

HITOS CONMEMORATIVOS MARCANDO LA 4^{TA} DIMENSION

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Catedrática

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**FELICITAMOS A PRYSIG EN
SUS
PRIMEROS QUINCES, QUE
CUMPLAS
MUCHOS MAS !!!**

**ASI QUE CON NUESTRA
PRESENTACION TITULADA
“HITOS
CONMEMORATIVOS
MARCANDO LA 4^{TA}
DIMENSION”
HABLAREMOS DE LA 4^{TA}
DIMENSION QUE IMPLICA
TIEMPO - DURACCION QUE
ES FUNCION DEL TIEMPO.**

Decimoquinta reunión nacional de —
Percepción Remota y Sistemas
de Información Geográfica de
Puerto Rico



COMENZAREMOS CON LA RELACION QUE NOSOTROS TENEMOS CON EL NATIONAL GEODETIC SURVEY POR VIRTUD DE UN “MOU” DESDE EL 1999.

DESTACAREMOS LOS HITOS O MARCAS CONMEMORATIVAS QUE HEMOS ESTABLECIDO EN PUERTO RICO Y LA QUE PROXIMAMENTE SE ESTABLECERA EN VIEQUES, LA CUAL TENEMOS AQUÍ.

Decimoquinta reunión nacional de —
Percepción Remota y Sistemas
de Información Geográfica de
Puerto Rico



<http://www.ngs.noaa.gov>

**NGS Regional Geodetic Advisor
State Geodetic Coordinator**

Mid-Atlantic

(Includes DC, DE, GA, MD, NC, PR, SC, USVI and VA)
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The screenshot shows the National Geodetic Survey (NGS) website homepage. At the top, there is the NOAA logo and the text "National Geodetic Survey" with the tagline "Positioning America for the Future". Below this is a navigation menu with links for "NGS Home", "About NGS", "Data & Imagery", "Tools", "Surveys", "Science & Education", and a search bar. The main content area is divided into several sections:

- Quick Links:** A list of links including "OPUS", "COR3", "Survey Mark Datasheets", "NGS Data Explorer", "OPUS Projects", "Geodetic Tool Kit", "State Plane Coordinates", "Antenna Calibration", "UFCOR3", "GEOD", "GP3 on Bench Marks", "Geodetic Advisors", "Storm Imagery", "Publications", "2017 Geospatial Summit", "FAQs", and "Contact Us". There is also a "Subscribe for email notifications" button.
- Introduction:** A paragraph stating "NOAA's National Geodetic Survey (NGS) provides the framework for all positioning activities in the Nation. The foundational elements of latitude, longitude, elevation, shoreline information impact a wide range of important activities."
- Learn more about:** A list of topics: "Data and tools we provide", "Activities in your area", and "Applications of geodesy".
- Featured Content:** A grid of six boxes, each with a title, a small image, a brief description, and a "Learn More" link:
 - GNSS & GP3 Data:** "Get coordinate information and the tools you need to work independently."
 - Remote Sensing:** "Download data and critical information into nautical charts."
 - Land Surveying:** "View guidelines and get tools to support land surveyors."
 - Geodesy:** "NGS works closely with the global researchers advancing geodetic science."
 - Training & Education:** "Classes and educational resources on scientific topics relating to geodesy."
 - Datums & Transformations:** "NGS defines datums to help align data and tools to transform coordinates."
- Emergency Response:** A section titled "Emergency Response" with sub-sections for "Pool Hurricane Aerial Imagery: Hurricane Nate", "Hurricane Maria", "Hurricane Irma", and "Hurricane Harvey", each with a "Previous Storms" link.
- Notices:** A section titled "Notices" with sub-sections for "Live Release: NADCON 5" and "Beta Release: COR3 & OPUS Share Maps", each with a "Previous Notices" link.
- In the News:** A section titled "In the News" with sub-sections for "11/09/2017 - Representing the Americas at International Geodesy Meeting", "11/17/2017 - U.S. and Canada Collaborate on Great Lakes Data Collection", and "11/08/2017 - NGS and NASA Discuss Organizational Mission Requirements", each with a "Previous News Stories" link.

