

STAFF RESUMES

May 1977

CENTER FOR ENERGY AND ENVIRONMENT RESEARCH

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Almodévar, Ismael  
Bhajan, William R.  
Block, Arthur  
Brown, Raymond A.  
Brown-Campos, Richard  
Chirtboga, Jorge  
Clements, Richard G.  
Cuevas-Rutz, José  
Cuevas-Viera, Elvira  
Godschalk, Wilhelm  
Goldman, Gary C.  
Gomez, Santiago  
González, Juan G.  
Holben, Brent  
Tarte, Modesto  
Eizary, Nima  
Jobin, William R.

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Ismael Almodévar  
Donald B. Sasscer  
Modesto Iriarte

Training Program  
Frederick E. Rushford

Human Ecology  
William R. Jobin  
Raymond A. Brown  
Cruz María Nazario

Marine Ecology  
Juan G. Gonzalez  
Gary C. Goldman  
José M. Lopez-Diaz  
Joseph J. Kimmel  
Vance P. Vicente  
Rosa Julia Santiago  
Hilda Rojas

Terrestrial Ecology  
Richard G. Clements  
Arthur Block  
William R. Bhajan  
Elvira Cuevas-Viera  
Brent Holben

Radiation Oncology Victor A. Marcial

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Head, Senior Scientist I .....7  
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Research Associate  
Research Associate  
Research Associate  
Research Associate  
Head and Chief, Environmental Research  
Scientist II  
Scientist 1  
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Scientific Associate II  
Head and Chief, Bio-Medical Research

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Nuclear Medicine: Aldo E, Lanaro  
Medical Physics: José C. Pacheco Diaz  
Health and Safety: Nimia Frizarry  
Santiago Gomez, Nuclear Technology  
Knud B. Pedarsen, Heriberto Plaza-Rosado  
Materials Science: Mortimer I. Kay, Rama S. Singh

Fossil Fuel: Jorge Chiriboga, Wilhelm Godschalk  
Decontamination Study: Richard Brown-Campos  
Tropical Agro-Sciences: Francis K.S. Koo, José Cuevas-Rufe  
Head, Senior Scientist 1  
Head, Research Associate II  
Acting Head, Senior Associate  
Senior Associate  
Senior Scientist I  
Scientist 1  
Head, Senior Scientist I  
Scientist 1  
Senior Scientist II  
Senior Scientist I  
Scientist 1  
Head, Senior Scientist 1  
Scientist I

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NAME: Ismael Almodévar

DEGREES:

Ph.D., Chemistry, Forrette Mellon University, Pittsburgh, Penn. (1950)

M.S., Chemistry, Sagente Institute of Technology, Pittsburgh, Penn. (1958)

B.Sc. (Magna Cum Laude), University of Puerto Rico, Mayaguez, P. R. (1952)

PROFESSIONAL POSITIONS HELD: January 1976 to Present

Director, Center for Energy and Environment Research of the University of Puerto Rico

AREAS OF INTEREST:

Coordinator of Scientific Affairs, Office of the President, University of Puerto Rico

Health Scientist Administrator, Division of Research Resources, NIH, on Sabbatical Leave from U.P.

Dean, College of Natural Sciences, University of Puerto Rico

Rico, Chairman, Department of Chemistry, University of Puerto Rico, Rio Piedras Campus

Director, Graduate Studies, University of Puerto Rico, Mayaguez Campus

Director, Neutron Diffraction Program, Puerto Rico Nuclear Center, Mayaguez, P.R.

Director, Nuclear Science and Technology Division, Puerto Rico Nuclear Center

Academic Appointments:

Instructor (1952)

Assistant Professor (1960)

Associate Professor (1962)

Professor of Chemistry (1967), University of Puerto Rico

Specializations: Higher Education Administration, Nuclear Chemistry, Analytical Chemistry, Management of Federal Health Science Programs

During the period of 1953-55, served as a Commissioned Officer in the Korean War.

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#### SOCIETY MEMBERSHIPS:

American Chemical Society, Washington, D.C.  
American Nuclear Society, Washington, D.C.  
New York Academy of Sciences, New York, N.Y.  
American Association for the Advancement of Science, Washington, D.C.  
American Institute of Chemists, New York, N.Y.  
Chemists Association, Puerto Rico  
Academy of Arts and Sciences, Puerto Rico  
Science Teachers Association, Puerto Rico  
Society of the Sigma Xi  
Phi Kappa Phi Honorary Society

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#### RESUME:

William Rudolph Bhajan, Age: 40

#### Degrees:

B.A., Inter-American University, San German, Puerto Rico, 1962, Biology  
M. Sc., Michigan State University, E. Lansing, Michigan, 1966, Ecology  
Ph.D., University of Waterloo, Ontario, Canada, 1970, Ecology

#### Professional Positions Held:

1975 - Limnologist, CEER  
1973 - 1975 Ecology Consultant, Environmental Research & Applications, Carbotech Labs  
1973 - 1975 Ecology Professor, World University, Hato Rey, Puerto Rico  
1973 - 1975 External Examiner, University of Guyana, Georgetown, Guyana  
1971 - 1975 Assistant Professor, Inter-American University, Hato Rey, Puerto Rico  
1970 - 1971 Water Pollution Ecologist, Secretary, Dept. of Health, San Juan, Puerto Rico  
1966 - 1970 Teaching and Research in Fresh Water Ecology, University of Waterloo, Ontario, Canada  
1964 - 1966 (Position not specified)  
Summer 1964 (Position not specified)

Canada - Teaching and Research in Ecology, Michigan State University, E. Lansing, Michigan.  
Research in Terrestrial Ecology, Dr. H. T. Odum, Puerto Rico Nuclear Center.

