Geospatial Team

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Geospatial Center of the CUNY CREST Institute

[Newsletter—Spring 2015 to Summer 2018]

Creating the next generation of skilled geospatial technicians

The BGCCCI seeks to educate, train and prepare BCC students to enter the workforce or pursue advanced studies in geospatial technology. The Center seeks to achieve this goal by engaging in the following activities:

- Design, develop and introduce new and multidisciplinary courses/programs in geospatial technology at BCC.
- Conduct scholarly activities and cutting-edge research in areas of national priority.
- Design and develop training programs for middle and high school students and educators.
- Train BCC students, faculty, staff and local residents.
- Organize summer institutes for high schools and undergraduate students.
- Seek grants from private and federal entities.

History of the BCC Geospatial Center of the CUNY CREST Institute (BGCCCI)

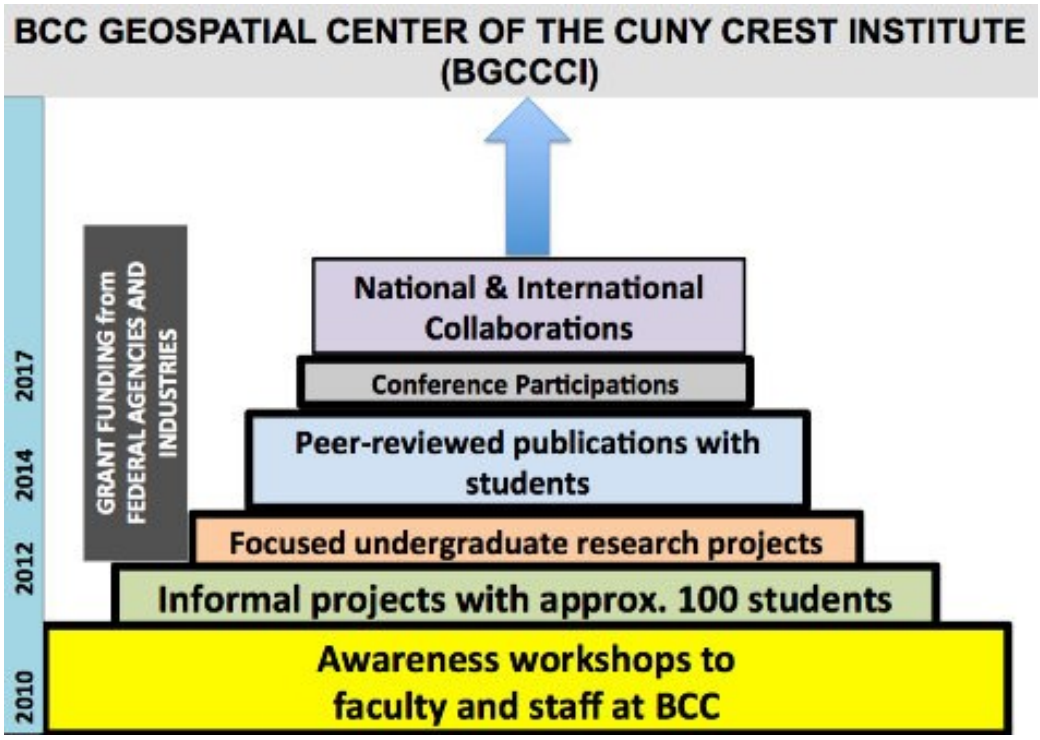
BGCCCI - Creating Pathways in Geospatial Technology and Careers NSF-ATE
(2017-2020)

In 2001, a proposal led by the City College of New York was submitted to the NOAA-CREST program for funding. Bronx Community College was one of the partners on the proposal, which was funded by NOAA. From 2001 and 2010 no significant collaborative activities took place between BCC and NOAA-CREST Institute.

However, since 2010 Dr. Sunil Bhaskaran spearheaded efforts in the development of geospatial technology at BCC leading to the formation of the first ever CUNY Geospatial Center. Seminars, workshops and demonstrations to build campus wide awareness were followed by submission of grant funding and design of new geospatial courses. Many students were mentored in cutting-edge research, which was published in peer-reviewed journal and in proceedings of conferences. Today BGCCCI is an ecosystem of affiliated faculty, students, researchers, interns, and collaborators (national and international). It has sustained its growth by

receiving series many grants from federal and private agencies including major grants from the Environmental Systems Research Institute, Federal Highway Administration and US Department of Transportation (FHWA-USDOT), and the National Science Foundation's Advanced Technological Education (NSF-ATE).

"The Geospatial Technology program started being developed since 2010 and is still in progress"



Growth of the BCC Geospatial Center of the CUNY CREST Institute throughout the years

Opening of the BCC Geospatial Center of the CUNY CREST Institute

The BCC Geospatial Center of the CUNY CREST Institute (BGCCCI) is a unit under the Office of Academic Affairs and Student Success. The Bronx Community College Geospatial Center of the CUNY CREST Institute (BGCCCI) is collaboration between Bronx Community College of The City University of New York and CUNY Remote Sensing Earth System (CREST) Institute.

The center was created after a Memorandum of Understanding (MoU) was signed between Bronx Community College (Senior Vice President and Provost Dr. Claudia Schrader) and Director of CUNY-CREST Institute Dr. Reza Khanbilvardi on the 3rd October, 2014.

