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## **EDUCATION**

- 1996 Ph.D. in Oceanography, University of South Florida
- 1992 M.S. in Marine Sciences, University of Puerto Rico at Mayagüez
- 1988 B.S. in Biology, University of Puerto Rico at Mayagüez

## **ACHIEVEMENTS AND AWARDS**

- 1998 Sackett Prize for Innovative Research  
Department of Marine Science, University of South Florida
- 1998 Cited in Who's Who in Science and Engineering. 4th Edition
- 1995-96 Fellowship in the Global Change Research Program  
NASA Grant No. NGT-30316
- 1992-94 Fellowship in the Graduate Student Researchers Program  
NASA Grant No. NGT-70260
- 1989-91 Fellowship in the Graduate Student Researchers Program  
NASA Grant No. NGT-70099
- 1993 JPL Summer Scholarship  
To attend the course "Processes of Global Change"  
NASA Earth Science Summer School
- 1992 BBSR Summer Scholarship  
To attend the course "Remote Sensing in Oceanography"  
Bermuda Biological Station for Research
- 1991 Young Investigator Award  
To attend the Symposium on Primary Productivity in the Sea  
Brookhaven National Laboratory

## **WORK EXPERIENCE**

- 01/02-Present Assistant Professor  
Department of Geology, University of Puerto Rico at Mayagüez

10/00-12/01	Post-Doctoral Investigator Center for Subsurface Sensing and Imaging Systems (CenSSIS) University of Puerto Rico at Mayagüez
01/98-12/01	Post-Doctoral Investigator Tropical Center for Earth and Space Studies (TCESS) University of Puerto Rico at Mayagüez
01/97-12/00	Post-Doctoral Investigator Department of Marine Sciences University of Puerto Rico at Mayagüez
08/92-12/96	Research Assistant in Remote Sensing Department of Marine Science University of South Florida
04/90-07/92	Biological Assistant & Clerk Cabo Rojo National Wildlife Refuge U.S. Fish and Wildlife Service Caribbean Field Office - Boquerón, P. R.
08/90-05/91	Research Advisor (International Scientific Fair) Science Research Academy for Gifted Students Inter American University San Germán Campus - San Germán, P. R.
January 1991	Consultant to U.S. Geological Survey USGS - Caribbean Office Supervisor: Richard Webb
05/88-12/88	Research Assistant in Phytoplankton Dynamics Center for Energy and Environment Research Marine Ecology Division; Mayagüez, P. R. Supervisor: Dr. José M. López
07/87-08/87	Biological Technician (Wildlife) U.S. Fish and Wildlife Service Caribbean Field Office - Boquerón, P. R.
08/86-05/88	Volunteer of the Scientific Research Auxiliaries Corps Department of Natural Resources Chapter of Ponce, Puerto Rico
Summer 1986	Field Work Assistant (Wildlife) U.S. Fish and Wildlife Service Cabo Rojo National Wildlife Refuge

08/85-06/86	Biology Workshop Assistant Department of Biology University of Puerto Rico at Mayagüez Supervisor: Noel Cardona
Summer 1985	Research Assistant (Water and Soil Quality) University of Puerto Rico at Mayagüez Supervisor: Dr. Alejandro Ruiz

## TEACHING EXPERIENCE

01/02-Present	GEOL 3105 - Images of the Earth Department of Geology University of Puerto Rico at Mayagüez
08/98-Present	CMOF 6445 - Oceanographic Remote Sensing I CMOF 8446 - Oceanographic Remote Sensing II Department of Marine Sciences University of Puerto Rico at Mayagüez
November 2000	Bio-Optical Oceanography and Satellite Remote Sensing Short Course to Facultad de Ciencias Exactas y Naturales Universidad Nacional del Mar Del Plata, Argentina
July 1997	Remote Sensing in Coastal Environments Short Course to Instituto Geográfico Agustín Codazzi Santa Fe De Bogotá, Colombia
01/92-05/92	Teaching Assistant in Biology Department of Biology University of Puerto Rico at Mayagüez Mayagüez, Puerto Rico

