

CREST-NESDIS Scientists Interactions

Visiting Scientists from NOAA:

Dr. Mike Hardesty of NOAA/ETL, Colorado, joined CREST-CUNY as Visiting Scientist, in February 2005, under the NOAA Science Exchange Program

Dr. Paul Menzel, NOAA/NESDIS, Spring 2006

New CREST Scientist:

Dr. Bill Smith, joined CREST-HU, in November 2004, and will strengthen the CREST program through his research ties with NOAA, NASA, and the University of Wisconsin's Cooperative Institute for Meteorological Satellite Studies (CIMSS). He will also advise graduate students in their thesis research projects and teach graduate level courses in atmospheric technology and satellite remote sensing

Dr. Margarita Mihailidi, joined CREST in February 2005 as Information Technology (IT) Personnel for CREST

Dr. Arnold Gruber formerly from NESDIS, joined CREST in February 2005 for collaboration with other CREST Scientists and Graduate Students in Hydro-Climate Group

Dr. Yonghua Wu, joined CREST/CUNY in January 2006

Dr. Wenying Su joined CREST/HU as the new Research Assistant Professor in June 2005.

Distinguished Professor:

Dr. Bill Rossow, NASA/GISS has accepted to join NOAA-CREST

Industrial Partnership

Existing partnership – Raytheon

The partnership with Raytheon :

- has enriched CREST's students educational and research experience through participation in joint collaborative projects (e.g. GOES-R scoping project funded by Raytheon at CCNY)
- student exchanges and summer internships
- participation on CREST committees and advisory boards, and
- sponsorship of student conferences.