Launch of the Geospatial Computing Center
(October 3rd, 2014)

"The BCC Geospatial Center of the CUNY CREST Institute was officially opened on October 3rd, 2014"

BGCCCI
Bronx Community College
Geospatial Center of the
CUNY CREST Institute

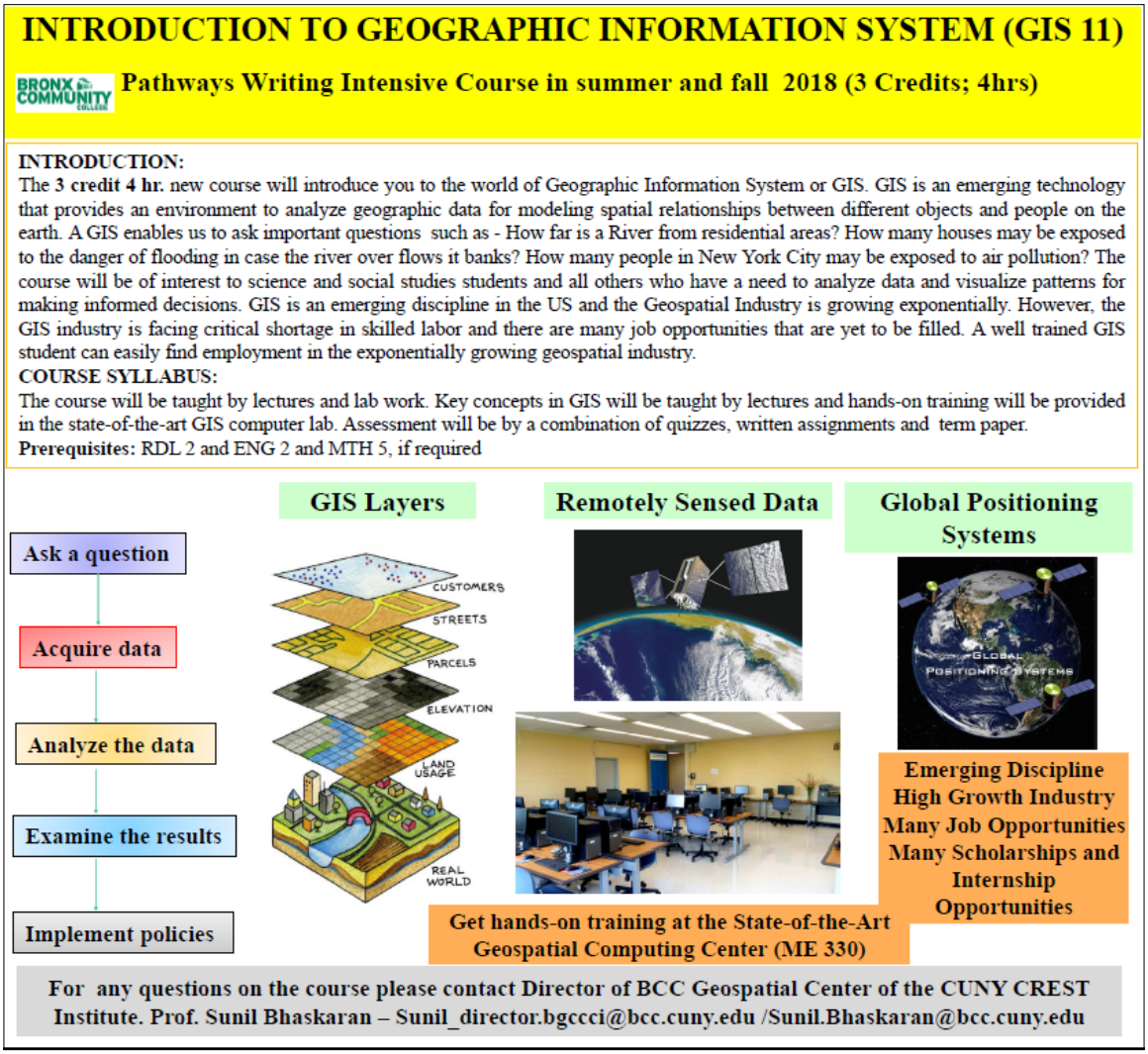
Bronx Community College Geospatial Center of the CUNY CREST Institute logo

Click here to see the entire gallery

The opening of BGCCCI by the Senior Vice President and Provost and Dr. Reza Khanbilvardi –Director of CUNY CREST Institute
(October 3rd, 2014)

Design of new pathways GIS courses: Part I

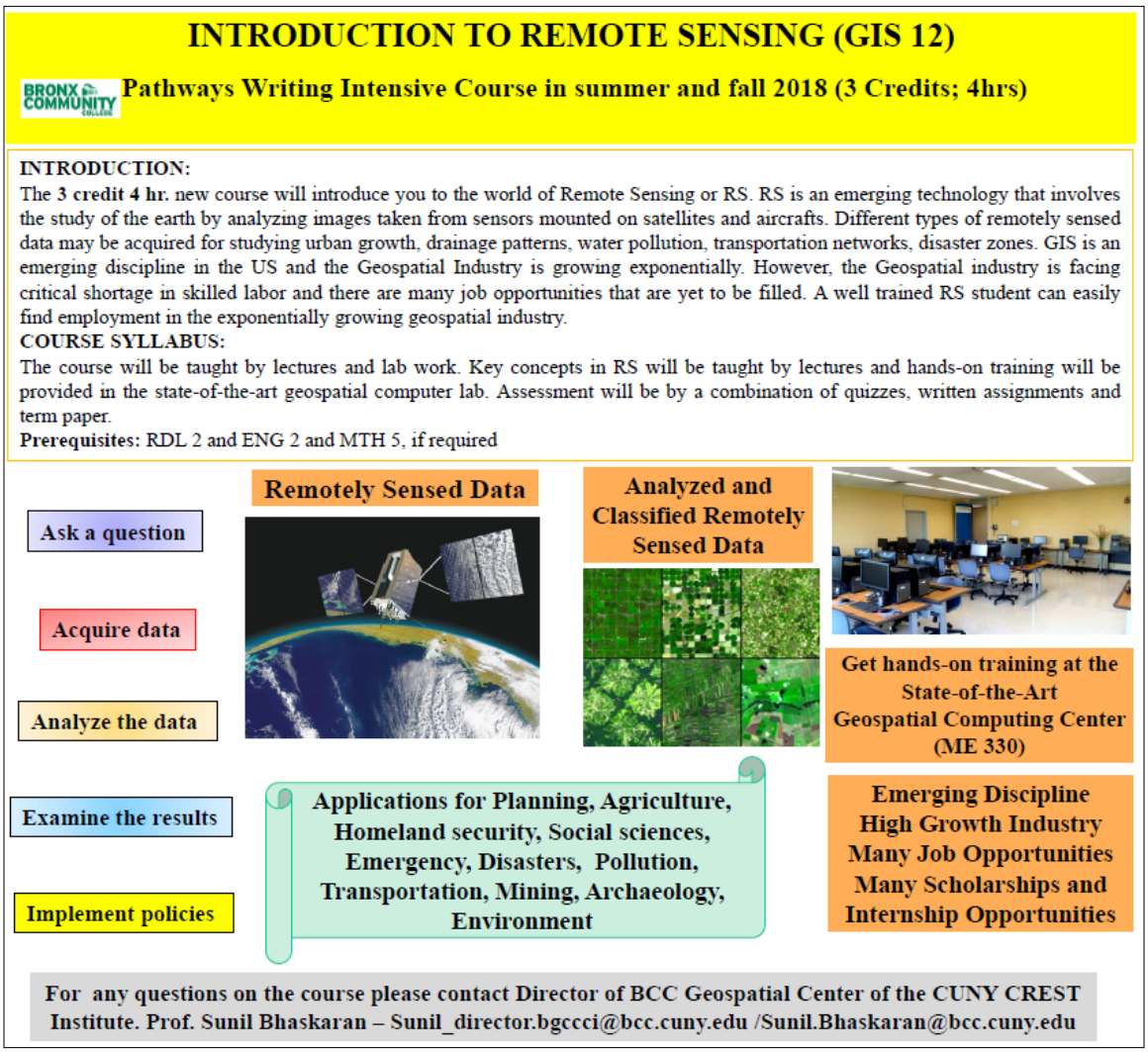
The first course **Introduction to Geographic Information Systems (GIS 11)** was designed by the Director of BGCCCI and submitted for approval to the college wide curriculum committee. This course will be located in the Pathways bucket (Scientific World – E) and will be writing intensive. The course was approved by the college wide curriculum committee, senate, university and pathways steering committee and offered to the students in fall 2015.