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#### PROFESSIONAL MEMBERSHIP:

- Instructor (Hato Rey & Barranquitas Ext. Centers) Inter-American University, San Germán, Puerto Rico, 1962 - 1964
- Laboratory Assistant, Inter-American University, San German, Puerto Rico, 1961 - 1962
- Elementary School Teacher, Department of Education, Georgetown, Guyana, 1952 - 1959

#### AFFILIATIONS:

- Beta Beta Beta Biological Honor Society
- Puerto Rico Water Pollution Control Association
- International Water Resources Association

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#### RESUME

NAME: Arthur McB. Block

AGE: 39

#### DEGREES:

- Bachelor in Arts, Chemistry and Physics, Cornell University, Ithaca, NY - 1961
- Ph.D., Physical Chemistry - Rutgers University, New Brunswick, NJ - 1967

#### PROFESSIONAL POSITIONS HELD:

- Scientist I CER, 1975 - Present
- Scientist 1 PRNC, 1973 - 1975
- Assistant Prof., U.P.R., Rio Piedras, Chemistry, 1968 - 1972
- Lecturer, U.P.R., Rio Piedras, Chemistry, 1967 - 1968
- Instructor, Rutgers University, 1961 - 1967
- Chemist, Johnson & Johnson Corp, 1964 - 1965
- Chemist, Merck & Co. Inc, 1963 - 1964

#### EXPERIENCE:

- Proposal Reviewer, U.S. Environmental Protection Agency, 1976
- Referee, Journal of Physical Chemistry, 1975

#### PROFESSIONAL MEMBERSHIP:

- Puerto Rico Society of Microbiologists
- American Men & Women of Science
- American Chemical Society/ Puerto Rico Section: Elections Committee Chairman 1975, Secretary 1976, Chairman-elect 1977
- Sigma Xi, San Juan Club
- International Society of Quantum Biologists
- Association of Southeastern Biologists
- Colgate-Palmolive Research Fellow (1964-1965)

PUBLICATIONS: (List not provided)

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#### RESUME

NAME: Raymond A. Brown

AGE: 57

DEGREES:

- Ph.D., Physical Chemistry - California Institute of Technology (1949)
- M.S., Physical Chemistry - California Institute of Technology

PROFESSIONAL POSITIONS HELD: (Exact years and positions not provided)

AREAS OF INTEREST: (List not provided)

SOCIETY MEMBERSHIPS: (List not provided)

PUBLICATIONS: (List not provided)

Institute of Technology, B.S., Chemistry (1947)

Wagner Lutheran College, Staten Island, N.Y. (1941)

Senior Scientist I, PRNC and CEER

Biologist, Radioimmunity group, Biology Division. ORNL Oak Ridge

Associate Member, Wistar Institute Philadelphia, Pa.

Visiting Scientist, Venezuelan Institute of Science, Caracas, Venezuela

Research Scientist, Virus Laboratory Lederle Lab, Pearl River, N.Y.

N.L.H. Post-doctoral fellow Immunology, Physical Biochemistry

Fellow, N.Y. Academy of Science, Sigma Xi, Puerto Rico Society of Microbiologists

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PROFESSIONAL EXPERIENCE AND DEGREES:

Jan.77 to Present:

July 75-Jan, 77

1968-1975

1959-1968

1960-1965

1958-1959

1987-1958

1955-1957

Richard Brown Campos, 46

Nuclear Technology, Univ. of P.R. (1962)

Mechanical Engineering, Univ. of P.R. (1983)

Head, Decontamination Project

Associate Prof. Mechanical Eng'g.

Acting Associate Director, CEER

Head, Reactor Division

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## RESUME:

Name: Jorge Chiriboga Ace

Degrees:

M.D., University of San Marcos, School of Medicine Lima, Peru (1948)

B.M., University of San Marcos, School of Medicine Lima, Peru (1945)

B.S., University of San Marcos, School of Sciences Lima, Peru (1941)

Professional Positions Held:

1966 - Present: Senior Scientist I, Puerto Rico Nuclear Center (now CEER)

1977 - Present: Assistant Secretary of Health for Environmental Health Programs, Department of Health

Commonwealth of Puerto Rico, 1976 - Present, Consultant to Catholic University of Puerto Rico on establishment of a new School of Medicine. 1965 - Present, Consultant to the Peruvian Atomic Energy Commission. 1966 - 1971, Assistant Director for Scientific Programs, PRNC and Head, Biomedical Division, PRNC. 1953-1966, Associate Professor, University of Tennessee AEC Agricultural Research Laboratory, Oak Ridge. 1957 - 1989, Head, Department of Biochemistry, School of Medicine Arequipa, Peru. 1957 - 1959, Organizer and Dean, School of Medicine Arequipa, Peru. 1956 - 1957, Organizer, Head of Graduate Program School of Agriculture, La Molina, Lima, Peru. 1954-1957, Head, Department of Biochemistry, School of Agriculture, La Molina, Lima, Peru.

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1952 - 1953, Fellowship of Biochemical Institute (Professor Luis F. Leloir), Buenos Aires, Argentina. 1949 - 1951, Fellowship, Cultural Commission of Argentina. 1945 - 1948, Research Associate, Public Health Ministry, Lima, Peru. 1942 - 1945, Instructor in Pathology, School of Medicine University of San Marcos, Lima, Peru.

AREAS OF INTEREST: Biochemistry, Environmental Health.

SOCIETY MEMBERSHIPS, HONORS:

- Member of the "Sociedad Argentina de Patología y Enfermedades Infecciosas" - 1950.
- Member of the "Sociedad Argentina de Dermo-sifilología" - 1951.
- Member of the "Sociedad Peruana de Anatomía Patológica" - 1957.
- Member of the "Directorio de la Sociedad Química" - Peru 1954-58.
- Member of the American Chemical Society, U.S.A., 1953.
- Member of the "Sociedad Latinoamericana de Nutrición" - 1967.
- Member of the Division of Biological Chemistry of the American Chemical Society, 1961, U.S.A.
- Member of the Tissue Culture Association, 1966.
- Member of the New York Academy of Sciences. 1967.
- Member of the American Society of Tropical Medicine & Hygiene, July, 1963.
- Member of the Advisory Committee of COLAB (Comité Latinoamericano de Biología, 1968).
- Member Commission of 4 persons appointed by OAS to establish new policy on Nuclear Energy development in Latin America.

