sarah Lawrence College, 1961.
- CHARLOTTE JUDITH MUNDY, of Roanoke, Va., A. B. Randolph-Macon Woman's College, 1962.
- JOAN ENID RUBINGER, of New Rochelle, N. Y., B. A. Manhattanville College of the Sacred Heart, 1963.
- GLEN BRUCE RUH, of Baltimore, Md., B. A. The Principia College, 1958.
- DAWN EDA SANGREY, of Bolton, Conn., A. B. Mount Holyoke College, 1963.
- CAROL SHELDON, of Towson, Md., A. B. Mount Holyoke College, 1963.
- MARJORIE LOUISE STISSEL, of Baltimore, Md., A. B. Mount Holyoke College, 1963.
- ANNE LOUISE TODD, of San Diego, Calif., A. B. Occidental College, 1963.
- JERRY ALAN VAN VOORHIS, of Malden, Mass., B. A. The College of William and Mary, 1963.
- HARVEY DALE WIEDERICK, of Wetaskiwin, Alta., Canada, B. S. Royal Military College of Canada, 1959.

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MASTERS OF ARTS

with titles of essays

- ROBERT ELDON ALEXANDER, of Ridgewood, N. J., B. A. Concordia College, 1961. Philosophy.
- ANN JAQUELIN AMBLER, of Washington, D. C., B. A. Oberlin College, 1962. Romance Languages.
- MARC HADLEY ARNOLD, of Seattle, Wash., B. A. University of Washington, 1963. English.
- RICHARD WILLIAM ARTHUR, of Riverside, Calif., B. A. University of California, Riverside, Calif., 1963. English.
- BURTON HENRY BARTLEY, of Laurens, Iowa, B. S. Iowa State College, 1962. Chemistry.
- JOSEPH WILLIAM BEATTY, of Philadelphia, Pa., B. A., La Salle College, 1963. Writing Seminars.
Tucany: A Portion of a Novel.
- MARY RUTH BLOCKSMA, of Grand Rapids, Mich., A. B. Wheaton College, 1963. Writing Seminars.
Collected Poems.
- MEADE BERNARD BRIDGERS, of Washington, D. C., A. B. Vassar College, 1962. Classics.
- HOMER OBED BROWN, JR., of McAlester, Okla., B. A. The University of Oklahoma, 1959; M. A. 1962. English.
- CHARLES PHILIP BUTLER, of Baltimore, Md. Political Science.
The Influence of Political Conflict on the Formation of the Red Army.
- CHARLES HERRICK CARLIN, of Rockford, Ill., B. A. Carthage College, 1961. Chemistry.