Introduction to Geographic Information System (GIS 11)

Design of new pathways GIS courses: Part II

The second new course **Introduction to Remote Sensing (GIS 12)** was designed by the Director of BGCCCI and submitted for approval to the college wide curriculum committee. This course will be located in the Pathways bucket (Scientific World – E) and will be writing intensive. The course was approved by the college wide curriculum committee, senate, university and pathways steering committee and offered to the students in fall 2015.



Introduction to Remote Sensing (GIS 12)

Associate in Applied Sciences — Geospatial Technology

A sixty (60) credit Associate degree in geospatial technology designed by the director of BGCCCI was submitted to the Office of Academic Affairs for review and comments. The draft program proposal is currently being reviewed and refined. The program (if approved) will provide BCC and CUNY student foundation level skills in Geospatial Technology an emerging technology with critical shortage in skilled labor. The courses in the proposed A.A.S. program are designed with inputs from the BGCCCI Industry advisory board.

This competency-based curriculum provides state of-the-art training for careers in geospatial technology. Geospatial Technology refers to equipment used in visualizations, measurements, and analysis of earth's features, typically involving such systems as GPS (Global Positioning Systems), GIS (Geographical Information Systems), and RS (Remote Sensing). Its use is well-known and widespread in the military and in homeland security, but its influence is pervasive everywhere, even in areas with a lower public profile, such as land use, flood plain mapping and environmental protection.

Geospatial Technology Curriculum (Pathways)
60 Credits required for A.A.S. Degree

Required Core — 10 Credits
A. English Composition
- ENG 10 Fundamentals of Composition and Rhetoric *OR* ENG 12 Comprehension and Rhetoric II (3 Credits)

B. Mathematical and Quantitative Reasoning
- MTH 30 Precalculus (3 Credits)

C. Life and Physical Sciences
- ENV 11 (4 Credits)

Flexible Core — 12 Credits
A. World Cultures and Global Issues
- HIS 10 History of the Modern World *OR* HIS 11 Introduction to the Modern World (3 Credits)

D. Individual and Society
- COMM 11 Fundamentals of Interpersonal Communication (3 Credits)

E. Scientific World
- GIS 11 Introduction to GIS (3 Credits)

Additional Flexible Core Requirement – Area E.
- GIS 12 Intro to RS (3 Credits)

SUBTOTAL 22

Required Areas of Study — 21 Credits
- AST 112 Astronomy of the Solar System (3 Credits)
- DAT 10 Computer Fundamental and Applications (3 Credits)
- ENG 223 Scientific and Technical Writing 4 (3 Credits)
- MTH 31 Analytical Geometry and Calculus 1 (4 Credits)
- PHY 11 College Physics I (4 Credits)
- PHY 12 College Physics II (4 Credits)

SUBTOTAL 21

Geospatial Technology Courses — 17 Credits
- GIS 13 Field work in geospatial technology (3 Credit)
- GIS 14 Principles of Geographic Information Systems (4 Credits)
- GIS 15 Advanced Image Analysis(4 Credits)
- GIS 16 Applied Geospatial Technology (4 Credits)
- GIS 17 Geospatial Project Management (2 Credits)
- **SUBTOTAL 17**

Total – 60 Credits

Geospatial Technology Curriculum (Pathways)

Cutting-edge Research Collaborations

National Cutting-edge Research Collaboration

Research collaboration with the department of Math and Computer Science, University of Missouri and University of Nebraska Lincoln: Project members: Faculty – Profs. Sunil Bhaskaran, Sanjiv Bhatia and Ashok Samal and Students – George Walter Gerules, Sharmila Mukherjee (University of Missouri); Leroy Brown (York College) and from BCC - Sutanya Waul, Modu Sene and Melissa Mitchell. Dr. Sunil Bhaskaran is collaborating with Profs. Sanjiv Bhatia and Ashok Samal from Missouri and Nebraska Lincoln universities respectively. The collaboration features two research projects a) *Mapping shadows in very high-resolution satellite data using HSV and edge detection techniques"* and b) Integration of airborne hyperspectral and multispectral datasets.