## PUBLICATIONS

- Gilbes, F., R. A. Armstrong, R. M. Webb, and F. E. Müller-Karger (2001) SeaWiFS Helps Assess Hurricane Impact On Phytoplankton In Caribbean Sea. EOS, Transactions, American Geophysical Union, 82(45):529 and 533.
- Gilbes, F., F. E. Müller-Karger, and C. E. Del Castillo. (In Press) New Evidence For The West Florida Shelf Plume. Continental Shelf Research.
- Gilbes, F. and R. A. Armstrong (In Review) Phytoplankton Dynamics In The Eastern Caribbean Sea As Detected With Space Remote Sensing. International Journal of Remote Sensing.
- Armstrong, R. A., F. Gilbes, R. Guerrero, C. Lasta, and H. Miazán. (In Review)

- Validation of SeaWiFS Chlorophyll Algorithm for the Rio de la Plata Estuary and Adjacent Waters. *International Journal of Remote Sensing*.
- Gilbes, F. and R. A. Armstrong (2000) Inherent Optical Properties At The Caribbean Time Series Station (CaTS). In: *Proceedings of Ocean Optics XV*, Monaco, pp. 1-13.
- Armstrong, R. A., J. M. López, and F. Gilbes (2000) Apparent Optical Properties At The Caribbean Time Series Station (CaTS). In: *Proceedings of Ocean Optics XV*, Monaco, pp. 1-5.
- Del Castillo, C. E., F. Gilbes, P. G. Coble and F. E. Müller-Karger (2000) On The Dispersal Of Riverine Colored Dissolved Organic Matter (CDOM) Over The West Florida Shelf. *Limnology and Oceanography*, 45(6):1425-1432.
- Del Castillo, C. E., F. Gilbes, P. G. Coble and F. E. Müller-Karger (1998) Optical Characteristics of Dissolved Organic Matter During a Bloom On The West Florida Shelf. In: *Proceedings of Ocean Optics XIV*, Kailua-Kona, Hawaii, pp. 1-6.
- Gilbes, F. and J. I. Vélez-Arocho (1998) The Caribbean Countries And The Inter-American Institute for Global Change Research. National Printers Inc., Mayagüez, P.R. 151 pp.
- Gilbes, F., C. Tomas, J. J. Walsh, and F. E. Müller-Karger (1996) An Episodic Chlorophyll Plume On The West Florida Shelf. *Continental Shelf Research*, 16(9):1201-1224
- Gilbes, F., J. M. López, and P. M. Yoshioka (1996) Spatial And Temporal Variations of Phytoplankton Chlorophyll-a And Suspended Particulate Matter In Mayagüez Bay, Puerto Rico. *Journal of Plankton Research*, 18(1):29-43.
- Gilbes, F. (1987) Cowbirds Control Project in Roosevelt Roads, Ceiba, Puerto Rico. U.S. Fish and Wildlife Service, Caribbean Field Office. Project Report.
- Rosado, M., F. Gilbes, R. A. Armstrong, and J. R. García (In Preparation) Spatial And Temporal Variability In The Optical Properties Of Mayagüez Bay, Puerto Rico. To be submitted to *Limnology and Oceanography*.
- Gilbes, F., F. E. Müller-Karger, C. E. Del Castillo, J. M. Lopez, and A. Dieppa (In preparation) Bio-Optical Variability During An Episodic Chlorophyll Plume On The West Florida Shelf. To be submitted to *Journal of Plankton Research*.
- Gilbes, F., R. A. Armstrong, J. M. Lopez, J. Corredor, and J. Morell (In preparation) Seasonal Variation Of Bio-Optical Properties In The Eastern Caribbean Sea. To be submitted to *Journal of Geophysical Research*.

Gilbes, F., R. A. Armstrong, F. E. Müller-Karger, J. M. Lopez, J. Corredor, J. Morell, and R. Varela (In preparation) Validation And Development Of Bio-Optical Algorithms In The Eastern Caribbean Sea. To be submitted to Journal of Geophysical Research.