- ROBERT LYNN CARRINGER, of Knoxville, Tenn., B. A. The University of Tennessee, 1962. English.
- COLIN ROBERT CHASE, of Denver, Colo., A. B. Harvard University, 1956; M. A. T. St. Louis University, 1962. English.
- MARTHA ELIZABETH CHEW, of Winston-Salem, N. C., B. A. Agnes Scott College, 1963. Writing Seminars.
The Plum Tree: A Collection of Short Stories.
- ELEANOR BENNETT CLARK, of Baltimore, Md., A. B. Mount Holyoke College, 1958. Art.
Architectural Settings and Architectural Backgrounds in the Etienne Chevalier Hours.
- HERBERT HOTACE CLARK, of Deadwood, S. D., B. A. Stanford University, 1962. Psychology.
Some Structural Properties of Simple Active and Passive Sentences.
- EMERY TAYLOR CLEAVES, of Baltimore, Md., A. B. Harvard University, 1960. Geography.
Laboratory Procedures for Mechanical and Heavy Mineral Analyses of Saprolites and Soil Profiles.
- KAREN COTZIN COHEN, of Baltimore, Md., A. B. Radcliffe College, 1963. Education.
Orthopaedic Surgery and Education at The Johns Hopkins Hospital and at The Johns Hopkins University School of Medicine.
- HOWARD MAURICE COHN, of Baltimore, Md., B. A. Yeshiva University, 1962. Writing Seminars.
Fragments of Form: a Collection of Poems; The Search For The Self: an Essay.
- RONALD KEITH COUNSELL, of Kalispell, Mont., B. S. California Institute of Technology, 1963. Chemistry.
- DOUGLAS LLOYD CRAMER, of Burlingame, Calif., A. B. San Francisco State College, 1961. Art as Applied to Medicine.
The Abdominal Viscera of the Chimpanzee, with Special Reference to Their Topography and Blood Supply.
- WESLEY EARL CRAVEN, of Euclid, Ohio, A. B. Wheaton College, 1963. Writing Seminars.
Noah's Ark: The Journals of a Madman. A Novel.
- FRANCIS ANTHONY DE CARO, of Brooklyn, N. Y., B. A. St. Francis College, 1963. Writing Seminars.
Four Stories and a Fragment.
- YVES MARIE-FRANÇOIS DEJEAN, O. M. I., of Port-au-Prince, Haiti. Oriental Seminary.
- ALISTAIR MCKAY DUCKWORTH, of Leeds, Yorkshire, England, M. A. Edinburgh University, 1958. English.
- CARL ALBERT ELLIGER, of Baltimore, Md., B. S. University of California, Berkeley, 1962. Chemistry.
- BARBARA YODER ELLIS, of Baltimore, Md., B. A. Swarthmore College, 1962. Chemistry.
- THOMAS WALTER ENGEL, of Ballston Lake, N. Y., B. A. The Johns Hopkins University, 1964. Chemistry.
- THOMAS GRANT EVANS, of Conklin, N. Y., A. B. The University of Rochester, 1963. German.
- THEODORE GEORGE FLECHSIG, of Washington, D. C., B. S. Rutgers University, 1950. Political Economy.
The Predictive Value of Consumer Buying Intentions.
- ROBERT BAGWELL FREY, of Towson, Md., A. B. Duke University, 1962. Chemistry.
- GERHARD KURT FRIESEN, of Kitchener, Ont., Canada, B. A. Waterloo College, 1963. German.
- HAROLD PHILIP FRY, of Oneonta, N. Y., B. A. Hartwick College, 1963. German.
- HANNA MARIA KATALIN GELDRICH, of Baltimore, Md., A. B. Mount St. Agnes College, 1963.
- MARGARET ELIZABETH GILES, of Media, Pa., A. B. Gettysburg College, 1963. Writing Seminars.
Three Short Stories.
- SAMUEL HAROLD GREENBLATT, of Potsdam, N. Y., A. B. Cornell University, 1961. History of Medicine.
John Hughlings Jackson: The Development of His Main Ideas to 1864.
- JUDITH MARY HAMILTON, of Syracuse, N. Y., B. A. Gettysburg College, 1962. Writing Seminars.
Dearlly Beloved: A Novella.
- PETER JEWELL HECK, of Chestertown, Md., A. B. Harvard University, 1963. English.
- RICHARD HELGERSON, of Pasadena, Calif., B. A. University of California, Riverside, Calif., 1963. English.
- WILLIAM HARLEY HENRY, of Baltimore, Md., B. A. Kenyon College, 1959; B. A. (Hons.) Christ Church, Oxford University, 1961. English.
- RICHARD IVES HIRES, of Annapolis, Md., B. S. in Physics Rensselaer Polytechnic Institute, 1961. Oceanography.
An Experimental Study of the Effect of Internal Waves on Vertical Mixing.
- BARRY HIRSH HONIG, of Tel-Aviv, Israel, B. S. Polytechnic Institute of Brooklyn, 1963. Chemistry.
- STEVEN L. HURWITZ, of Baltimore, Md., B. A. Clark University, 1963. German.
- JOEL KENNEDY, C. F. X., of Brooklyn, N. Y., B. A. The Catholic University of America, 1963. English.