International Cutting-edge Research Collaboration

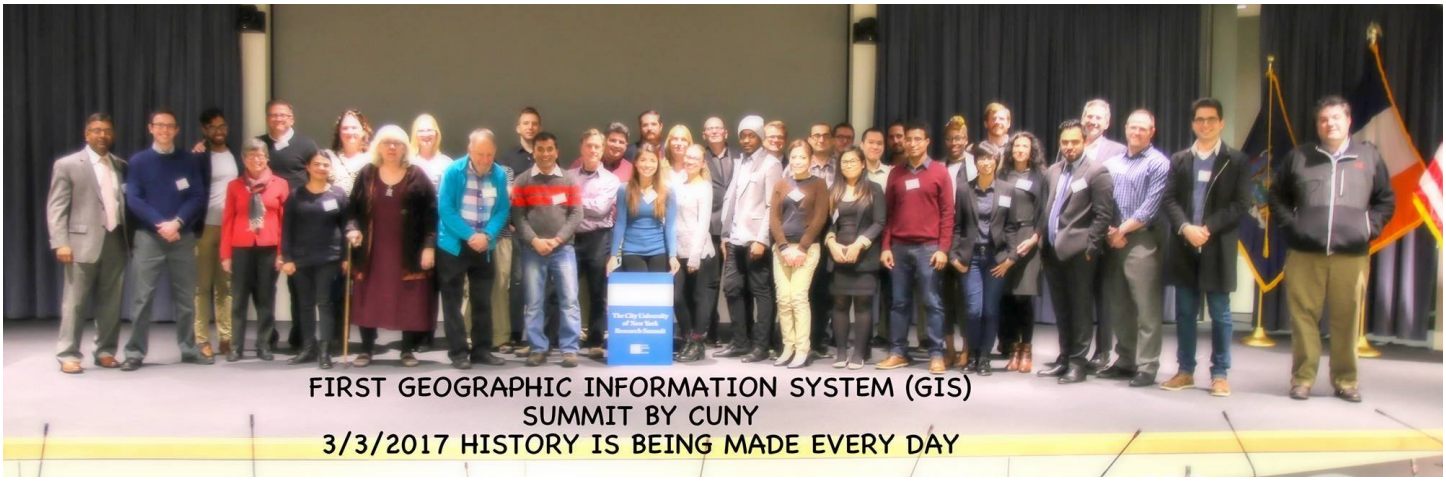
BCC has also been actively involved in projects with the City of Townsville, Australia. The projects centered on Smarter Cities and applications of geospatial technology for mapping smarter cities initiatives. Joint submissions were made to the Rockefeller Foundation. Exchange visits to Australia were sponsored by the Mayor of Townsville's office in Australia and President of BCC. The Smarter Cities initiative led by Professor Neal Phillip has been growing in strength since 2012. A one-day Smarter Cities convention was held at the Historic Gould Memorial Hall on the 2nd October, 2014. The conveners of the event were Professors Neal Phillip and Sunil Bhaskaran.

The Smarter Cities convention at the famous Gould Memorial Hall was attended by key institutes, centers, and students from NYC

BCC President Dr. Carole Berotte Joseph and visiting delegation of Mayors from Australia.

BGCCCI Workshops

A GIS summit was hosted by the Office of Research (Interim Vice Provost for Research Dr. Mark Hauber, Professors Glen Johnson, Andrew Moroko and Sunil Bhaskaran). The event attracted the cream of GIS faculty and students across CUNY and was a roaring success. It facilitated an open discussion about different GIS approaches and enabled participants to network and brainstorm collaborations. The event was held at the CUNY LAW school's Dave Field auditorium.



First Geographic Information System (GIS) Summit by CUNY
March 3rd, 2017

BGCCCI representatives attend the Opportunity Fair hosted by the Fannie Lou Hammer High School in the Bronx.

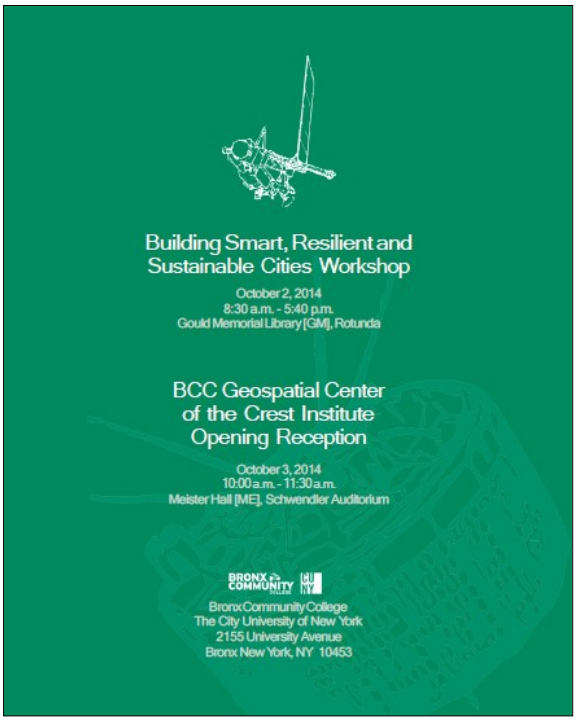
Annual BCC Science Fairs (2011-2015)

Focused undergraduate research: Students were invited to participate in focused cutting-edge research that included satellite image analysis, geostatistical analyses, imaging spectroscopy etc. They were informed about these potential projects in the classrooms during teaching sessions. Many students at BCC face difficult and challenging circumstances at the social and domestic front, which affects their state of mind and also impacts on their availability for participating in research projects. One of the most important issue they faced is finding time for out-of-class activities. Affiliated faculty got around these challenges in a major way by working flexibly around their times and providing flexible hours for research participation. They were trained by customized tutorials for hands-on geospatial exercises. The students were able to engage in research activities throughout a major part of the semester. They prepared technical reports, participated in CUNY conferences, Science Fairs, Symposiums and even published articles in peer-reviewed journals as co-authors with their faculty mentors.

Geospatial students with their research posters at the Annual BCC Science Fairs (2011-2015).