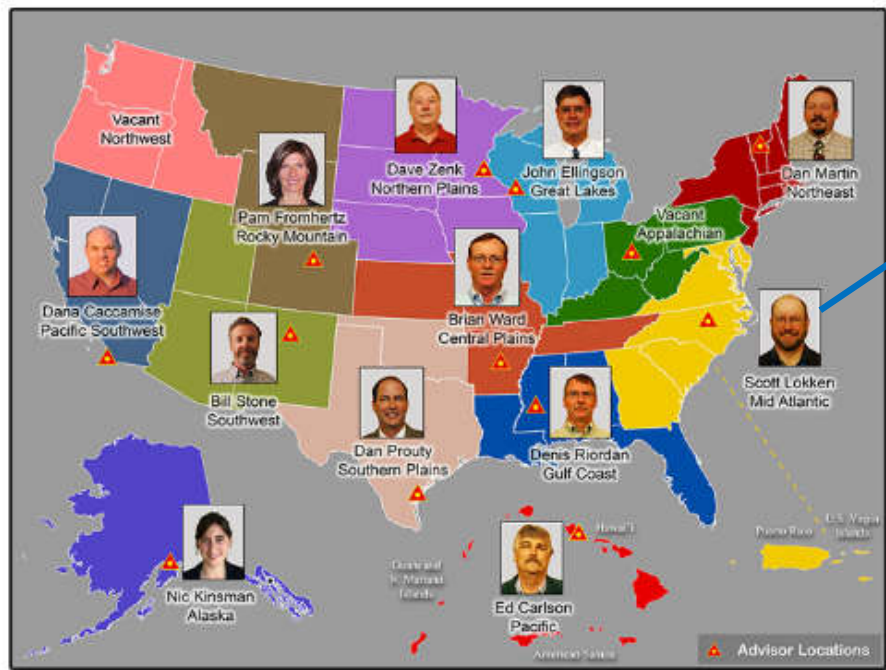
At the bottom of the page, there is a footer with the text "Website Owner: National Geodetic Survey | Last modified by NGS.webmaster Jun 12 2017" and a navigation bar with links for "NGS Home", "NGS Employees", "Privacy Policy", "Disclaimer", "USA.gov", "Ready.gov", "Site Map", and "Contact Webmaster".



NGS Regional Geodetic Advisors

National Geodetic Survey

NGS Home About NGS Data & Imagery Tools Surveys Science & Education Search



Mid-Atlantic

(Includes DC, DE, GA, MD, NC, PR, SC, USVI and VA)

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The Regional Geodetic Advisor is a federal employee of NOAA's National Geodetic Survey (NGS). The Advisor serves as a liaison between NGS and its public, academic and private sector constituents within their assigned region. They provide expert guidance and assistance to these constituents who are managing the geodetic component of geospatial activities that are tied to the National Spatial Reference System (NSRS). Geodetic advisors serve as subject matter experts in geodesy and regional geodetic issues, collaborating internally across NGS and NOAA to further the organizations' missions. They are to maintain awareness of current developments in geodetic science and technology, updates and improvements to geodetic reference systems, and application to geospatial activities. Recognizing that a Regional Advisor supports an entire region in which individual states may have local and unique geodetic needs or priorities, NGS recommends that each state identify someone to serve as a State Geodetic Coordinator.



State Geodetic Coordinators

National Geodetic Survey

[NGS Home](#)

[About NGS](#)

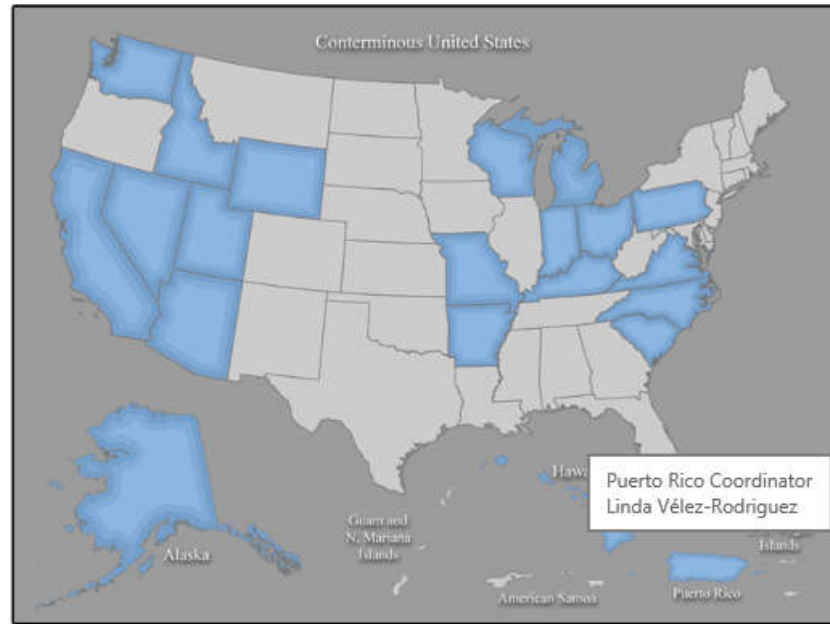
[Data & Imagery](#)

[Tools](#)

[Surveys](#)

[Science & Education](#)