## MEETING PRESENTATIONS

- 2002 Schellekens, J.H., Gilbes, F., Rivera-Rivera, G.D. and Ysa, Y., Remote sensing of mineral deposits in tropical terranes. Porphyry copper deposits in west-central Puerto Rico (Abstract) 16 Caribbean Geological Conference, Barbados, June 16-21, 2002.
- 2002 Gilbes, F. Telesensoria remota. (Oral Presentation) BIOS '02, La biología revolucionando el nuevo siglo. UPRM-Departamento de Biología. 1-mayo-02.
- 2002 Rivera-Rivera, G.D., Ysa, Y., Schellekens, J.H. and Gilbes, F., Remote sensing of metal enriched areas in tropical terranes. - Porphyry copper deposits in west-central Puerto Rico (Poster Presentation) Sigma Xi student Poster Night Program and Abstracts, April 19, 2002, Mayagüez, Puerto Rico.
- 2002 Schellekens, J.H., Gilbes, F., Rivera-Rivera, G.D. and Ysa, Y., Remote sensing of mineral deposits in tropical terranes. Porphyry copper deposits in west-central Puerto Rico (Poster Presentation) 6th Sigma Xi student post day, 18 April 2002 University of Puerto Rico at Mayagüez, Program and Abstracts p. 43.
- 2002 Schellekens, J.H., Gilbes, F., Rivera-Rivera, G.D., Chardon, S., Fong, Y., and Ysa, Y., Remote sensing of metal enriched areas in tropical terranes. - Differences in vegetation reflectance: Oral presentation at the 22<sup>nd</sup> Anniversario de Casa Pueblo, Adjuntas, PR. 14 April 2002
- 2002 Gilbes, F. Percepción Remota: Una forma diferente de Observar la Tierra. (Presentación Oral) Simposio de Ciencias y Tecnología. Programa Upward Bound Ciencias y Matemáticas. Universidad Interamericana de Puerto Rico, Recinto de Ponce. 12 de abril de 2002
- 2002 Rivera-Rivera, G.D., Ysa, Y., Schellekens, J.H., and Gilbes, F., Remote sensing of metal enriched areas in tropical terranes. - Porphyry copper deposits in west-central Puerto Rico (Poster Presentation) Puerto Rico Interdisciplinary Science Meeting, Arecibo, 16 March 2002
- 2002 Gilbes, F. Hyperspectral Remote Sensing of Coral Reefs. (Oral Presentation) Research and Industrial Collaboration Conference of the Center for Subsurface Sensing and Imaging Systems. Northeastern University, Boston, MA. January 29-30, 2002
- 2001 Schellekens, J.H., Gilbes, F., Rivera-Rivera, G.D., and Ysa, Y., Remote sensing of mineral deposits in tropical terranes. Porphyry copper deposits in west-central

Puerto Rico (Poster Presentation) PRSGC First Congress on Integrating NASA Research and Education Projects in Puerto Rico, Hyatt Regency Cerromar Beach Resort. November 14-17, 2001