Workshops

Defense and Intelligence Research Forum
April 20th, 2018



Building Smart, Resilient and Sustainable Cities Workshop
October 2, 2014 8:30am-5:40pm

GISMO Career Fair
March 3rd, 2017

Workshops

Applications of Geospatial Technology for Business Projects
Students of Professor Harini Mittal
March 28, 2017 11:00am-11:25am

Geospatial Technology has become a fast-growing, emerging field. Its broad range implications can be used to answer many real world questions. Here at the BCC Geospatial Center, the bright students of Dr. Harini Mittal had the wonderful opportunity to discuss how Geospatial Technology can be implemented in defining and achieving the goals of their business projects. Below is a summary of the student groups and their goals of their business projects. Students are encouraged to define their products and project ideas to better direct them in the use of geospatial technology.

Group 1: Lady, Christopher, Juan, Kimberly
Business Goal: Produce an app for courier service to customers and businesses while ensuring safe transactions to occur between clients in the Bronx location.

Geospatial Questions
- What is the demographics to build the Customer Profile?
- Where are the locations of all local businesses?

Group 2: Pablo, Andy, Jamie, Leslie, Daphne
Project Goal: Market self-charging case for cell phones relying on solar power and magnet/coil technology

Geospatial Questions
- Where are all the retail locations to market this charging case?
- What are the proximities of the retail locations to major highways?
- What are the demographics build Customer Profile?

Group 3: Stephanie, Tahmessha, Patrick, Daneesa
Project Goal: Market specialized mats that uses disposal sheets to collect disposed hair to salons.

Geospatial Questions
- How many salons in NYC? What are the locations?
- What is geographic and spatial distribution of Private/Public Ownership of salons?
- What are the non-spatial data of interest associated with salons?

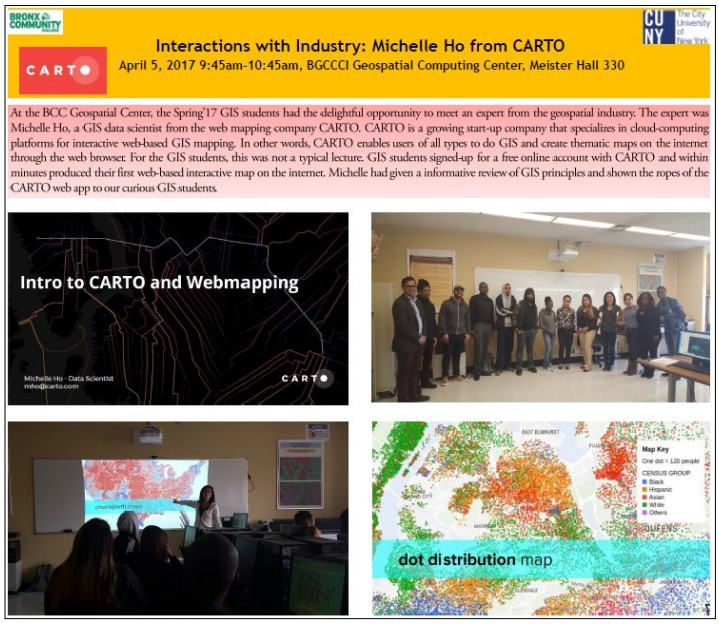
Applications of Geospatial Technology for Business Projects
Students of Professor Harini Mittal
March 28, 2017 11:00am-11:25am

Geospatial Technologies for Health and Human Services
May 4, 2017 10:30am-11:30 am, BGCCCI Geospatial Computing Center, Meister Hall 330

The Public Health Students of Professor Stacia Reader were cordially invited to attend an important health workshop at the BCC Geospatial Center. The workshop introduced Professor Reader and her students to GIS and its implication to Public Health. Adjunct Faculty Asif Zaman of BGCCCI provided a crash course in GIS to the students. Later the students mapped hypothetical Lead Concentrations of Public Schools in New York. Students learned the GIS process of obtaining and cleaning open source data and importing the data into ESRI's ArcMap program. Students also understood the perils of using open source in terms of reliability. For most of Professor Reader's students, GIS was entirely a new concept. However, by the end of the workshop, students recognized how the understanding of health issues can be enhanced with the aid of GIS.

Geospatial Technologies for Health and Human Services
May 4, 2017 10:30am-11:30 am, BGCCCI Geospatial Computing Center, Meister Hall 330

Workshops by the Industry



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Geospatial Technologies for Health and Human Services
May 4, 2017 10:30am-11:30 am, BGCCCI Geospatial Computing Center, Meister Hall 330

The BGCCCI Advisory Board Meeting — Visit by the representatives from the Industry

BGCCCI a center driven by Industry Inputs and Advisory board

The center thrives on inputs from the Industry and holds meeting with them under the auspices of the BGCCCI Advisory board. The meetings themselves are supported by the Office of Academic Affairs and Job Linkages grant program. The meeting focuses on creating innovative career pathways with middle-high schools, 2 and 4-year colleges and employers. The advisory board consists of representatives from the Geospatial Industry, CUNY Collaborative program, NOAA-CREST and others.

Director of BGCCCI with members of the Geospatial industry at the Hall of Fame for Great Americans

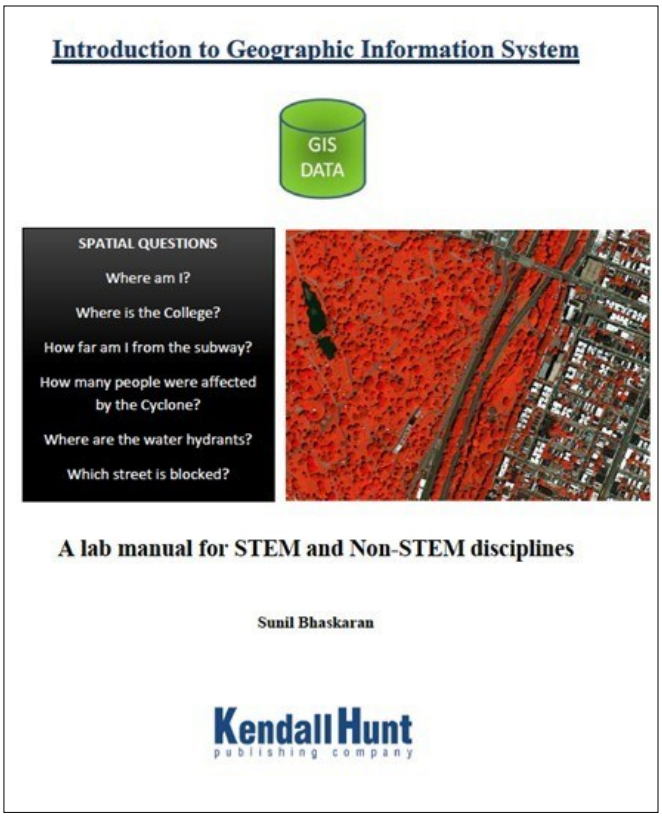
Members of the BGCCCI Advisory Board at the Geospatial Computing Center