1972. Honorary Citizen of Tennessee State - 1963, Honorary Member of the "Asociación



Venezolana para el Avance de la Ciencia", 1966. Executive Committee Member of the American Chemical Society, Puerto Rico Section, 1968.

## PUBLICATIONS :

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## RESUME

NAME: Richard G. Clements

AGE: 46

DEGREES:

B.S. 1956, Purdue University, Soils

Ph.D. 1966, University of Georgia, Soils, Bio-chemistry Botany

## PROFESSIONAL POSITIONS HELD:

1976 to Present - Chief, Environmental Sciences Division, Center for Energy and Environment Research

1969 to Present - Head, Terrestrial Ecology Program, Center for Energy and Environment Research

1968 - 1969 - Research Associate, Institute of Ecology, University of Georgia. P.I. in IBP studies at Coweeta, N.C.

1966 - 1968 - Research Associate, Institute of Ecology, University of Georgia. Field Director of Terrestrial Studies in Panama and Colombia in conjunction with Interoceanic Canal Studies.

1963 - 1966 - Research Assistant, Dept. of Agronomy, University of Georgia. Graduate studies.

1961 - 1963 - Agronomist, Standard Fruit & Steamship Company, La Ceiba, Honduras.

1988 - 1961 - Head, Quality Control Department, Standard Fruit & Steamship Company, La Ceiba, Honduras

1956 - 1958 - Soil Scientist, Dept. of Tropical Research, Standard Fruit Company, La Ceiba, Honduras

## PROFESSIONAL SOCIETIES:

American Society of Agronomy

Sigma Xi

(Cont.)

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## PUBLICATIONS:

Association of Southeastern Biologists

Association of Tropical Biology

Ecological Society of America

American Institute of Biological Sciences

American Chemical Society

Soil-Plant-Water Relationships, Mineral Cycling

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## RESUME

NAME: José Cuevas Ruiz

AGE: 45

DEGREE:

B.S., Radiation Biology (Biology) UPR, Mayaguez (1966)

J.S. Agriculture UPR, Mayaguez (1961)

PROFESSIONAL POSITIONS HELD:

Scientist, Tropical Agro-Science Division, Center for Energy & Environment Research, Mayaguez, Puerto Rico

AREAS OF INTEREST:

SOCIETY MEMBERSHIPS:

PUBLICATIONS:

Assistant, Department of Biochemistry, University of Leyden, The Netherlands, 1961-1963

Fixed Text:

Senior Associate, ABS Puerto Rico Nuclear Center, Mayaguez, Puerto Rico

Research Associate, ABS Puerto Rico Nuclear Center, Mayaguez, Puerto Rico

Research Assistant, ABS Puerto Rico Nuclear Center, Mayaguez, Puerto Rico

Assistant Professor of Horticulture, Lecturer & Visiting Scientist, TCAITE, Guatemala Program, Quito, Ecuador

Institute of Radiation Biology, Food Science, Colegio de Agrónomos de Puerto Rico, Sociedad Puertorriqueña de Ciencias Agrícolas, Caribbean Food Crops Society, Gamma Sigma Delta

Institute of Food Technologists, Beta Beta Beta

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Name: Elvira Cuevas Viera

Age: 26

Degrees: Bachelor in Science, U.P.R, December, 1971, Biology, Master in Science, May, 1978, Biology, UPAR

Professional Positions Held: Scientific Associate III - CEER, 1976, 1975, 1972, Summer, 1972

Professional Membership: Beta Beta Beta Biological Honorary Society, American Institute of Biological Sciences

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Name: Wilhelm Goetschalckx

Age: 45

Degree: Ph.D. Biochemistry, University of Leyden, The Netherlands

Professional Positions Held: Research Scientist, P.R. Dept, of Health, Div, Environmental Health, 1977-present, Senior Scientist 1, Center for Energy & Environment Research, operated by U.P.R., (part-time), 1972-1975, Member, Committee on Graduate Studies, U.P.R, Medical Sciences Campus, 1972-1975, Associate Professor, Dept. of Biochemistry & Nutrition, U.P.R. School of Medicine, 1968-1972, Assistant Professor, Dept. of Biochemistry, University of Virginia School of Medicine, 1965-1968, Instructor, Dept. of Biochemistry, University of Virginia School of Medicine, 1965-1968, Research Associate, Dept. of Physics, University of Virginia, 1964, Research Associate, Dept. of Biochemistry, University of Leyden, The Netherlands, 1963-1964, Chief Research Assistant, Dept. of Biochemistry, University of Leyden, The Netherlands, 1961-1963.

Teaching Assistant, Dept. of Biochemistry, University of Leyden, The Netherlands, 1958-1959. Research and Teaching Assistant, Dept. of Inorganic and Physical Chemistry, University of Leyden, The Netherlands, 1956-1964. Control Officer, Dutch Public Health Service, Division of Special Regulations Oils and Fats. Areas of interest: Chemical carcinogenesis, viruses, protein chemistry, mathematical modeling, data evaluation by computer, analysis of air and water pollutants. Societies, honors: Mineralogical Society, American Chemical Society, Sigma Xi. Lecturer ad honorem, U.P. School of Dentistry, 1972-1974. Publications: 18.

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## RESUME

Name: Gary C. Goldman

Age: 35

Degrees:

Ph.D., Physical Oceanography, University of Michigan, Ann Arbor (1973)

M.S., Oceanography, University of Michigan, Ann Arbor (1970)

B.S., Mathematics, Physics, Bowling Green State University (1962)

Professional Positions Held:

Project Head/Research Oceanographer, Marine Ecology Division, CEER, Mayaguez, P.R., December 1975 - Present.