[Search](#)



Puerto Rico

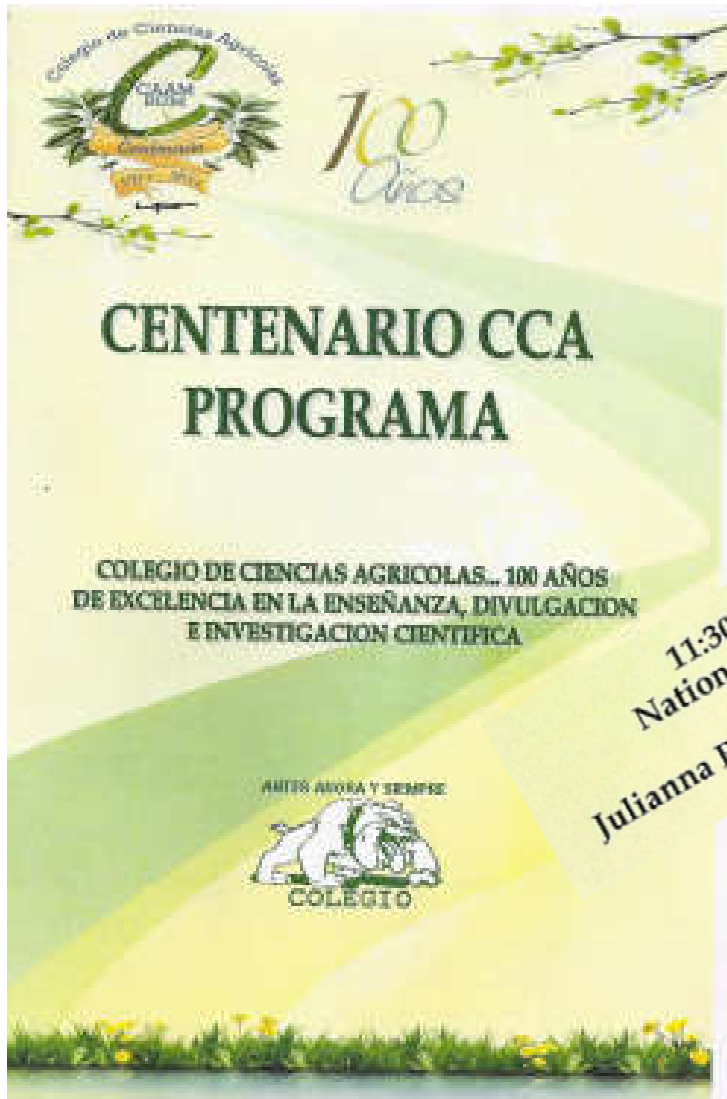
Linda Vélez-Rodriguez, MS, PE, PLS
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The State Geodetic Coordinator is not employed by NGS and is assigned by a state government agency or university. The Coordinator serves as a liaison between the state and NGS. State Coordinators should have technical expertise in geodesy to make informed decisions about and provide guidance for geospatial activities that benefit from connecting to the NSRS. The State Geodetic Coordinator is a primary point of contact in the state for the Regional Geodetic Advisor.

State Geodetic Coordinators

<https://www.ngs.noaa.gov/ADVISORS/state-geodetic-coordinators.shtml#PRC>



11:30 AM – Develación Punto de Referencia
 National Oceanic and Atmospheric Administration
 Julianna P. Blackwell, NOAA National Geodetic Survey Office

ACTIVIDAD PROTOCOLARIA

Moderador: Agro. Julio Colón

8:00AM – Reflexión
 Birmontida

8:15AM – Saludos

Hon. José Guillermo Rodríguez, Alcalde
 Municipio de Mayagüez

Dr. Jorge Rivera Santos, Rector
 Recinto Universitario de Mayagüez

Agro. Maribel Torres, Subsecretaria
 Departamento de Agricultura

Sra. Rocio Zapata, Presidenta
 Comité Centenario – RUM

Ing. José R. Balzac, Presidente
 Asociación y Fundación Alumni Colegio

9:30AM – Presentación

Colegio de Ciencias Agrícolas... 100 años de excelencia en la
 enseñanza, divulgación e investigación de las ciencias agrícolas

Dr. Héctor L. Santiago Anadín, Decano - Director

10:15AM - Presentación Pictórica

Dr. John Fernández VanCleve, Catedrático

10:45 AM - Soricografía Centenaria

Prof. Aristides Armstrong - Decano Asociado Facultad

11:00AM – Reconocimientos

11:30 AM – Develación Punto de Referencia
 National Oceanic and Atmospheric Administration

Julianna P. Blackwell, NOAA National Geodetic Survey Office

11:45AM - Develación Escultura de Reconocimiento a Auspiciadores

12:00 M - Siembra Árbol Centenario

Organizaciones Estudiantiles – CCA

MARCA DEL CENTENARIO CAAM/RUM 1911-2011



El 23 de septiembre de 2011,
Julianna P. Blackwell,
Directora del “National Geodetic
Survey” (NGS) junto al **Dr.
Jorge Rivera Santos** Rector
develan la marca del centenario.