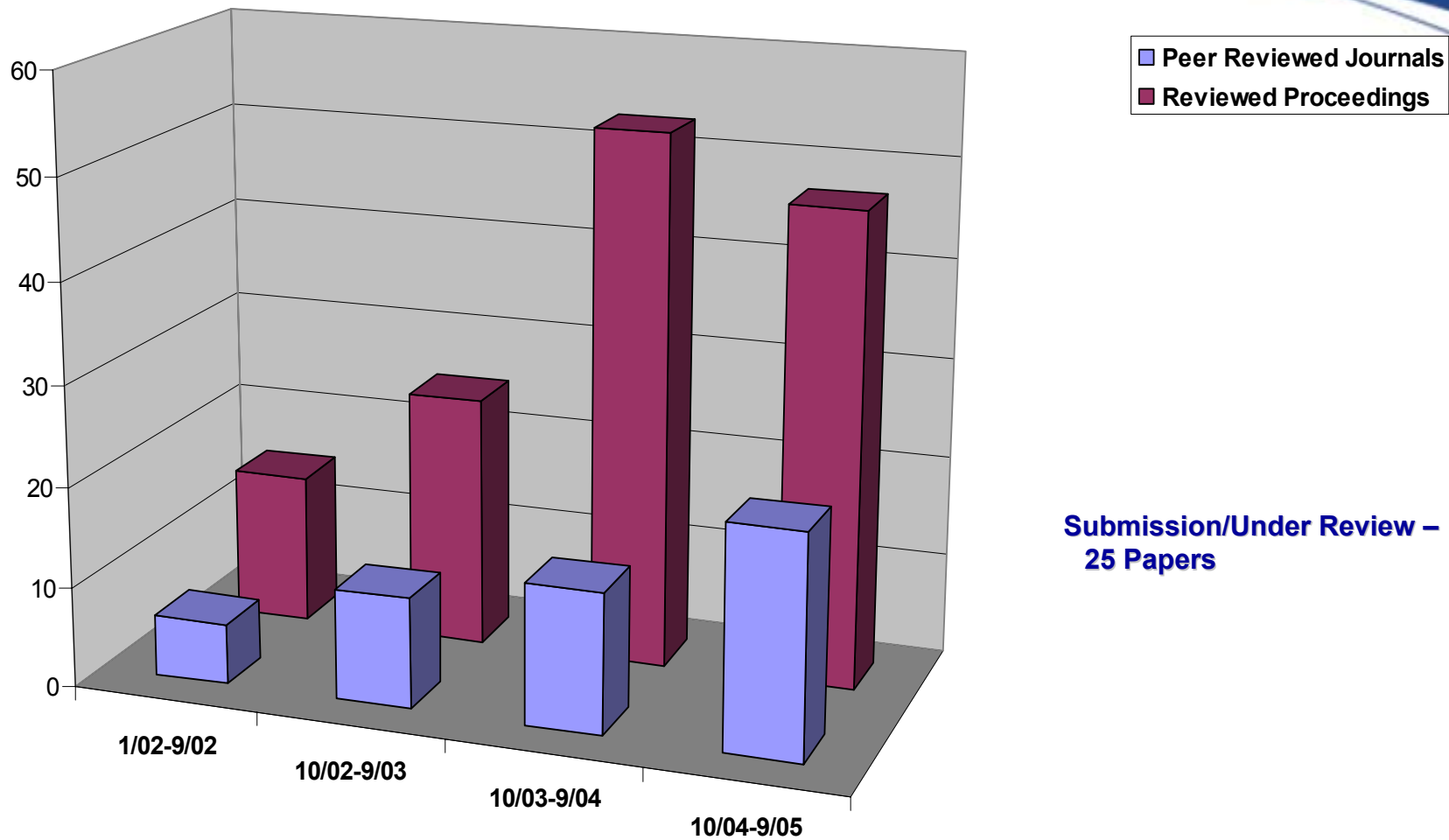
New Industrial Partner –RSIS

RS Information Systems (RSIS) will be on board as our second Industrial Partner.

This partnership would mainly focus on the summer internship opportunities for CREST Students including the underrepresented minorities

CREST Publications

CREST Research Publications (2001-2004)



	1/02-9/02	10/02-9/03	10/03-9/04	10/04-9/05
Peer Reviewed Journals	6	11	14	22
Reviewed Proceedings	* 15	25	53	47

NOAA-CREST

Newsflash

NOAA Education and Science Forum, October 21-23, 2004, City College of City University of New York, New York

The NOAA Educational Partnership Program Forum on Education & Science was held on October 21-23, 2004 at City College of City University of New York.

The Forum was organized to bring together the scientific, academic and government communities to discuss advancements and opportunities for continued research in NOAA-related sciences. Scientists and research faculty particularly from Minority Serving Institutions, discussed Satellites and Remote Sensing, Technologies, Weather Observations, Coastal and Marine Resource Management, Fisheries, and Climate Issues.

The forum served as a good platform for students interested in NOAA-related sciences to interact and further enhance their career opportunities in oceanic and atmospheric research.

About 400 participants, including students, faculty scientists and professionals from the private sector attended this two and a half day Forum with 5 plenary; 4 technical

and 14 breakout sessions. 74 oral and 133 posters were presented by researchers from all four cooperative centers and their partner institutions and environmental entrepreneurship award recipients.

Three best poster recognition awards were given to three undergraduate and graduate students.

The invited dignitaries were; Dr. Selma Botman, Executive Vice Chancellor for Academic Affairs, CUNY; Dr. Richard Rosen, Assistant Administrator, NOAA Research; Congressmen Charles Rangel (NY-15); Jose Serrano (NY-16); Dr. Ghassem Asrar, Deputy Associate Administrator, NASA; Mr. Paul Thompson, Vice President, Raytheon Information Solutions; Dr. Larry Robinson, Director ECSC Center, FAMU; Dr. Colleen Hartman, Deputy Assistant Administrator, NOAA-Satellite and Information Services; Dr. Jim Hansen, NASA-GISS; Mr. John Jones, Deputy Assistant Administrator, NOAA-Weather Service; Dr. Steve Murawski, NOAA Fisheries; Dr. Phil Ardanuy, Raytheon Information Solutions; Dr. Robert Chen CIESIN, Columbia University; Dr. Marie Colton, Director, ORA,



Dignitaries: from L to R: Paul Thompson, Raytheon; Richard Rosen, NOAA; Ghassem Asrar, NASA; Gregory Williams, CCNY; Reza Khanbilvardi, NOAA-CREST, CCNY.