Acting Head, Marine Ecology Division, CI, Mayaguez, P.R., May 1976 - August 1976.

Acting Project Director/Research Oceanographer, Department of Natural Resources, University of Michigan, October 1976 - December 1974.

Assistant Research Oceanographer, Earth Technology Resources Division, Environmental Research Institute of Michigan, Ann Arbor, Michigan, January 1976 - June 1975.

Research Oceanographer/Teaching Fellow, Dept. of Atmospheric and Oceanographic Science, University of Michigan, January 1970 - December 1973.

Experimental Physicist, Research Division, N.A.S.A. Lewis Research Center, Cleveland, 1963 - 1969.

Areas of Interest: Coastal Circulation, Air-Sea Interaction.

Society Memberships, Honors: National Physics Honorary, National Mathematics Honorary, Marine Technology Society, Institute of Environmental Science, American Association for the Advancement of Science, American Geophysical Union.

Publications: 15 - 20.

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Name:

Age:

Degrees:

Professional Positions Held:

Areas of Interest:

RESUME: Santiago F. Gomez

M.S., Physics, Catholic University of America, Washington, D.C. (1962)

M.S., Radiological Health, University of Puerto Rico (1973)

B.S., Science, Instituto De La Salle, Bogota, Colombia (1958)

Professional Positions Held:

- Senior Associate, Health and Safety Division, CEER (formerly PRNC)
- Radiological Safety Officer, Veterans Administration Hospital, San Juan (assigned by CEER)
- Professor of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia
- Deputy Director, Air Quality Control Program, UIS & Western Kentucky University, Bucaramanga, Colombia
- Lecturer, School of Medicine, Universidad Industrial de Santander (UIS)
- Research Associate, PRNC, Mayaguez, Puerto Rico
- Coordinator of Physics Program, Universidad Industrial de Santander
- Associate Professor of Physics, Universidad Industrial de Santander

Areas of Interest: Physics, Radiological Health, Health and Safety

Society Memberships and Honors:

- Puerto Rico Chapter, Health Physics Society
- American Association of Physicists in Medicine
- Radiological Science Associates, Puerto Rico
- Nuclear Medicine Society of Puerto Rico

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RESUME: Juan G. Gonzalez

Ph.D., Biological Oceanography, University of Rhode Island, Kingston (1973)

M.S., Biological Oceanography, Texas A&M University, College Station (1957)

B.S., Zoology, University of Puerto Rico, Mayaguez (1958)

Professional Positions Held:

- Scientist Head, Marine Ecology Division, CEER
- Aquatic Biologist, Environmental Research Laboratory, Narragansett, R.I.
- Professor, Marine Sciences, University of Puerto Rico
- Science Teacher, Department of Education, Commonwealth of Puerto Rico

Areas of Interest: Plankton, Physiology and Taxonomy, Primary Productivity, Polluting effects in the marine environment

Society Memberships and Honors:

- American Men and Women of Science
- Leaders in American Science

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RESUME: Brent Holben

Age: 26

B.S., University of Idaho

1972, Scott M. S., Colorado State University, Colorado, 1975. Major: Bioclimatology. Professional Positions Held: 1975 - Present, Scientific Associate III - CEER. Professional Societies: American Meteorological Society, Sigma Xi, Colorado.

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Publications: [List of publications not included in the text]

Resume:

Name: Modesto Irtarte, Jr.

Age: 53

Degrees:

- Ph.D., Nuclear Engineering, University of Michigan (1958)
- M.S., Electrical Engineering, Texas A&M, (1949)
- B.S., Civil Engineering, University of Puerto Rico (1951)
- B.S., Electrical Engineering, University of Puerto Rico (1945)

Professional Positions Held:

- 1976 - Present: Consultant to Center for Energy and Environment Research
- 1965 - 1975: Acting Executive Director, Puerto Rico Water Resources Authority (PRWRA, various occasions)
- 1965 - 1975: Assistant Executive Director, PRWRA, Electrical Planning Research and Construction Director, 4 Divisions: Electrical Planning and Research, Nuclear and Environmental, Power Design Construction, Engineering and Construction.
- 1960 - 1965: Senior Electrical and Nuclear Power Engineer, PRWRA
- 1959 - 1960: Staff Engineer, General Nuclear Corp., for Design of PRWRA BONUS Nuclear Plant
- 1958 - 1959: Electrical Planning Engineer, PRWRA
- 1954 - 1955: Load Dispatcher Superintendent, PRWRA
- 1951 - 1954: Electrical Design Engineer, PRWRA
- 1949 - 1951: Assistant Professor, Electrical Engineering, University of Puerto Rico, Mayaguez

- 1945 - 1949: Instructor, Electrical Engineering, University of Puerto Rico, Mayaguez

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Areas of Interest: Electrical Engineering, Nuclear Engineering, Electrical Power Transmission

Society Memberships and Honors:

- Member, American Institute of Electronic Engineers
- Member, American Nuclear Society
- Member, Sociedad Interamericana de Planificacion
- Member, Colegio de Ingenieros, Arquitectos y Agrimensores de Puerto Rico
- Member, Puerto Rico Association of Electrical Engineers
- Appointed by U.S. Secretary of the Interior to a U.S. State Department Electric Power Team to review and exchange information with the electric power industry of West [Country name not included in the text]

Publications: [List of publications not included in the text]

Germany, November 1967. Deputy Director, Defense Electric Power Administration, Power Area E, 1970 to 1978 - appointed by U.S. Secretary of the Interior. Institute of Electrical and B

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NAME: Nimia E. Resin Irizarry

AGE: 32

DEGREES: M.S. Radiological Health, University of Puerto Rico School of Public Health at the Medical Sciences Campus (1973), University of Puerto Rico, Mayaguez Campus (1966)

PROFESSIONAL POSITIONS HELD: Senior Associate Health & Safety Division, CEER Mayaguez, PR, Scientific Associate I Health & Safety Division, CEER Mayaguez, PR, Research Assistant III Marine Biology Mayaguez, PR

AREAS OF INTEREST: Health Physics, Industrial Safety

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NAME: William R. Jobin

DEGREES: S.B., Civil Eng. MIT, (1959), S.M., Sanitary Eng. MIT, (1961), Sc.D., Harvard Tropical Public Health (1966)

PROFESSIONAL POSITIONS HELD: Head of Human Ecology - CEER, Consulting Engineer, International Schistosomiasis and Water Pollution, Sanitary Engineer - State of Mass: Water Pollution.