News at the National Geodetic Survey Web Page

www.ngs.noaa.gov



The screenshot shows the NOAA logo in the top left corner. The page title is "News Item" and the organization is identified as the "National Geodetic Survey". A navigation menu includes links for "NGS Home", "About NGS", "Data & Imagery", "Tools", "Surveys", and "Science & Education", along with a search box. The main content area features a date "Thursday, September 29, 2011" and a headline "NGS Director Dedicates Commemorative Positioning Monument". An accompanying image shows a gold commemorative coin, a satellite, and a building. The text describes the dedication of a commemorative mark at the University of Puerto Rico, Mayaquez (UPRM) on September 23, 2011, by Juliana Blackwell, Director of NGS. It notes that nearly 200 people attended and that other NGS staff will be working to expand the vertical reference frame in areas lacking vertical control. Contact information for Sherri Watkins is provided. The footer contains the website owner information and a list of links: "NGS Home", "NGS Employees", "Privacy Policy", "Disclaimer", "USA.gov", "Ready.gov", "Site Map", and "Contact Webmaster".

 **News Item**
National Geodetic Survey

[NGS Home](#) [About NGS](#) [Data & Imagery](#) [Tools](#) [Surveys](#) [Science & Education](#) [Search](#)

 **Thursday, September 29, 2011**

NGS Director Dedicates Commemorative Positioning Monument

The National Geodetic Survey (NGS) staff recently traveled to Puerto Rico to participate in the Centennial Celebration of the University of Puerto Rico, Mayaquez (UPRM) held on Sept. 23 on the University of Mayaquez campus. Juliana Blackwell, Director of NGS, addressed the group and dedicated and unveiled the University of Mayaquez/NGS commemorative mark. Nearly 200 people attended the event. Other NGS staff will perform work to further expand the Puerto Rico vertical reference frame in areas lacking vertical control. For more information, contact [Sherri Watkins](#).

Website Owner: National Geodetic Survey / Last modified by NGS.webmaster May 16 2017

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Online Positioning User Service (OPUS) Shared Solution

Para este servicio del National Geodetic Survey (NGS) via web, se requiere lo siguiente:

- 1-Observaciones de GNSS estáticas en el lugar, por 4 horas;
 - 2-Fotografías del punto: una en detalle y otra que se vea el horizonte
 - 3- Contestar unas preguntas sobre la monumentación y
 - 4-Descripción de como llegar al punto incluyendo un amarre verbal
 - 5-Se evaluara lo enviado se comunican vía web.
- De pasar los parámetros se publicara en “OPUS Shared”



OPUS menu
upload
about OPUS
projects
shared solutions
support / feedback

Upload your data file.
Solve your GPS position & tie it to the National Spatial Reference System. [What is OPUS?](#) [FAQs](#)

data file of dual-frequency GPS observations. [sample](#)

antenna - choosing wrong may degrade your accuracy.

antenna height meters above your mark.
antenna height of your antenna's reference point.

email address - your solution will be sent here.

Options to customize your solution.

formats

base stations **Use:** **Exclude:**

state plane

project identifier

my profile

share my solution

format details
type in 4-char site IDs any CORS you wish to explicitly include or exclude from your solution with line break [sample](#)
NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly

Look up site IDs
override your native **SPCS zone**
enter the id provided by your project manager
customize OPUS defaults for future solutions

why share?

[sample solutions](#)



OPUS: Online Positioning User Service

National Geodetic Survey

- NGS Home
- About NGS
- Data & Imagery
- Tools
- Surveys
- Science & Education



- OPUS menu**
- upload
 - about OPUS
 - projects
 - shared solutions
 - support / feedback

Browse map to locate and access Shared solutions.

<https://www.ngs.noaa.gov/OPUS/getDatasheet.jsp?PID=BBFB06>

Shared Solution

PID: BBFB06

Designation: 100YRS CAAM

Stamping: 100YRS CAAM

Stability: May hold, commonly subject to ground movement

Setting: Mat foundation or concrete slab other than pavement

Description: THE STATION IS A CONMMEMORATIVE MARK OF THE 100 YEARS OF THE UNIVERSITY FOUNDATION (1911 TO 2011). TO REACH THE STATION FROM THE INTERSECTION OF PR-2 AND CALLE SAN JUAN IN THE TOWN OF MAYAGUEZ, GO NORTHEAST ON CALLE SAN JUAN FOR 0.06 MI(0.1 KM) TO A CONCRETE ARCH AT THE ENTRANCE TO THE UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS AND AT THE ENTRANCE OF JESUS T. PINERO BUILDING GO WEST, THE STATION IS AT THE CENTER ON THE CONCRETE CIRCULAR SLAB.