NOAA/NESDIS; Mr. Steve Klosko, Raytheon, Information Solutions; Dr. Ron Birk, Director, Science Applications, NASA Science Mission Directorate; Dr. Roberta Millar CIESIN, Columbia University; Mr. Carroll Hood, Raytheon GEOS Architect; Mr. Steve Drescher, NOAA Grants Management Division.

Dr. Reza Khanbilvardi, introduced Dr. Gregory Williams, 11th president of CCNY, a flagship college of CUNY, and the oldest public university established in 1847. Since his arrival in 2001, Dr. Williams has strongly supported CREST and its activities.



CREST Semi-Annual Digest

NOAA-CREST Center, City College of City University of New York

Volume 3 Issue 1

June 2005

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4th CREST Annual Technical Meeting held at CREST-UMBC, January 19, 2005

The 4th Annual CREST Technical Meeting was held at CREST-UMBC on January 19, 2005. Drs. Marie Colton, and Fuzhong Weng, from NESDIS attended the meeting. Drs. Ray Hoff, UMBC; Pat McCormick and John Anderson from HU; Hamed Parsiani, UPRM; Bill Lawrence, BSU; Reza Khanbilvardi, Sam Ahmed, Jeff Steiner, Fred Moshary, Barry Gross, Shayesteh Mahani, and Shakila Merchant, from CUNY; Drs. Phil Ardanuy, and Kenneth Jensen from

Raytheon; and Nikisa Jordan, Kamonayi Mubenga, and Ray Rogers, CREST-Students, UMBC participated in the meeting. Each research group made presentations on their ongoing and accomplished research projects during the last year. Ken Jensen and Phil Ardanuy delivered and discussed Raytheon's presentation suggesting candidates for future collaborations in seven potential areas: IT; Web Mapping In-



terface for Coastal Oceans Data; Customer Relationship Management; Artificial Intelligence/ Decision Support Tool; GIS; Field Campaigns/Validation; and Operational Algorithm upgrades.

4th CREST EAB Meeting held at UPRM, March 28-29, 2005

NOAA-CREST External Advisory and Scientific Board Members met on the March 28-29, 2005, at CREST-UPRM, Mayaguez, to review the CREST performance, which is in its fourth year since its inception in 2001. An overview presentation by Dr. Reza Khanbilvardi was followed by the CREST-Research overview by Dr. Sam Ahmed, and individual presentations by Drs. Ray Hoff (UMBC); Hamed Parsiani (UPRM); Manohar Marebojana (BSU) and John Anderson (HU). CUNY emphasized its developing approach to become the Ur-

ban Observation and Resource Center for NOAA.

On the second day, the external advisory board members gave their recommendations/suggestions to strengthen the institutional planning strategies for long-term sustainability.

Drs. Mike Hardesty (NOAA/ETL) currently visiting Distinguished Professor at CREST-CUNY; Geoffrey Bonnin (NOAA/NWS); Steve Ackerman (CIMSS/WI); Roger Heymann (NOAA/NESDIS);



Jeffery Puschell (Raytheon) and Dennis Johnson (Geophysical Survey System Inc.) were the board members who attended the meeting. Ms. Jacqueline Rousseau, Program Director, NOAA-EPP, also attended the meeting.

National Oceanic and Atmospheric Administration
Cooperative Remote Sensing Science and Technology Center

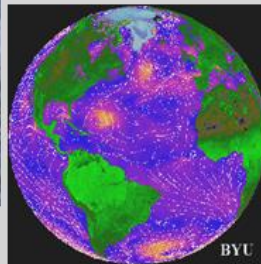
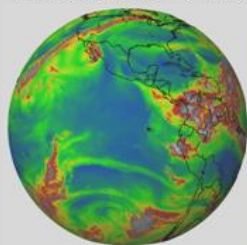
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CREST PUBLICATIONS SERIES

Volume 3

No: 01-2005

Impacts of Atmospheric Circulation Modes on Climate Variables (SWE) over North America.