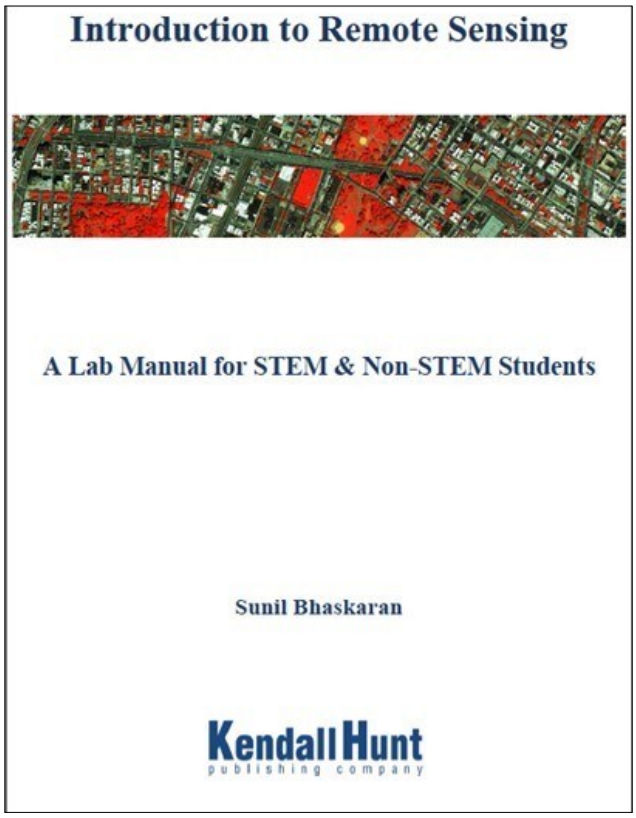
Peer-reviewed publications

- Leroy Brown, Bhaskaran Sunil, Dhar Ratan, Automated Feature Extraction Algorithms from Multispectral Space Borne Datasets, 2015 GSA Annual Meeting in Baltimore, Maryland, USA (1-4 November 2015).

Books

- Introduction to Remote Sensing: Introduction to Remote Sensing. (2015). A lab manual for STEM and Non-STEM students. Author: Sunil Bhaskaran. Contributors: Sanjiv Bhatia, Ratan Dhar and Leroy Brown*. Publishers - Kendall Hunt, ISBN # 978-1-4652-7400-7, pp. 110.
- Introduction to Geographic Information System:Introduction to Geographic Information System. (2015). A lab manual for STEM and Non-STEM students. Author: Sunil Bhaskaran. Contributors: Dhruv Kumar Bhatt*, Amos Addy*, Nicaela Cartagena*, and Sheldon Skaggs. Publishers - Kendall Hunt, ISBN #978-1-4652-7399-4, pp.242.





In proceedings of conferences/symposium/summit

2017

- Rositsa T. Ilieva, Tanzina Ahmed, Sunil Bhaskaran, Assessing Fresh Food Access at a Community College: A Socio-Spatial Approach, Session Theme: Geospatial Technologies for Urban Health, AAG, April 10-14, 2018, New Orleans.
- Rodriguez, Stephanie and Sunil Bhaskaran, Geologic hazard assessment of mass wasting along California's Central Pacific Coast, GSA Annual Meeting in Seattle, Washington, USA – 2017.
- Sunil Bhaskaran and Leroy Brown, Mapping Landcover over New York City with high-res satellite data, CUNY GIS Summit, 3/3/2017, CUNY Law School, Brooklyn, New York.
- Sunil Bhaskaran, Pioneering Geospatial Technology at Bronx Community College – City University of New York, CUNY GIS Summit, 3/3/2017, CUNY Law School, Brooklyn, New York.
- Sunil Bhaskaran, The development of Geospatial Technology at Bronx Community College: A MODEL approach to preparing students for today's workforce, 6th Annual Tri-State Best Practices Conference Issues of Equity in Higher Education, March 4, 2017, Bergen Community College at the Meadowlands, New Jersey.

2016

- Sunil Bhaskaran, (2016), Pathways in Geospatial Technology – A Model for CUNY, 1 December, 2016, John Jay College, New York. http://www.centerdigitaled.com/events/CUNY-IT-Conference.html

2015

- Leroy Brown, Bhaskaran Sunil, Dhar Ratan, Automated Feature Extraction Algorthms from Multispectral Space Borne Datasets, 2015 GSA Annual Meeting in Baltimore, Maryland, USA (1-4 November 2015).

Invited Lectures, Seminars, and Honors

2017

- Invited speaker – International Research Conference – Graduate Center – CUNY, 8th November, 2017
- Invited to speak at the GeoStac (Geospatial Seminar), BMCC-CUNY, 10/27/2017, 1-5pm
- Invited to attend the Falling Walls Lab New York, Thursday, September 14, 8:30am - 11:00am at the German House, 871 United Nations Plaza, New York, NY 10017.
- Invited on the 2nd August, 2017 by CUNY to serve as a member of a university wide implementation team for 'Knowledge creation and Innovative Research' – one of the 5 major areas of the Connected CUNY Strategy Framework http://www1.cuny.edu/sites/connected/overview/ led by Chancellor James B. Milliken, Provost Vita Rabinowitz and Associate Vice Chancellor Amy McIntosh.
- Invited to attend the ENVI Analytics Symposium (EAS) 22-24 August, Denver.
- Nominated by SVP and Provost Dr. Claudia Schrader to on the to serve on the CUNY's Inaugural Research Advisory Board chaired by Associate Vice chancellor and University Vice Provost for Research (7th April, 2017).
- Invited to co-host CUNY's first ever Geographic Information System (GIS) summit (3rd March, 2017) at CUNY Law School
- Geospatial Technology and Data Visualization, Department of Art and Music, Bronx Community College, City University of New York, 2155, University Avenue, Bronx 10453, New York.
- Invited to serve as a Scientific Committee member for International Geosciences and Remote Sensing Symposium (IGARSS) 2017, Texas, USA.