Observed: 2011-09-07T21:41:00Z

Source: OPUS - page5 1209.04



Close-up View

PID: BBFB06

Designation: 100YRS CAAM

Stamping: 100YRS CAAM

Stability: May hold, commonly subject to ground movement

Setting: Mat foundation or concrete slab other than pavement

Description: THE STATION IS A CONMMEMORATIVE MARK OF THE 100 YEARS OF THE UNIVERSITY FOUNDATION (1911 TO 2011). TO REACH THE STATION FROM THE INTERSECTION OF PR-2 AND CALLE SAN JUAN IN THE TOWN OF MAYAGUEZ, GO NORTHEAST ON CALLE SAN JUAN FOR 0.06 MI(0.1 KM) TO A CONCRETE ARCH AT THE ENTRANCE TO THE UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS AND AT THE ENTRANCE OF JESUS T. PINERO BUILDING GO WEST, THE STATION IS AT THE CENTER ON THE CONCRETE CIRCULAR SLAB.

Observed: 2011-09-07T21:41:00Z

Source: OPUS - page5 1209.04

REF FRAME: NAD_83(2011)	EPOCH: 2010.0000	SOURCE: H = h-N (N = GEOID12B HGT)	UNITS: m	SET PROFILE	DETAILS
LAT: 18° 12' 37.90542" ± 0.008 m					
LON: -67° 8' 37.39113" ± 0.020 m					
ELL HT: -20.922 ± 0.043 m					
X: 2354082.234 ± 0.022 m					
Y: -5584777.796 ± 0.035 m					
Z: 1980525.906 ± 0.018 m					
ORTHO HT: 19.811 ± 0.073 m					
		UTM 19	SPC 5200(PRVI)		
		NORTHING: 2014471.949m	241894.148m		
		EASTING: 696304.002m	124856.958m		
		CONVERGENCE: 0.58029176°	-0.22227152°		
		POINT SCALE: 1.00007643	0.99999402		
		COMBINED FACTOR: 1.00007972	0.99999731		

CONTRIBUTED BY

[linda.velez](#)

• [University of Puerto Rico, Mayagüez](#)



Horizon View



REF FRAME: NAD_83(2011)	EPOCH: 2010.0000	SOURCE: H = h-N (N = GEOID12B HGT)	UNITS: m	SET PROFILE	DETAILS
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LAT: 18° 12' 37.90542" ± 0.008 m					
LON: -67° 8' 37.39113" ± 0.020 m					
ELL HT: -20.922 ± 0.043 m					
X: 2354082.234 ± 0.022 m					
Y: -5584777.796 ± 0.035 m					
Z: 1980525.906 ± 0.018 m					
ORTHO HT: 19.811 ± 0.073 m					

UTM 19	SPC 5200(PRVI)
NORTHING: 2014471.949m	241894.148m
EASTING: 696304.002m	124856.958m
CONVERGENCE: 0.58029176°	-0.22227152°
POINT SCALE: 1.00007643	0.99999402
COMBINED FACTOR: 1.00007972	0.99999731

CELEBRAMOS LOS 100 AÑOS DEL DEPARTAMENTO DE INGENIERIA CIVIL Y AGRIMENSURA SIMBOLICAMENTE CON



Presentaremos los HITOS del PASADO, PRESENTE Y FUTURO, dedicados a los promotores y forjadores de la ingeniería civil y la agrimensura. Simbólicamente hemos designado estos HITOS con los siguientes nombres: Aurelio Matilla, QEPD profesor español que en el 1948 comenzó a vislumbrar la enseñanza universitaria de la agrimensura en el entonces CAAM; de la primera mujer ingeniera civil, Nora H. Rivera Murillo, QEPD, primera en viabilizar el poder tomar el campamento de agrimensura en Guajataca graduada en 1955; Antonio Hernández Virella, QEPD ingeniero civil con una pasión por la práctica y promoción de la agrimensura graduado en 1958, siendo estos tres los HITOS DEL PASADO correspondiendo estos a los primeros 45 años 1913 al 1958.