By:

Stefan Sobolowski¹, Drs. Shayesteh Mahani², Allan Frei³
and Reza Khanbilvardi²

¹ Master Student, Hunter College; ² Department of Civil Engineering, City College, City University of New York; ³ Dept of Geography, Hunter College

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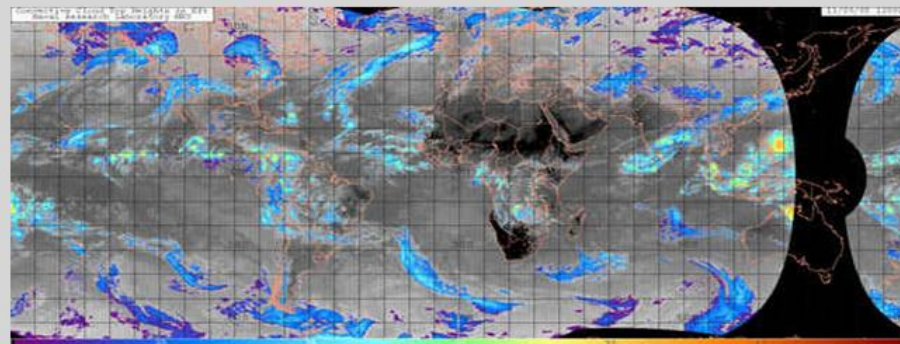
CREST PUBLICATIONS SERIES

Volume 3

No: 02-2005

Validating Remotely Sensed Rainfall Estimates over Tropical Region

(A Case of Study: over Colombia in South America)



By:

Jose T. Fernandez, Drs. Shayesteh Mahani, and Reza Khanbilvardi
Department of Civil Engineering, City College of New York

Published By:

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National Oceanic and Atmospheric Administration-
Cooperative Remote Sensing Science & Technology Center
City University of New York, NY



Capacity Building

- **New Courses** have been initiated/modified at CREST and its partner institutions due to CREST program

Students:

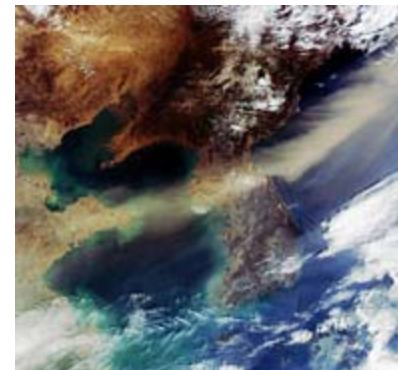
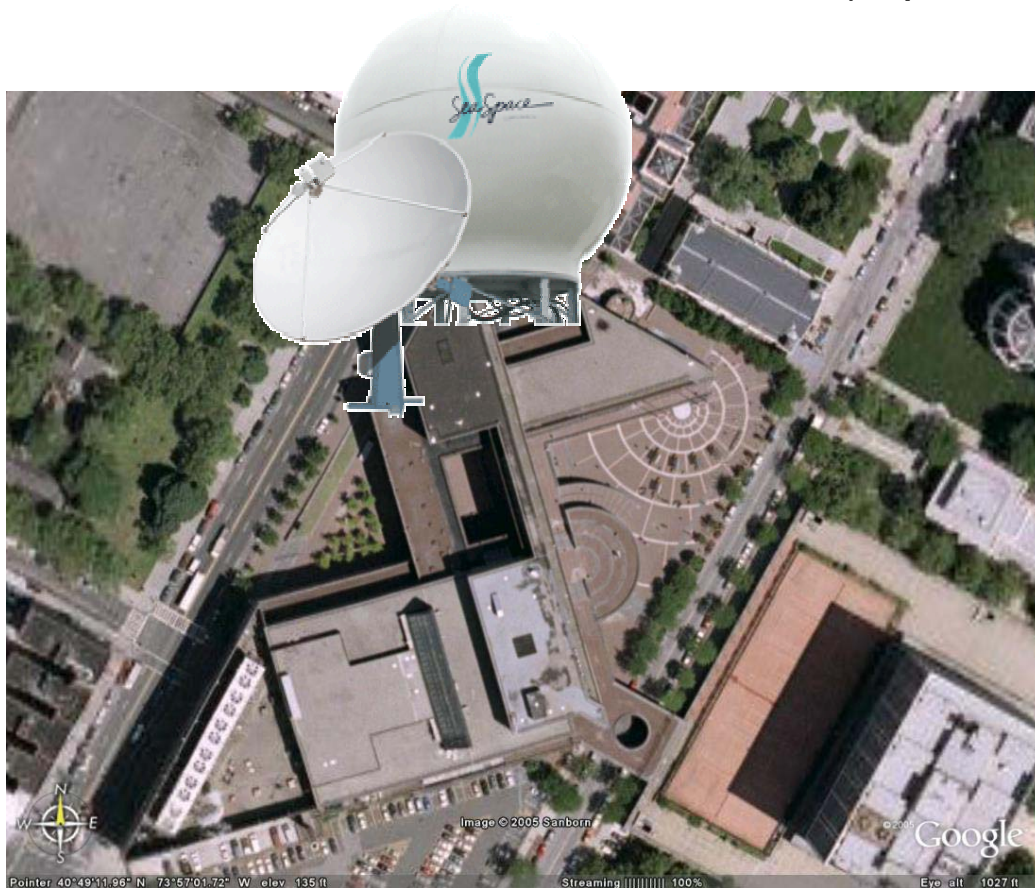
- On an average – 200 students (Undergrad – 100, Masters – 59, PhD – 40) students have so far received financial assistance since the inception of the CREST program
- 101 students (2 PhD; 36 Masters and 62 Undergraduates) have so far graduated
- Students can attend various national and international conferences and make their research presentation.