OTHER EXPERIENCE: Member World Health Organization Expert Committee on Schistosomiasis. Consultant to World Bank, Clark Foundation, U.S.A.I.D., PAHO, U.N.E.P., W.H.O., USPHS, Nobel Foundation, NIH, and private firms on Schistosomiasis in Mauritania, Mali, Senegal, Ghana, Swaziland, Rhodesia, Brazil, Venezuela, and Caribbean Islands.

AREAS OF INTEREST: Environmental Health, Schistosomiasis

SOCIETY MEMBERSHIPS: American Society of Tropical Medicine and Hygiene

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CURRICULUM VITAE: Mortimer I. Kay

PROFESSIONAL POSITIONS HELD: Sept. 1975 - Present

AREAS OF INTEREST: Unknown

SOCIETY MEMBERSHIPS, HONORS: Unknown

PUBLICATIONS: 18

Mortimer K.

1. Ph.D. (Phys. Chem.) University of Connecticut - 1957
2. M.S. (Phys. Chem.) Purdue University - 1953
3. B.A. (Chemistry) Brooklyn College, New York - 1952

Professional Positions Held:

- Head, Materials Science Division
- Head, Neutron Diffraction Program (REC, 64-72; NSF, 73-77)
- Research Associate Professor of Chemistry, Engineering Experiment Station, Georgia Institute of Technology.
- Solid State Physicist, NASA
- Post-Doctoral Fellow, Royal Norwegian Council for Scientific and Industrial Research, Institute for Atom Energy, Kjeller, Norway
- Research Associate and Visiting Associate Physicist, Penn State University and Brookhaven National Lab.
- Research Assistant in Crystallography, University of Connecticut
- Graduate Assistant, University of Connecticut.
- Graduate Assistant, Purdue University.

Areas of Interest:

- Crystal & Molecular Structure
- Thermal Motion
- Correlation with Electrical Properties of Materials

Memberships:

- American Chemical Soc.
- American Physical Soc.
- American Crystallographic Assn.
- American Assn. Adv. Sci.
- Society of Sigma Xi

Publications:

- NGIE Post Doctoral Fellowship-Kjeller, Norway
- Fulbright Travel Grant.

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Joseph J. Kimnet

1. A-B. General Science, East Carolina University - 1968
2. M.S. Biological Oceanography, Old Dominion University - 1973

Professional Positions Held:

- Research Associate, Marine Ecology Division - C.E.R, Mayaguez, P.R.
- Research Associate, Radioecology Division - P.R.N.C. Mayaguez, P.R.
- Teaching Assistant, Old Dominion University
- Sanitarian, VA. State Health Department

Other Experience:

- Fish Taxonomy
- Diver - NAUI Certificate

Areas of Interest:

- Marine biology and geology
- Saturated diving in La Chalupa

Ecologically oriented fish research involving fish work. Research response of organisms to stress. Member of the American Society of Ichthyologists & Herpetologists, American Fisheries Society, American Museum of Natural History, and International Oceanographic Society.

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Name: Francis K. S. Koo, Ph.D., University of Minnesota (Plant Genetics), 1950

Degree: Professional Positions Held 1968, 1961, 1972, 1974, 1967, 1965, 1961, 1953, 1981

Areas of Interest: Society Membership: Present

Honors: 1968, 1961, 1953

Publications: Resume

Positions held include Senior Scientist and Head of the Tropical Agro-Sciences Division at the Puerto Rico Nuclear Center (now CEER), Professor of Biology (Ad Honorem) and Professor of Agronomy at the University of Puerto Rico, UNDP-IAEA Expert in Genetics at the Center of Nuclear Energy in Agriculture in Brazil (for 3 months), Chief Scientist at the Agricultural Bio-Sciences Division of the Puerto Rico Nuclear Center, National Visiting Professor at National Taiwan University, Taiwan, Associate Scientist II at the Agricultural Bio-Sciences Division of the Puerto Rico Nuclear Center, and Project Leader for Oat and Rye Improvement at the University of Minnesota (Breeder of two oat varieties "Minland" and "Minhafer", released in Minnesota).

Memberships include the Genetic Society of America, Radiation Research Society, Sigma Xi Society, AAAS, and Gamma Sigma Delta.

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Name: Aldo E. Lanaro, M.D.



Age: 37

Degrees: Nuclear Medicine Board, V.M.B., 1972; Puerto Rico Board of Medical Examiner; M.D., Univ. of Buenos Aires, Argentina, 1990

Professional Positions Held: 1971-present; 1963-1970

Other Experience: 1974-present; 1973-present; 1957-1963; 1954-1960

Other Activities: 1976-present; 1963-present; 1954-1963

Positions held include Senior Scientist II and Director of the Nuclear Medicine Division at CEER, Associate Professor in Nuclear Medicine at UPR School of Medicine, Associate Scientist II at the Clinical Applications Division of PRNC, and Consultant in Nuclear Medicine at the Veterans Administration Center.

He is also a courtesy member of the Nuclear Medicine Hospital del Maestro Hospital Presby.