Shared Solution

PID: BBDX35
 Designation: ING. NORA H RIVERA
 Stamping: NORA H RIVERA MURILLO UPR RUM 1914 - 2014
 Stability: May hold, commonly subject to ground movement
 Setting: Object driven into ground
 Description: A CONMMEMORATIVE "HITO" BENCH MARK, LOCATED AT THE UPR-MAYAGUEZ CAMPUS ON THE S SIDE OF THE CIVIL ENGINEERING BUILDING AT THE ENTRANCE OF THE EAST CAMPUS ON THE 1.7 KM ON PR-108. THE STATION IS 12.8 METERS (41.997 FT) S-SE FROM THE W CORNER OF THE E STAIRCASE, 8.9 METERS (29.201 FT) S-SW FROM AGTO 2005 BENCH MARK, AND 12.9 METERS (42.325 FT) S-SW FROM THE E CORNER OF THE E STAIRCASE. STATION IS ON METAL CAP ROD WITH A PROTECTIVE ACCESS COVER. ESTAMPED NORA H RIVERA MURILLO UPR-RUM 1914 - 2014.
 Observed: 2014-09-29T14:45:00Z
 Source: OPUS - page5 1209.04



Close-up View

REF FRAME: NAD_83(2011)	EPOCH: 2010.0000	SOURCE: H=L-N (N=GEOID12B HGT)	UNITS: m	SET PROFILE	DETAILS
LAT: 18° 12' 52.23505" ± 0.011 m	LON: -67° 8' 19.48584" ± 0.016 m	ELL HT: -27.652 ± 0.020 m	X: 2354511.046 ± 0.007 m	Y: -5584440.653 ± 0.027 m	Z: 1980942.298 ± 0.004 m
ORTHO HT: 13.085 ± 0.035 m	UTM 19 SPC 5200(PRV)		NORTHING: 2014917.865m 242332.677m	EASTING: 696825.651m 125384.758m	CONVERGENCE: 0.58197045° -0.22071531°
		POINT SCALE: 1.00007896 0.99999400	COMBINED FACTOR: 1.00008331 0.99999835		

CONTRIBUTED BY

[linda veleg](#)
 University of Puerto Rico, Mayagüez



Horizon View



Los HITOS DEL PRESENTE comprenden los restantes 55 años del centenario, presentados a los propulsores del programa de Agrimensura y Topografía, Jenaro Negrón, QEPD, Julio C. Ríos, QEPD, Miguel Rodríguez, QEPD, tres agrimensores que dedicaron parte de sus vidas a la enseñanza de la agrimensura, los primeros dos desde la cátedra y la administración universitaria y el último laborando en el Laboratorio de Agrimensura, complementando la labor docente con la práctica. Los restantes dos HITOS DEL PRESENTE se han designado, uno con el nombre de Darío Hernández Torres, ingeniero y agrimensor, con una práctica exitosa en el servicio público y en la empresa privada, ocupó la cátedra en el CAAM, fue secretario del Departamento de Transportación y Obras Públicas. El otro HITO DEL PRESENTE, designado con el nombre de Joseph D. Chandler, simboliza a los estudiantes de nuestro programa de Bachillerato de Agrimensura y Topografía.



Shared Solution

PID: BBDX37
Designation: PROF JCRIOS
Stamping: 2012 J.C.RIOS
Stability: May hold, commonly subject to ground movement
Setting: Object driven into ground
Description: A CONMEMORATIVE "HITO" BENCH MARK LOCATED AT THE UPR-MAYAGUEZ CAMPUS ON THE GROUND PLANE AT THE ENTRANCE OF THE EAST CAMPUS ON THE 1.7 KM ON PR-108.
 THE STATION IS 14.332 METERS (47.021 FT) WEST OF THE NORTHWEST END OF A CONCRETE BRIDGE OF THE QUEBRADA DE ORO, 11.920 METERS (39.108 FT) NORTH NORTHEAST FROM THE FIRST POLE OF THE CYCLONE FENCE TO THE NORTH IN THE ENTRANCE GATE, 10.201 METERS (33.468 FT) NORTHEAST FROM THE THIRD POLE OF THE CYCLONE FENCE TO THE NORTH OF THE ENTRANCE GATE.
Observed: 2014-10-15T21:26:00Z
Source: OPUS - page 1209.04



Close-up View

REF FRAME: NAD_83(2011)	EPOCH: 2010.0000	SOURCE: H=L-N (N=GEOID12B HGT)	UNITS: m	SET PROFILE	DETAILS
LAT: 18° 12' 52.92360" ± 0.022 m					
LON: -67° 8' 27.86831" ± 0.006 m					
ELL HT: -31.068 ± 0.040 m					
X: 2354280.265 ± 0.018 m					
Y: -5584527.247 ± 0.036 m					
Z: 1980961.339 ± 0.017 m					
ORTHO HT: 9.683 ± 0.067 m					
		UTM 19	SPC 5200(PRVI)		
		NORTHING: 2014936.535m	242354.796m		
		EASTING: 696579.134m	125138.547m		
		CONVERGENCE: 0.58124782°	-0.22144386°		
		POINT SCALE: 1.00007777	0.99999400		
		COMBINED FACTOR: 1.00008265	0.99999888		