Faculty:

- Research Faculty have almost doubled (23 in Year I to 46 in Year IV&V) since the inception of the program (*includes post docs and research scientists*)
 - *CUNY: Three faculty positions; 1 technical positions; 1 IT personnel; 1 Distinguished Professor; 1 NOAA-Chair Professorship*

Satellite Data Mining and Processing

Ground system for receiving, processing, displaying high resolution images, and disseminating data from polar orbiting satellites (Aqua, Terra, NOAA-12 to NOAA-17 and future NPP, NPOESS, ...) operational in the spring 2006.



2.4m Autotrack X/L-Band
Antenna and Data Processing
and Archiving System, located in
NAC Building, CCNY campus.

Students Activities

Chesapeake Bay Campaign

July 10-19, 2005

A Chesapeake Bay Campaign was undertaken under the guidance and leadership of CREST Coastal Research Group. Drs. Sam Ahmed and Alex alongwith CREST Students: Marco Vargas, PhD; Zhing Jhaou, PhD; Abdullphatah Mustafa, PhD; Badr, E; Kiana Aran; Undergraduate went on a one week cruise for water sampling in the Bay



Chesapeake Bay Campaign

Other Team members/partners were:

Florida A&M University, FL

– Prof. Mark Harwell

Creighton University, NE

– Professor John Schalles

University of Nebraska, NE

– Prof. Donald Rundquist

Morgan State University, MD

– Prof. Anthony Wilbon

Kent University, OH

– Prof. Robert Carlson



Measurements:

- Flyover of the Nebraska- Lincoln Piper Saratoga plane with the hyperspectral AISA sensor on board
- Laboratory and HPLC water analyses
- Water turbidity and Secchi disk diagnostics

CREST Student visits CICS, Maryland

- In Summer 2005, Cecelia Hernandez-Aldarondo, CREST/CUNY PhD student visited Cooperative Institute for Climate Studies (CICS) at University of Maryland during August 8-12, 2005.
- Dr. Ralph Ferraro, NOAA/NESDIS Scientist and Visiting Faculty at CICS, guided and helped Cecilia during her visit to CICS.