2016

- 'Geospatial applications for managing trauma and emergencies' - Hackensack Medical University Foundation, Dec 1, Hackensack University Medical Center Foundation, A member of Hackensack Meridian Health, 360 Essex Street, Suite 301, Hackensack, NJ
- 'Mapping career pathways in geospatial technology' - GeoNYC MeetUp, Monday, October 10, 2016, 6:30 PM, Mapzen, 30 W 26th Street, 7th floor, New York, NY.
- Invited by the Interim Vice- Provost for Research - City University of New York on the 6th October, 2016, to discuss Geospatial project collaborations with National Geospatial Intelligence Agency (NGIA), Participants – Senator Bob Kerrey, Director of Technology Ernie Reith (NGIA), Dr. Vita Rabinowitz (Provost – City University of New York, Chancellor of City University of New York, James B. Milliken, Interim University Vice Provost Dr. Mark E. Hauber and Professor Glen Johnson, CUNY School of Public Health.

2016

- 'Evolution of the BCC Geospatial Center of the CUNY CREST Institute - Delivered a presentation on the development of Geospatial Technology at Bronx Community college at CARTO, 201, Moore Street, Brooklyn, New York.
- 'Cutting-edge research at the BCC Geospatial Center of the CUNY CREST Institute' – Presentation at the BCC Geospatial Center of the CUNY CREST Institute.
- 'Imaging spectroscopy for mapping Urban Environment' - Invited by the Mayor's Office City of Dubuque, Iowa to deliver key note address – Annual Sustainability conference, 5th October.
- Honored by CUNY - For outstanding contributions in research, education and service. Special Grants Reception hosted by Chairperson of CUNY Board of Trustees – Benno Schmidt, Chancellor James B. Milliken, and Provost Vita Rabinowitz. 5/12/2016
- 'Model for collaboration between BGCCCI and NASA, Goddard Flight Center', Delivered a presentation to a team from NASA educational office (Goddard Flight Center), New York on 10/26/2015
- 'Research in emerging technologies', NASA Space Grant program – American Museum of Natural History. 3:30pm. 19th February, 2016
- Invited to serve as a Scientific Committee member for International Geosciences and Remote Sensing Symposium (IGARSS) 2016, Beijing, China.
- Invitation from The Sustainable Development Goals Fund at the United Nations Development Program (UNDP) to participate in an online event on fostering Business and United Nations engagement.

2015

- Member of panel discussion – Annual Sustainable Energy and Design (SED) conference, Bronx Community College.
- 'Research in Geospatial Technologies (Invited Lecture), NASA Space Grant program – Borough of Manhattan Community College, 2015
- Honored by CUNY - For outstanding contributions in research, education and service. Special Grants Reception hosted by Chairperson of CUNY Board of Trustees – BennoSchmidt, Chancellor James B. Milliken, and Provost Vita Rabonawitz. 12/08/2015
- Honored by CUNY - For outstanding contributions in research, education and service. Special Grants Reception hosted by Chairperson of CUNY Board of Trustees – Benno Schmidt, Chancellor James B. Milliken, and Interim Provost Julia Wrigley. 05/14/2015
- Honored by CUNY – For outstanding contributions in research, education and service. Special Grants Reception hosted by Chairperson of CUNY Board of Trustees – Benno Schmidt, Chancellor James B. Milliken, and Interim Provost Julia Wrigley. 05/08/2014.

Fall 2017 NSF Events

⇒ Director of BCC Geospatial Center invited to attend the Falling Walls Lab in New York at the German House, 871 United Nations Plaza New York, NY 10017.

Date: Thursday, September 14

Time: 8:30am - 11:00am

⇒ Director of BCC Geospatial Center invited to deliver a talk titled: “Pioneering Activities in Geospatial Education, Research and Outreach at the BCC Geospatial Center of the CUNY CREST Institute" at the Fund for the City of New York.

Date: September 27

Time: 11:30am - 1:00pm

⇒ BGCCCI Coordinator and GIS Instructor represent BGCCCI at the Opportunity Fair hosted by the Fannie Lou Hammer School in the Bronx.

Date: October 7th - December 9th, 2017

⇒ GISMO cordially invited students to participate in the Job Fair, which was held at Hunter College (695 Park Avenue).

Date: October 24, 2017

Time: 2:00pm - 6:00pm

⇒ BCC Geospatial Center Director and Principal Investigator of NSF-ATE program to participate in the 2017 ATE Principal Investigators Conference at Washington, D.C.

Date: October 23-25, 2017

⇒ BCC Geospatial Center discusses new pipelines with BMCC's Criminal Justice Program

Date: October 27, 2017

Time: 11:00am

⇒ Geography & Spatial Thinking Across the Curriculum (GeoSTAC).

Date: Fri, October 27, 2017

Time: 1:00 PM – 5:00 PM

Location: Room S341 (Main Campus), BMCC, CUNY

⇒ Director of BGCCCI invited to present at the International Research and Education Forum

Date: November 8, 2017

Location: The City University of New York (CUNY) Graduate Center, 365 Fifth Avenue at 34th Street, New York City.

Spring 2018 Events

⇒ Director of BGCCCI delivers a talk on 'Managing Earth from Space' at the Wycoff Chamber of Commerce.

Date: 3/15/2018

Time: 8:00am

⇒ Director of BGCCCI to attend the Defense and Intelligence Research Forum

Date: Friday, April 20th, 2018

Time: 11:00am - 5:00pm

⇒ Thirty (30) members from the Geospatial Information Systems and Mapping Organization (GISMO) the largest not-for-profit Geospatial Association in New York State will be visiting the BCC Geospatial Center of the CUNY CREST Institute (BGCCCI).