- THOMAS JOSEPH KENNEDY, of Jersey City, N. J., B. A. St. Peter's College, 1963. German.
- STANLEY DAVID KRIMINS, of Philadelphia, Pa., B. A. St. John's College, Maryland, 1963. Writing Seminars.
Patroclus (A Story) and *Collected Poems*.
- KARL CADEM LEMP, of Baltimore, Md., B. A. Amherst College, 1953; LL. B. Harvard University, 1956. Classics.
- HARALD RICHARD LEUBA, of Phoenix, Ariz., B. S. New Mexico State University, 1958; M. S. The George Washington University, 1963. Psychology.
The Symmetry of Unilateral Constraint in Printed English.
- JOHN THURMAN LEWIS, of Eupora, Miss., B. A. Mississippi College, 1951; B. D. New Orleans Theological Seminary, 1954. Oriental Seminary.
- FREDRIC ALAN LITT, of New York, N. Y., B. Ch. E. Cooper Union, 1961. Chemistry.
- KUN-ICHI MATSUSHITA, of Tokyo, Japan, B. of Tech. Yokohama National University, 1962. Chemistry.
- COLIN CROMBIE MCANENY, of Princeton, N. J., B. S. E. Princeton University, 1952. Geology.
- MARY ROBSON MCBRIDE, of Akron, Ohio, A. B. Middlebury College, 1963. English.
- DENNIS PETER MCCORT, of Hoboken, N. J., B. A. St. Peter's College, 1963. German.
- JOHN MORTON McILVAIN, of Baltimore, Md., B. A. The Johns Hopkins University, 1963. Writing Seminars.
Virtuoso's Castles: A Collection of Poems.
- ERNEST LOUIS MEHLER, of Chicago, Ill., B. S. Illinois Institute of Technology, 1960. Chemistry.
- KENNETH JOHN MILLER, of Chicago, Ill., B. S. Illinois Institute of Technology, 1960. Chemistry.
- MIGUEL ANGEL MORALES, of Ciales, Puerto Rico, Diploma Evangelical Seminary of Puerto Rico, 1945. Writing Seminars.
El Amauta: Poems.
- SHARON NELSON, of Fort Smith, Ark., B. F. A. University of Colorado, 1960. Art as Applied to Medicine.
The Arterial Supply of the Uterus and Adnexa of the Rhesus Monkey (*Macaca mulatta*).
- JAMES EDWARD OLIVER, of Albany, Wis., B. S. University of Wisconsin, 1962. Chemistry.
- DOUGLAS HARMON OLSEN, of Arlington Heights, Ill., A. B. Wheaton College, 1960. Writing Seminars.
April (A Portion of a Novel) and *The Shelter* (A Play).
- LYNN HUDSON PARSONS, of Baltimore, Md., B. A. Grinnell College, 1958. History.
- RONALD EDWARD PUHEK, of Hibbing, Minn., B. A. College of St. Thomas, St. Paul, Minn., 1961. Political Science.
American Policy Toward Vietnam: 1945-1963; A Case Study in the Democratic Foreign Policy.
- LAWRENCE GENE RICE, of Los Angeles, Calif., B. A. Loyola University of Los Angeles, 1963. Classics.
- JAMES OTIS ROBBINS, of Beach Lake, Pa., B. S. Allegheny College, 1961. Chemistry.
- FREDERICK HOOKER RUSSELL, of Syracuse, N. Y., B. A. Swarthmore College, 1962. History.
- DAVID ROLAND SANDERSON, of Oreland, Pa., A. B. Gordon College, 1962. Writing Seminars.
Symposium on a Man: Stories.
- WILLIAM ELDON SCHOPF, of Sheridan, Wyo., A. B. Wheaton College, 1963. Writing Seminars.
Tales of the Dogs as Young Rabbit Chasers; and Poems.
- RICHARD LOCKWOOD SCHOTT, of Shawnee Mission, Kans., A. B. Stanford University, 1961. History.
Eugen Richter: A Study of His Early Career.
- DAVID MARTIN SILVER, of Chicago, Ill., B. S. in Ch. Illinois Institute of Technology, 1962. Chemistry.
- ZOMAYA SHLEIMON SOLOMON, of Baltimore, Md., B. A. Bob Jones University, 1957. Oriental Seminary.
- GEORGE ELWOOD SPINELLI, of Norristown, Pa., A. B. Gettysburg College, 1963. Writing Seminars.
Four Short Stories.
- JUDITH ROSE STARK, of Springfield, Mass., B. A. University of Chicago, 1962. Writing Seminars.
The Good Friday and Other Stories.
- ELIZABETH SWEET STUDLEY, of Longmeadow, Mass., B. A. Vassar College, 1962. History.
- RICHARD CARL TUEK, of Baltimore, Md., A. B. Columbia University, 1963. English.
- WILLIAM GEORGE VON HOLLE, of Cincinnati, Ohio, B. S. Xavier University, 1963. Chemistry.
- JOHN JOSEPH WAVRIK, of Baltimore, Md., B. A. The Johns Hopkins University, 1961. Mathematics.
- NICK HENRY WERSTIUK, of Vilna, Alta., Canada, B. Sc. University of Alberta, 1962. Chemistry.
- ELEANOR RAND WILNER, of Cleveland, Ohio, A. B. Goucher College, 1959. Writing Seminars.
First Poems.
- DONALD CLAUDE WILSON, of Wichita, Kans., B. S. in Foreign Service Georgetown University, 1962. Writing Seminars.
Sorrows in Splendor and Glory: A Novella.