Director of the Radioisotopes Department of the Endocrinology and Metabolism at the Italiano Hospital Metropolitano, Buenos Aires, Argentina. Also in charge of the Radioisotopes Department of the Research Medical Center at the Tornd Hospital, Buenos Aires, Argentina. Member of the Advisory Committee of the "Revista de Biología y Medicina Nuclear" Journal published by the ALASBLM (Latin American Association of Societies of Biology and Nuclear Medicine). Member of the Organizing Committee of the Argentinian Society of Nuclear Medicine, 1963. Adjunct professor in Biological Physics at the School of Medicine of the University of Buenos Aires, Argentina.

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Aldo E. Lanaro, MD, Areas of Interest: Society Membership: Publications: Nuclear Medicine and Endocrinology. Member of the Argentine Medical Association, Argentinian Society of Endocrinology and Metabolism, Puerto Rico Chapter of the Health Physics Society, Puerto Rican Society of Nuclear Medicine, American Association for the Advancement of Science, Health Physics Society, Peruvian Society of Biology and Nuclear Medicine (Honorary Member), Society of Nuclear Medicine, American Heart Association, Puerto Rico Medical Association (1974), American Medical Association (1974), American College of Nuclear Physicians (1975).

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Resume: José Manuel López, Age: 27, Degrees: Ph.D. Environmental Sciences (Chemistry) from The University of Texas at Dallas (1976), M.S. Water Chemistry from University of Wisconsin (1973), B.S. Chemistry from University of Puerto Rico (1970). Professional Positions Held: Marine Ecology Division, C=ER Mayaguez, P.R., Lecturer in Environmental Sciences at The University of Texas at Dallas, Associate Research Scientist/Engineer at The University of Texas at Dallas, Research Assistant at Texas A&M University, Instructor of Chemistry at Miguel Such Vocational School, Puerto Rico. Other Experience: Industrial consulting assessing significance of thermal and

Chemical pollutants are discharged into various U.S. Great Lakes, rivers, and estuaries. The sources, significance, and fate of these chemical contaminants in the environment are significant. Involved organizations include the American Society of Limnology and Oceanography, the

American Chemical Society, and the American Association for the Advancement of Science.

Professor Ad Honorem, Department of Biology, UPR.

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## 2. RESUME

NAME: Victor A. Marcial, M.D.

AGE: 13

### DEGREES:

M.D., Harvard University (1949)

B.S., University of Puerto Rico (1944)

### PROFESSIONAL POSITIONS HELD:

1958 to present: Head, Radiation Oncology Division

1967 to present: Associate Director for Medical Programs

1974 to present: Acting Director, Department of Radiological Sciences, UPR School of Medicine

1958 to present: Professor and Chief of Division of Radiation Oncology, UPR School of Medicine

1958-70: Attending and Chief of Radiation Therapy Department, I. González Martínez Oncological Hospital

1955-65: Director, Cancer Control Program, Puerto Rico Department of Health

### MEMBERSHIPS, HONORS:

Fellowship, National Cancer Institute

Fellowship, American Cancer Society

Alpha Omega Alpha, Honorary Medical Society

Counselor for Puerto Rico, Radiological Society of North America

Councillor for Puerto Rico, Interamerican College of Radiology

Member, Committee for Radiation Oncology Studies, MLC

Member, Clinical Cancer Training Committee, NC

Member, Cancer Commission, American College of Radiology

Member, Cancer Management Committee of the American College of Radiology

Chairman, Interagency Committee, Department of Health

Secretary for the American Branch of the International Club of Radiotherapists

President, Two Interamerican Congress of Radiology

President, Radiological Society of Puerto Rico

President, American Radium Society

Most Outstanding Young Physician in Puerto Rico for the Year 1962, Junior Chamber of

Commerce, San Pedro, Puerto Rico  
Member, Board of Governors, American Federation of Clinical Oncologic Societies.

Member, Clinical Cancer Education Committee, National Cancer Institute (Cont.)

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23 (Cont)

President, Puerto Rico Division of the American Cancer Society

Chairman, Radiotherapy Commission, Interamerican College of Radiology

Member, Scientific Committee of the XII International Cancer Congress

Chairman, Department of Radiological Sciences, University of Puerto Rico School of Medicine

Associate Director for Clinical Programs, Puerto Rico Comprehensive Cancer Center

AREAS OF INTEREST: Radiation Oncology.

PUBLICATIONS: 44

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NAME: Cruz María Nazario

AGE: 33

DEGREES:

- B.S., University of Puerto Rico Rio Piedras, Puerto Rico
- M.S., University of Puerto Rico Medical Sciences Campus, Rio Piedras, Puerto Rico

PROFESSIONAL POSITIONS HELD:

- 1976-Present: Research Associate MI, CEER, Computer Programming, Statistics
- Mathematics Instructor, C.U.T., Caguas, Puerto Rico
- Technical Assistant, PRNC Health & Safety Instructor, Department of Education, Barranquitas
- System Programmer I, Department of Education

AREAS OF INTEREST: Statistical Epidemiology, Computer Programming, Health-Physics

SOCIETY MEMBERSHIPS:

- Health-Physics Society, P.R. Chapter
- American Public Health Association
- Speleological Society of Puerto Rico

## PUBLICATIONS: 1

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## RESUME

NAME: José C. Pacheco Diaz

AGE: 35

### DEGREES:

- M.S., Radiological Health, University of Puerto Rico, Medical Sciences Campus (1970)
- B.S., Mathematics, University of Puerto Rico, Mayaguez Campus (1965)

### PROFESSIONAL POSITIONS HELD:

- 1976-Present: Head, Medical Physics Section, Center for Energy and Environment Research
- 1974-Present: Instructor, Department of Radiological Sciences, University of Puerto Rico, School of Medicine
- 1967-Present: Instructor, Radiological Physics, Presbyterian Hospital, San Juan, Puerto Rico
- 1972-1976: Research Associate II, Medical Physics, Puerto Rico Nuclear Center (now CER)
- 1971-1975: Ad-Honorem Instructor, School of Public Health, University of Puerto Rico
- 1970-1972: Research Associate I

Radiotherapy and Cancer Division, Puerto Rico Nuclear Center, 1965 - 1969. Radiation Protection Specialist I, Department of Health, Commonwealth of Puerto Rico. Areas of interest: Radiological Science related to electron treatment of malignant disease. Society memberships and honors: Member of Puerto Rico Chapter Health Physics Society, Puerto Rico Nuclear Medicine Society and American Association of Physicists in Medicine.