Date: April 20th, 2018

Time: 3:30pm

⇒ Director of BGCCCI invited to talk about Urban Sensing at a seminar by New York University-Kavli Futures

Date: 25th April, 2018

⇒ Director of BGCCCI invited to sit on a panel discussion about application of remote sensing for Smarter Cities

Date: 26th April, 2018

The BGCCCI has collaborated with very important partners and attended highly innovated events.

⇒ **TTD event**

Bev Corwin of the Technology Transfer Delivery (TTD) Team will visit the Geospatial Center of the CUNY CREST Institute in the month of May, 2018. Bev is the founder of TDD. Technology Transfer Days are diverse collaborative learning events where invited speakers, guest participants, attendees, subject matter experts, thought leaders, researchers, advisors, entrepreneurs, innovators and inventors gather from industry, business, academia, research, government, and community organizations to problem solve, learn, mentor, and collaboratively explore needs and opportunities in emerging technology transfer ecosystems.

Summer 2018 Geospatial Workshops

The BGCCCI offered Summer Geospatial Workshops for Middle and High Schools and Undergraduate Students.

Geospatial Workshop for Middle Schools

Geospatial Workshop for High Schools

Geospatial Workshop for Undergraduate Students

Summer 2018 Workforce Internship Programs

The BGCCCI offered Summer Workforce Internship Programs (SWIP) for High School and Undergraduate Students.

Summer Workforce Internship Program (SWIP) for High Schools

Click on the links below to get an inside on the High School Interns' research projects:

- Avishek Mojumdar: Comparing the effects of chemical elements in Freshwater Soil and Wetland Soil
- Joshua Tsai: The Effects of Dissolved Nitrogen on Seasonal Hypoxia in the Long Island Sound
- Brianna Barrera: Antibiotic resistance in bacteria from animal origin vs non animal origin foods
- Timothy Foley: Studying the environmental factors influencing particulate matter concentration
- Ousmane Sow: Population Diversity of Miami, Florida
- Mei Shin Lee: The Correlation between Population Growth and Inhalable Particulate Concentration in New York City
- Shohag Islam: The Correlation between Household Income and Education Attainment in Different U.S. Regions
- Elisa Tilley: Food Deserts in NYC – America's Silent Killer

Summer 2018 Workforce Internship Programs

Summer Workforce Internship Program (SWIP) for Undergraduate Students

Click on the links below to get an inside on the Undergraduate Interns' research projects:

- Navado Wray: Raster Based Land Cover Classification of Multi-Resolution Satellite Data over the Bronx & Queens
- Mike Tejada: A Spatio-Temporal Study on Drug Overdose VS Elections in the United States
- Shraman Sen: Demographic Changes and Spatial Correlations in Socio-Economic in New York City
- Camilo Martinez: Spatial Analyses of Open Source Data for Health Services
- Ality Aghedo: Microbial Diversity in Urban Environments: Concern for Antibiotic Resistance
- Jenat Fahima: Effectiveness of New York State Department of Environmental Conservation (NYSDEC) Restoration Plantings
- Lorena Pardo: Using the AirBeam to Monitor Particulate Matter at a Public Transportation Hub in Jamaica, Queens (New York)
- Luz Arely Cadavid: Stormwater management Studies in New York City: How does flood affect the residents in South Jamaica, Queens?
- Meem Mahmud: Phosphate levels of water and sink of the Long Island Sound

Summer 2018 Professional Development Workshop for Educators from Middle and High Schools and Colleges

PDW for Educators from Middle and High Schools and Colleges

This program was designed to improve the educators' disciplinary capabilities, teaching skills, and understanding of geospatial technologies, which will enable them to learn fundamental geospatial skills and integrate those skills into their classroom lessons.

Director's presentation: 'Blending emerging technologies in teaching'

Grants and Funding

(2017) Training BCC students and faculty in 3D Geographic Information System Data Analysis and Modeling (**Status - funded $16,000**).

(2017) Teaching Early Childhood Students about Geospatial Faculty Mentor: Sunil Bhaskaran (**Status – Funded $2,500**)

(2017) CUNY WIDE GIS research repository **($15,000)**

(2016) Education, Research and Dissemination of Geospatial Technology at Bronx Community College **[$300,000],** submitted.

(2016-2020) 'Pathways to Geospatial Technology and Careers' National Science Foundation-Advanced Technological Education, 2017.
Status—funded **($899,840.00**).
Eureka New Alert - https://www.eurekalert.org/pub_releases/2017-07/tcuo-cci071117.php
City University of New York BLOG - http://bit.ly/2sLQZ0F
NSF-ATE Central Website - https://atecentral.net/msites/bhaskaran

(2016) Mapping Air Quality in New York City using Geospatial Technology. Student Tech Fee **[$7,000]**

(2016) Interning to Careers in Geospatial Technology, Job Linkages Grant – BCC-OAA [**$9,564.00]**

(2015) NASA Space Grant faculty mentor release time **[$6,000]**

(2015) 'Mapping Global Urbanization Patterns'. Digital Globe Foundation [**$120,000]**

(2015) BCC Environmental Technology Program NYCDEP Internship Program. Approved for funding but not awarded **[$13.500]**

(2015) BCC STEM Majors participation in the 2015 Black Engineer of the year award (BEYA), Conference, Washington, DC (Grant from NOAA-CREST Institute [**$5,500]**

(2015) Student Technology Fee Grant, BCC-CUNY, [**$5,000]**

(2013 -2015) Workforce Development Initiative Grant – CUNY, [**$38,000]**

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Mission

The mission of the BGCCCI is to educate, train and prepare BCC students to enter the workforce or pursue advanced studies in geospatial technology. The Center seeks to achieve this goal by engaging in the following activities:

- *Design, develop and introduce new and multidisciplinary courses/programs in geospatial technology at BCC.*
- *Conduct scholarly activities and cutting-edge research in areas of national priority.*
- *Design and develop training programs for middle and high school students and educators.*
- *Train BCC students, faculty, staff and local residents.*
- *Organize summer institutes for high schools and undergraduate students.*
- *Seek grants from private and federal entities.*

Geospatial Team

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