JEAN ARENDES WITTICH, of Baltimore, Md., B. S. The Johns Hopkins University, 1956. Writing Seminars.

Now I Lay Me Down: A Play in Five Short Acts.

RICHARD JOSEPH WOLF, S. J., of Rockville Centre, N. Y., A. B. Boston College, 1960; M. A., 1961. Classics.

OLIVER CHRISTOS ZAFIRIOU, of Passaic, N. J., B. A. Oberlin College, 1962. Chemistry.

EUGENE WILLIAM ZELTMANN, of Chicago, Ill., B. A. Beloit College, 1962. Chemistry.

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DOCTORS OF PHILOSOPHY

with titles of dissertations

ROBERT WALTER ADAMS, of Rochester, N. Y., A. B. The University of Rochester, 1956. Geology.

Loyalhanna Limestone, Cross-bedding and Provenance.

JUDSON BOYCE ALLEN, of Nashville, Tenn., B. A. Baylor University, 1953; M. A. Vanderbilt University, 1954. English.

Mythology in the Bible Commentaries and *Moralitates* of Robert Holkot.

TAKESHI AMEMIYA, of Tokyo, Japan, B. A. International Christian University, Tokyo, Japan, 1958; M. A. The American University, 1961. Political Economy.

Specification Analysis in Econometrics.

JAMES GEORGE ANDERSON, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1957; M. S. E. 1959; M. A. T. 1960. Education.

An Empirical Study of Bureaucratic Rules in the Junior High School.

EARL WAYNE BAKER, of St. Ignatius, Mont., B. S. Montana State College, 1952; M. A. The Johns Hopkins University, 1962. Chemistry.

Transition Metal Porphyrin Complexes.

JAMES HARLEY BAROFF, of Cheverly, Md., B. A. The Johns Hopkins University, 1959. Physics.

Vector Meson Interactions with Photons and Leptons.

PAULIS BIRZNIKS, of Washington, D. C., Wittenberg College, 1955; M. A. The Johns Hopkins University, 1958. German.

The Two Worlds of Goethe's and Richter's Epistolary Novels.

ROBERT LEROY BOVEY, of Lincoln, Nebr., B. S. United States Naval Academy, 1959. Operations Research and Industrial Engineering.

The Sensitivity of Optimal Strategies in Finite Statistical Decision Problems to Variations in Parameters.

HUGH EDWARD BRADLEY, of Ann Arbor, Mich., B. S. and M. S. in E. E. Massachusetts Institute of Technology, 1957. Operations Research and Industrial Engineering.

A Queueing System with Non-Stationary Arrival and Service Distributions.

JOHN MICHAEL BREWER, of Garden City, Kans., B. A. The Johns Hopkins University, 1960. Biology.

Effects of Dark Preincubation with Ferricyanide on Spinach Chloroplasts.

CYNTHIA STOKES BROWN, of Madisonville, Ky., A. B. Duke University, 1960; M. A. T. The Johns Hopkins University, 1961. Education.

The American Discovery of the German University: Four Students at Göttingen, 1815-1822.

DALE EUGENE BURRENTOON, of Oneonta, N. Y., A. B. The George Washington University, 1952; B. D. The Lutheran Theological Seminary, 1955. Philosophy.

The Place of Natural Law in Protestant Ethics, An Examination of Emil Brunner's Ethical Theory.

MAURICE MOYER BURSEY, of Baltimore, Md., B. A. The Johns Hopkins University, 1959; M. A. 1960. Chemistry.

I. An Infrared Investigation of Some Irreversible Photochemical Reactions at Low Temperatures. II. Studies of the Chemiluminescence of Aromatic Hydrazides.

GEORGE LEW CHOULES, of Twin Falls, Idaho, B. S. Utah State Agricultural College, 1955; M. S. 1957. Biology.

Electrophoretic Behavior of Mouse Liver Sub-fractions Containing both Mitochondrial and Microsomal Particles.

ALBERT RICHARD CIRILLO, of Brooklyn, N. Y., B. A. Fordham University, 1955; M. A. 1959. English.

Spenser's Myth of Love: A Study of *The Faerie Queene*, Books III and IV.

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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