- 2000 Gilbes, F. and Armstrong, R. Space Remote Sensing Of The Eastern Caribbean Sea. (Poster Presentation) Oceans From Space Meeting, Venice, Italy.
- 2000 Armstrong, R. and Gilbes F. Validation of SeaWiFS Chlorophyll Algorithm For The Rio De La Plata Estuary. (Poster Presentation) Oceans From Space Meeting, Venice, Italy.
- 2000 Gilbes, F. and Armstrong, R. Inherent Optical Properties At The Caribbean Time Series Station (CaTS). (Poster Presentation) Ocean Optics XV Meeting, Monaco.
- 2000 Armstrong, R. and Gilbes F. Apparent Optical Properties At The Caribbean Time Series Station (CaTS). (Oral Presentation) Ocean Optics XV Meeting, Monaco.
- 1998 Del Castillo, C., Gilbes F. and Coble, P. Optical Characteristics Of Dissolved Organic Matter During A Bloom On The West Florida Shelf. (Poster Presentation) Ocean Optics XIV Meeting, Hawaii.
- 1996 Gilbes, F. and Armstrong, R. AVHRR Detection of Orinoco River Plume Waters In The Eastern Caribbean Sea. (Oral presentation) Ocean Sciences Meeting ASLO and AGU, California.
- 1989 Gilbes, F. Estudio Preliminar Sobre el Análisis del Patrón de Distribución de Favia fragum en el Cayo San Cristobal en La Parguera, Puerto Rico. (Oral presentation) XVI Symposium of Department of Natural Resources, San Juan, P.R.
- 1989 Gilbes, F. Abundancia y Distribución de los Erizos De Mar (Clase Echinoidea) en la Costa Rocosa de la Isla Caja De Muertos. (Oral presentation) IX Symposium of Wildlife of Puerto Rico. University of the Sacred Heart, San Juan, P.R.

## **OTHER RESEARCH EXPERIENCE**

- 2002 Remote Sensing of the Eastern Caribbean Sea. Research in progress at the Tropical Center for Earth and Space Studies. NASA Grant. UPR-Mayagüez.
- 2002 Detection of Submerge Features Using Hyperspectral Remote Sensing. Research in progress at the Engineering Research Center for Subsurface Sensing and Imaging Systems. NSF Grant. UPR-Mayagüez.
- 2002 Bio-optical properties of coastal and oceanic waters in the Eastern Caribbean Sea. Research in progress. NASA Grant. UPR-Mayagüez.
- 2002 Monitoring the water quality parameters of Mayagüez Bay. Research in progress.

EPA Grant through the "Instituto de Investigaciones de Recursos de Agua de PR. UPR-Mayagüez.

- 1996 Analysis of Episodic Phytoplankton Blooming and Associated Oceanographic Parameters on the West Florida Shelf using Remote Sensing and Field Data. Dissertation, University of South Florida. Advisor: Dr. Frank E. Müller-Karger
- 1992 The Relationship Between Phytoplankton Chlorophyll-A and Suspended Particulate Matter in Mayagüez Bay, Puerto Rico. Master Thesis, University of Puerto Rico at Mayagüez. Advisors: Drs. Paul M. Yoshioka and José M. López
- 1990 The Coral Zonation Patterns At Enrique Reef. UPR-Marine Science.
- 1988 Symbiosis Between Spirobranchus giganteus and Porites astreoides: A Preliminary Study. UPR-Marine Science.
- 1988 Spatial and Temporal Variations of Chlorophyll-a and Phytoplankton Diversity in Laguna Joyuda. CEER-Marine Ecology Division.
- 1987 Diversity of the Marine Invertebrates on Rocky Shore in Caja de Muertos Island: A Preliminary Study. UPR-Biology.

## ORGANIZATIONS AND COMMITTEES

Chairman of the Outcomes Assessment Committee. UPRM-Geology. (2002-Present)  
 Member of American Geophysical Union (1996-Present)  
 Member of the Society of Latin American Remote Sensing Specialists (1996-Present)  
 Member of Cousteau Society (1989-1992)  
 Member of The Oceanography Society (1988-1991)  
 Chairman of Bios'87, Department of Biology, November 2-13, 1987  
 Chairman of the Biological Student Society UPR - Mayagüez Campus, 1986-1987  
 Founding Member of the Scientific Research Auxiliaries Corps, DNR, 1986-1988

## SPECIAL SKILLS

Bilingual: Spanish and English  
 Digital image processing: SeaDAS, ERDAS-Imagine, DSP, IDL, ENVI, and TeraScan  
 Computer systems: Mac OS, DOS, Windows, VMS, UNIX  
 Hypertext Markup Language (HTML)  
 Oceanographic, Bio-optical, and Remote Sensing Techniques  
 Advanced scuba diving (NAUI)

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