CONTRIBUTED BY

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[University of Puerto Rico, Mayagüez](#)



Horizon View





Shared Solution

PID: BBFD28
Designation: PROF. J R NEGRON
Stamping: JENARO R. NEGRON 2013 78
Stability: Most reliable; expected to hold position well
Setting: Object driven into ground
Description: IS A "CONMEMORATIVE MARK", THE STATION IS LOCATED AT THE UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS, ON THE EAST CAMPUS, ON PR-108 KM 1.7. JUST GO TO THE ENTRANCE OF THE COMPLEX OF THE CHEMICAL AND CIVIL ENGINEERING AT UPR MAYAGUEZ UNTIL THE END OF THE PARKING LOT, GO SOUTH. THE STATION IS ON THE SE OF THE GREEN AREA.
Observed: 2014-09-11T17:33:00Z
Source: OPUS - page 5 1209.04



Close-up View

REF FRAME: NAD_83(2011) EPOCH: 2010.0000 SOURCE: H = h-N (N = GEOID12B HGT) UNITS: m SET PROFILE DETAILS	
<p>LAT: 18° 12' 52.07788" ± 0.032 m LON: -67° 8' 18.68295" ± 0.024 m ELL HT: -27.057 ± 0.030 m X: 2354533.590 ± 0.030 m Y: -5584433.401 ± 0.010 m Z: 1990937.894 ± 0.040 m ORTHO HT: 13.679 ± 0.050 m</p>	<p>UTM 19 SPC 5200(PRVI) NORTHING: 2014913.272m 242327.754m EASTING: 696849.292m 125408.330m CONVERGENCE: 0.58203888° -0.22064553° POINT SCALE: 1.00007908 0.999999400 COMBINED FACTOR: 1.00008333 0.99999825</p>

CONTRIBUTED BY
[linda.velez](#)
[University of Puerto Rico, Mayagüez](#)

Horizon View



Shared Solution

PID: BBDX36
Designation: J. D. CHANDLER
Stamping: 2013 JOSEPH D. CHANDLER
Stability: Most reliable, expected to hold position well
Setting: A metal rod driven into ground. Describe below.
Description: A CONMEMORATIVE "HITO" BENCH MARK, LOCATED AT THE UPR-MAYAGUEZ CAMPUS ON THE SOUTH SIDE OF THE CIVIL ENGINEERING BUILDING AT THE ENTRANCE OF THE EAST CAMPUS ON THE 1.7 KM ON PR-108. THE STATION IS 8.59 M (28.184 FT) SOUTHWEST FROM THE HIGUERA TREE, 19.56 METERS (64.176 FT) SOUTHWEST FROM LIGHT POLE AND 19.55 METERS (64.144 FT) SOUTHEAST FROM THE METAL MANHOLE COVER. THE MARK IS A REBAR ALUMINUM CAP OF 3.5 INCHES DIAMETER, DRIVEN 9.14 METERS (29.988 FT) OF DEPTH UNTIL REFUSAL.
Observed: 2014-09-30T16:02:00Z
Source: OPUS - page5 1209.04



Close-up View

REF FRAME: NAD 83(2011)	EPOCH: 2010.0000	SOURCE: H = b-N (N = GEOID12B HGT)	UNITS: m	SET PROFILE	DETAILS
LAT: 18° 12' 52.40151" ± 0.008 m	UTM 19 SPC 5200(PRVT)				
LON: -67° 8' 18.68291" ± 0.005 m	NORTHING: 2014923.223m 242337.704m				
ELL HT: -26.604 ± 0.055 m	EASTING: 696849.192m 125408.369m				
X: 2354532.550 ± 0.017 m	CONVERGENCE: 0.58204166° -0.22064533°				
Y: -5584430.931 ± 0.052 m	POINT SCALE: 1.00007908 0.99999400				
Z: 1980947.487 ± 0.012 m	COMBINED FACTOR: 1.00008326 0.99999818				
ORTHO HT: 14.133 ± 0.093 m					

CONTRIBUTED BY
[linda.velez](#)
[University of Puerto Rico, Mayaguez](#)