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### Degrees and Professional Positions:

- Ph.D. Nuclear Engineering, Iowa State University, 1967.
- B.S. Nuclear Engineering, Iowa State University, 1964.
- B.S. Mechanical Engineering, Iowa State College, 1956.

### Positions Held:

- Associate Professor, RUM, August 1976 to Present.
- Assistant Professor, Nuclear Engineering, University of Puerto Rico, AUM, July 1970 to July 1976.
- Assistant Professor, Iowa State University, July 1967 to 1970.
- Instructor, Nuclear Engineering, Iowa State University, Ames, Iowa, June 1967 to July 1967.
- Scientist, Senior Scientist, Puerto Rico Nuclear Center, Mayaguez, P, August 1964 to June 1967.

- Junior Engineer, Ames Laboratory, Ames, Iowa, July 1967 to Present.
- Development Engineer, Outboard Marine Corp., Waukegan, IL, August 1960 to July 1964.
- U.S. Army, Corporal, July 1958 to July 1960.

Other Experience:

- Research Participant, Oak Ridge National Laboratory, Oak Ridge, Tennessee, Dec. 1952 to Dec. 1954.
- Fellow, NASA/ASEE Systems Design Summer Faculty Program, Johnson Space Center, Houston, Texas, 1973 - 1976.
- Vice President, Parents-Teachers Organization, Campus School, TAU, San German, PR, 1968-1969.
- Chairman, School Board, Campus School, 1AU, 1969-1970.
- Member, President's Council of Inter American University, San German, PR, 1970-1971.
- Member, Board of Directors, YMCA, Mayaguez, PR, 1973-Present.
- Member, League of Women Voters, Puerto Rico, 1978.

Areas of Interest: Thermo Sciences, Nuclear Power Plants, Environmental impacts.

Publications:

- To be listed.

Memberships:

- Phi Eta Sigma, Pi Tau Sigma, Tau, Honorary Fraternities.
- American Nuclear Society, Member.
- Co-founder of Latin American Society.

Resume of Knud Borge Pedersen.

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Section: American Society for Engineering Education, Phi Kappa Phi Honor Society, Wilderness Society, Society for the Prevention of Cruelty to Animals

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Resume:

Name: Herizerto Plaza-Rosado

Age: 33

Degrees:

- Ph.D., Nuclear Engineering, Texas A&M University (1966)
- M.S., Nuclear Technology, University of Puerto Rico, RUM (1963)

- B.S., Electrical Engineering, University of Puerto Rico, RUM (1961)

Professional Positions Held:

- Professor, RUM, and Scientist, Nuclear Engineering Division, CEER, Mayaguez, Puerto Rico
- Post Doctoral Fellow, Energy Conservation Program, Auburn University (August 27, 1976 - May 6, 1977)

Other Experience:

- Net Energy Analysis and Economics of Energy Systems, Energy Conservation

Areas of Interest:

- Society Memberships, Honors

Publications: 27

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Professional Positions Held:

- October 1975 - Present
- July 1976 - 1975
- August 1971 - June 1976
- May-August 1971
- June 1969 - June 1970

Other Experience:

Areas of Interest:

Society Memberships:

Publications: 28

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Resume:

Name: Hilda M. Rojas

Age: 27

Degrees:

- Master of Science, Biological Oceanography, Department of Marine Science, University of Puerto Rico (1976)

- Bachelor of Science, Zoology, University of Maryland (1971)

Professional Positions Held:

- Research Associate, Marine Ecology Division, CEER, Mayaguez, Puerto Rico
- Research Associate, Radioecology Division, PRNC, Mayaguez, Puerto Rico
- Head, Chemistry Section, Student Originated Studies Program, National Science Foundation, Washington, D.C.

Other Experience:

- Laboratory Assistant, Biochemistry Department, University of Maryland
- Diver - NAUI Certificate

Areas of Interest:

- Benthic Taxonomy
- Marine Algal Taxonomy
- Research in Plankton and Marine Algal Biology

Society Memberships:

- TOF, Smithsonian, NAUZ

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Professional Positions Held:

- October 1976 - Present
- August 1970 - Present
- January 1970 - Present
- June 1972 - June 1974
- June 1962 - July 1970
- August 1960 - May 1962
- October 1960 - November 1960
- July 1959 - July 1960
- April 1959 - June 1959
- January 1952 - May

1953, AREAS OF INTEREST, SOCIETY MEMBERSHIPS, PUBLICATIONS, RESUME

29: Frederick Edward Rushford, 48

M.S., Biology (required course credits completed), University of Puerto Rico, Rio Piedras Campus

B.S., General Science, Trinity College, Hartford, Connecticut (1959)

Positions Held:

- Head, Training Program Center for Energy and Environment Research (CEER)
- Educational Officer, CER, formerly Puerto Rico Nuclear Center (PRNC)
- Head, Training and Information Division, CER, formerly PRNC
- Coordinator for Nuclear Programs, President's, University of Puerto Rico, Joint Appointment
- Technical Assistant to the Director, Puerto Rico Nuclear Center
- Teacher, Science and Mathematics, Antilles High School, U.S. Naval Station, San Juan
- Assistant Scientist, Oak Ridge Institute of Nuclear Studies, assigned to USAEC
- Exhibit, Buenos Aires, Arg.
- Traveling Science Teacher, Oak Ridge Institute of Nuclear Studies
- Medical Laboratory Technician, Military Service, Rodriguez Army Hospital, San Juan, Puerto Rico

Areas of Interest:

- Educational Administration
- Science Education
- Technical Information

Memberships:

- Puerto Rico Teachers Association
- National Education Association
- Puerto Rico Science Teachers Association
- Puerto Rico Chapter, Health Physics Society
- American Nuclear Society, 1965 - 1976

From 1963-1976, served as Editor for PRNC, now CEER, Annual Reports

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NAME, AGE, DEGREES, PROFESSIONAL POSITIONS HELD

30: Rosa Julia Santiago, 44

M.S., Health Physics, University of Puerto Rico, Mayaguez (1963)

B.S., Biology, University of Puerto Rico, Mayaguez (1960)

Positions Held:

- Research Associate, Marine Ecology, Puerto Rico Nuclear Center (now CER)
- Acting Head, Bikini Project, PRNC
- Research Associate I, Marine Biology, Puerto Rico Nuclear Center
- Research Assistant II, Resonance in Radiation Effects Project, PRNC
- Staff Member, Summer Institute of Radiation Biology, PRNC
- Research Assistant I

Health Physics Division, PRNC 1 Biology, Health Physics Health Physics Society Puerto Rico



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RESUME, May 1977

NAME: Sasscer, Donald S., NE 247

DEGREES:

1. Ph.D, Nuclear Engineering, Iowa State Univ., 1964
2. N.S., Nuclear Engineering, Iowa State Univ., 1959
3. S., Mechanical Engineering, Univ. of Utah, 1955

PROFESSIONAL POSITIONS HELD:

- Jan 1977 to Present: Acting Associate Director, CEER
- 1964 to Present: Associate Professor, Professor of Nuclear Engineering, RUM-UPR
- 1964 to Present: Scientist II, Chief Scientist II, Nuclear Eng'g., CEER
- 1966 to Present: Lead, Nuclear Technology Division of CEER
- Aug. 76 to Jan. 76: Energy Coordinator, School of Engineering, RIN-UPR
- 1966 to 1976: Director, Dept. of Nuclear Engineering, RUR-UPR
- 1961 to 1964: Assistant Professor, Associate Professor, Nuclear Eng., Iowa State Univ.
- 1961 to 1964: Research Scientist, Nuclear Eng'g., Ames Lab. USABC
- 1956 to 1959: Instructor, Theoretical and Applied Mech., Iowa State Univ.
- Nov, 55 to Jan.56: Industrial Engineer, U.S.A.F., Hill Airforce Base, Utah
- June 56 to Aug.56: Mechanical Engineer, McDonnell Aircraft Corp.
- 1953 to 1955: Ind Lt., Ist Lt., Guidance System Officer, U.S.A.F.
- June 53 to Dec.53: Mechanical Eng'g., Douglas Aircraft Corp.
- Nov. 1968: Consultant, Commonwealth Oil Refining Company, part-time

AREAS OF INTEREST: Nuclear, OTEC

SOCIETIES, MEMBERSHIPS, HONORS:

- Member, American Nuclear Society (ANS)
- Member, Health Physics Society (HPS)
- Member, American Society for Engineering Education (ASE)
- USABC Special Fellow, 1959-1961
- Member Engineering Honor Society of Tau Beta Phi
- Member of National Honor Society of Phi Kappa Phi
- Listed in American Men and Women of Science
- Recipient of Award by Engineers, Architects, and Surveyors Society (Colegio de Ingenieros, Arquitectos y Agrimensores) of Puerto Rico in recognition of contribution to the education of professional engineers in Puerto Rico, August 1974.

PUBLICATIONS: 18

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NAME, AGE : DEGREES PROFESSIONAL POSITIONS HELD 1972 -

Resume

Name: Rama S. Singh

Age: 39

Degrees:

- Ph.D. Electrical Engineering (Solid State), Univ. R.1. (1971)
- M.Sc. Physics, Banaras Hindu University, India (1959)
- B.Sc. with Honors in Physics, Banaras Hindu University, India (1959)

Professional Positions Held:

- 1972 - Present: Asst. Prof., Department of Physics, RUM-UPR, Scientist I (Joint Appointment), CEcR NRC
- 1969 - 1971: Postdoctor Fellow, U.S. Army MUCOM and Nat'l. Bureau of Standard, Washington, D.C.
- 1967 - 1969: Instructor, Department of E.E. University of Rhode Island. Research and Teaching Asst., Dept. of E-E., U.R.I.. Rhode Island

Other Experience:

Research Collaborator, Department of Physics, Brookhaven National Laboratory during summer of 1976.

Areas of Interest:

Phase Transition in Crystals, Light Scattering, Solar Energy Storage and Selective Surfaces of the Collectors.

Society Memberships:

American Physical Society  
Institute of Electronics and Electrical Engineer  
Phi Kappa Phi

Publications:

11 publications, one in press, three in preparation

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Resume

Name: Vance Peter Vicente

Age: 27

Degrees:

- M.S. Biological Oceanography, University of Puerto Rico, Mayaguez (1973)
- B.S., Biology, University of Puerto Rico, Rio Piedras (1970)

Professional Positions Held:

- 1975 - Present: Research Associate IIT Marine Ecology Division, CEER Mayaguez, P.R.
- 1973 - 1975: Research Associate II Radioecology Division, CEER Mayaguez, P.R.
- 1973: Assistant Science Program Coordinator PRINUL San German, P.R.

Other Experience:

Cooperative Consultant for sponge-ecology and taxonomy. Cooperative Consultant for biological studies.

Areas of Interest:

Benthic Ecology — Seagrass bed ecology, Mangrove root communities, coral reef ecology. Sponge ecology and taxonomy.

Society Memberships:

International Association of Aquatic Vascular Plant Biologists (TAAVPB)

Association of Island Marine Laboratories of the Caribbean (ATMLC)

National Association of Underwater Instructors (NAUI)

International Oceanographic Foundation (TOF)

Oceanic Society

American Museum of Natural History (Associate)

Sociedad Española de Auxilio

Publications:

Not provided

Mutual and Beneficence of Puerto Rico (Associate)

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