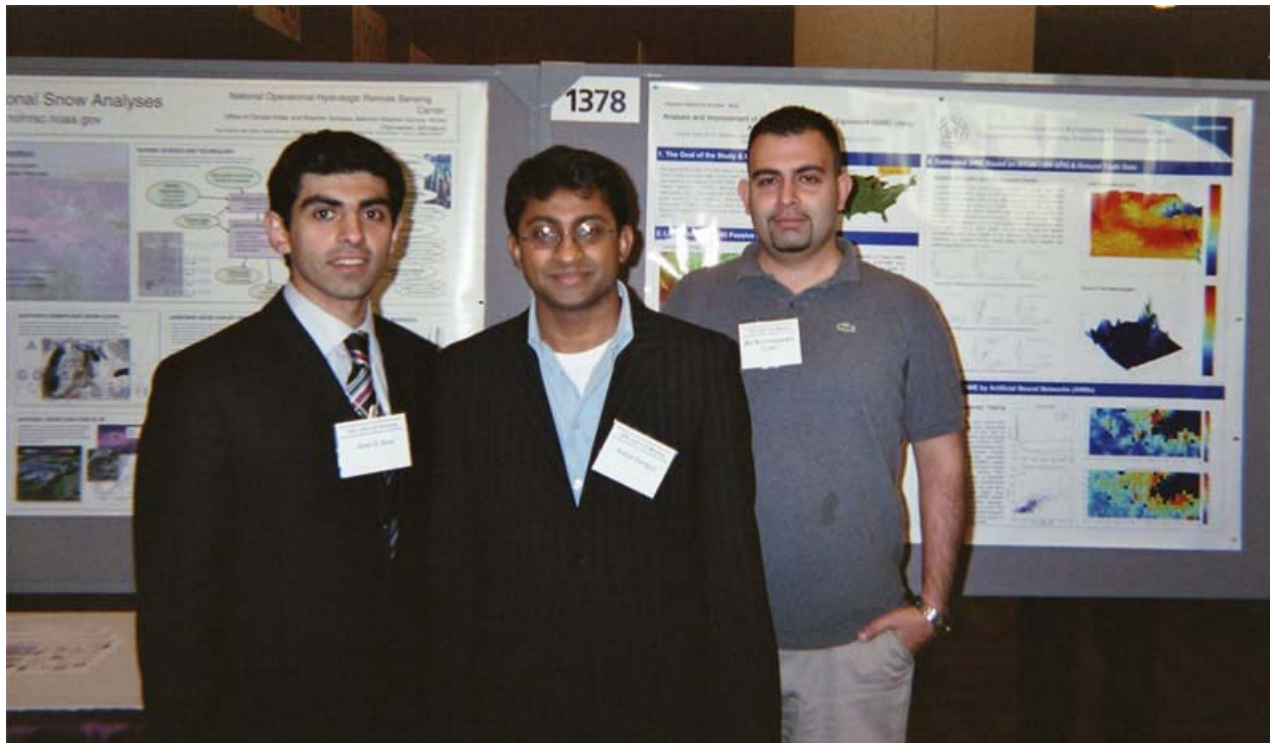


CREST Student received Prestigious Fellowship Award

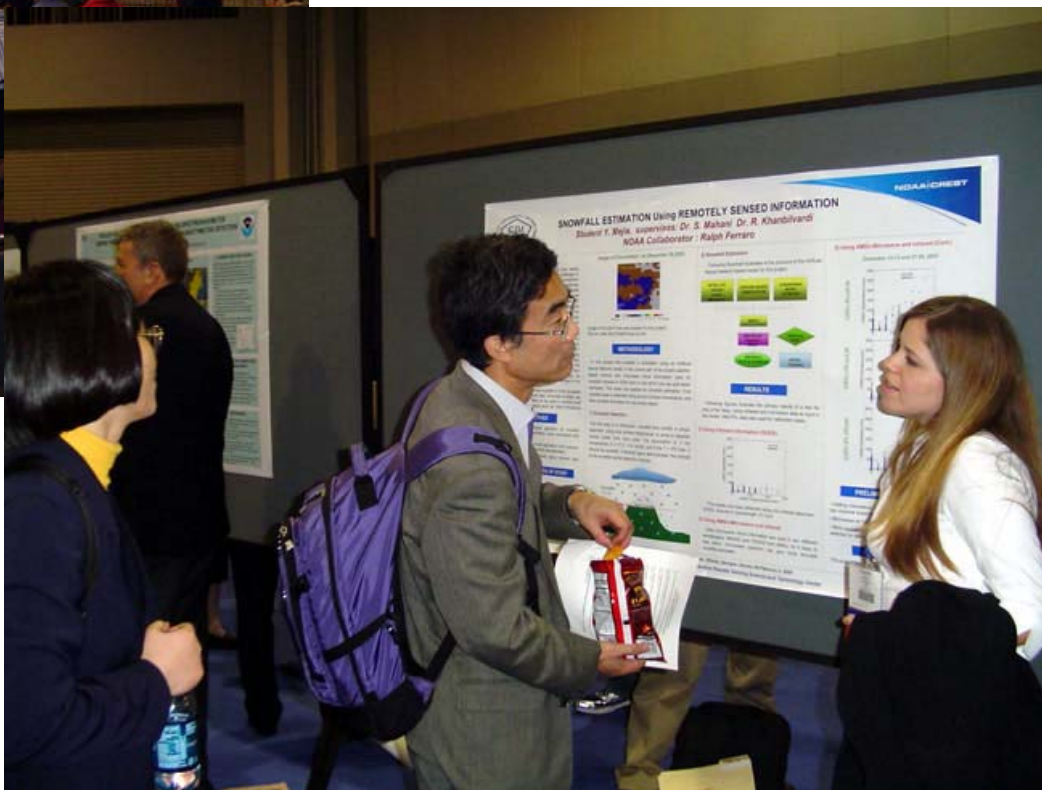
Ana Picon, a MS student, at CREST/UPRM, received the prestigious NASA Harriett G. Jenkins Pre-Doctoral three-year Fellowship award in May 2005. This award began in Fall 2005 and will cover Ph.D. studies on computer science and engineering.



CREST Students participate in AGU Conference, December 5-9, 2005, San Francisco, California



CREST Students participate in AMS Conference 29 January -2 February, 2006 Atlanta, Georgia



Annual CREST Symposium at Puerto Rico February 23-25, 2006

Over 75 participants (faculties, students and staff from Academia, and NOAA) attended the two and a half day Symposium. Fifty-nine research papers were presented, of which CREST Students presented 26 posters and 11 oral research papers.

The technical sessions were mainly based on research themes to cover Applications of Remote Sensing Techniques in the areas of **(1) Air Quality (2) Coastal Water Quality (3) Hydro-Climate (4) Land & Hydrology and (5) Data and Information Systems.**

Dr. Al Powell, Acting Director, NESDIS/STAR in his keynote address spoke about Current and Future Directions of Environmental Research. Other invited speakers were **Israel Matos**, Director, National Weather Service, San Juan, **Jacqueline Rousseau**, Program Director, NOAA/EPP, **Ingrid Guch**, CoRP Program Director, NESDIS; **Dr. Jorge Gonzalez**, UPRM and **Dr. Bill Smith**, Distinguished Professor, CREST/Hampton University.

Best paper (oral and poster) awards went to **Tarendra Lakhankar**; **Marco Vargas** - doctoral students from CREST/CUNY and **Patrick Reyes** a doctoral student from CREST/UPRM. The poster presentation awardees were **Bernard Mhando** (MS Student) **Eduardo Hernandez** (PhD Student) and **Nasim Nourozi** (MS Student) from CREST/CUNY.

A certification and an award were given to all the winners.



CREST Day, May 4, 2006

National Oceanic and Atmospheric Administration
Cooperative Remote Sensing Science and Technology Center

Fifth Annual CREST Day was celebrated at City College on May 4, 2006.

185 students from High Schools of NY metro; Community Colleges and other campus of CUNY attended the Annual Day.

A presentation on Science and Technology by Dr. Al Powell, Director, STAR/NESDIS/NOAA and Educational Priorities by Louisa Koch, Director, Office of Education, NOAA, were amongst the highlights of the event.

CREST Students made poster presentations and some of them also spoke about their experiences and expectations from CREST and NOAA.

The Regional Ocean Science Bowl students of Bronx High School of Sciences, were felicitated on this occasion.

This recruitment event begun to bear fruits with many students already submitted their applications to join CREST Program.