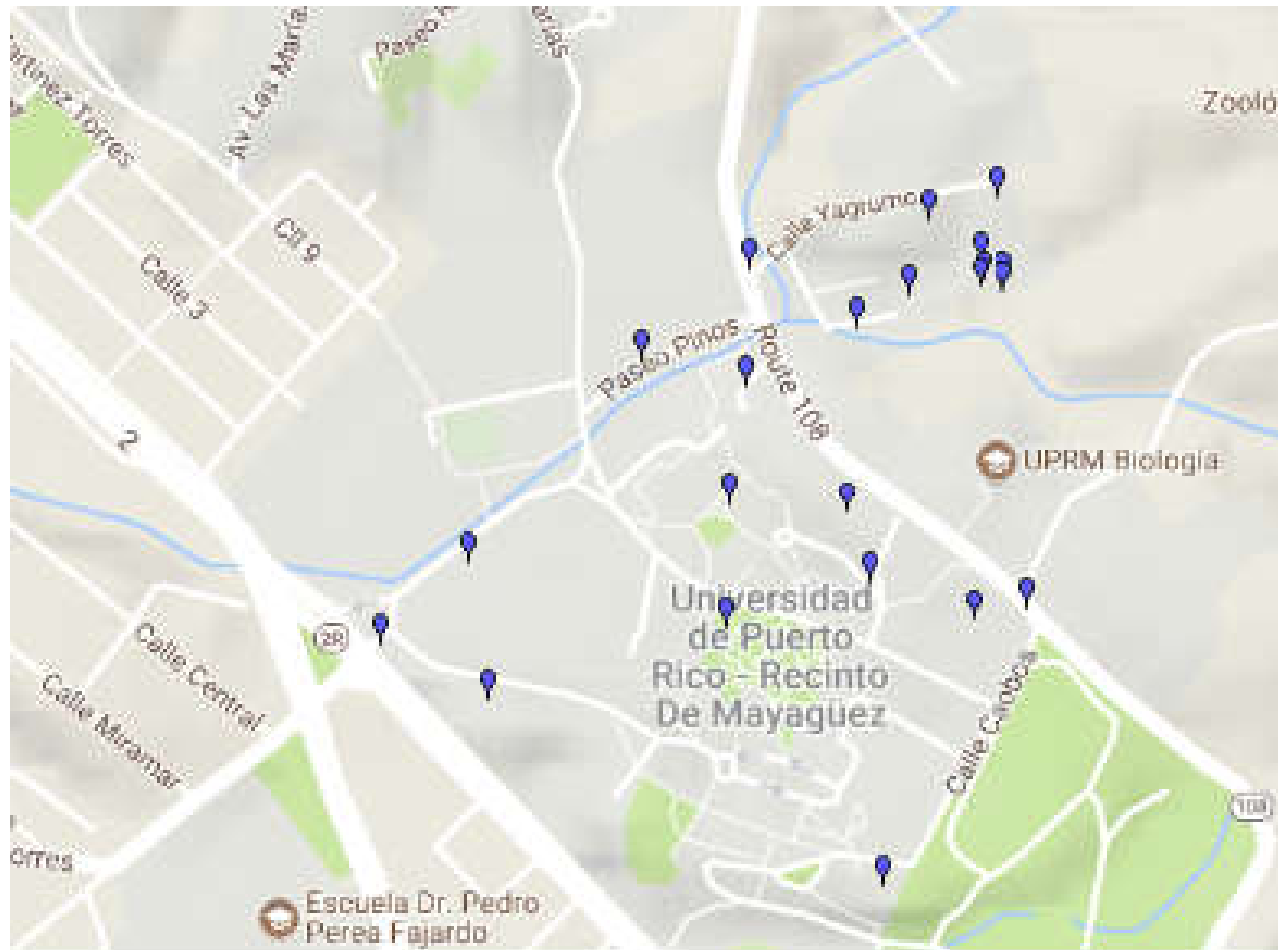
Horizon View



El HITO DEL FUTURO, es uno que fue diseñado por el técnico del Laboratorio de Agrimensura Roberto Caraballo, mandado a construir y dono por la compañía XACTA Surveying and Geomatic, PSC cuyos principales son agrimensores exalumnos de nuestra universidad, siendo un HITO CONMEMORATIVO del centenario, el cual se colocará eventualmente en la Plaza de la Huella del Tarzán en el primer nivel del lado oeste del Edificio de Ingeniería Civil, de la Universidad de Puerto Rico Recinto Universitario de Mayagüez.



REF_FRAME: NAD_83(2011)		EPOCH: 2010.0000		SOURCE: H = h-N (N = GEOID12B HGT)		UNITS: m		SET PROFILE		DET	
LAT: 18° 12' 51.93547" ± 0.011 m				UTM 19				SPC 5200(PRVI)			
LON: -67° 8' 22.06180" ± 0.004 m				NORTHING: 2014907.885m				242323.758m			
ELL HT: -27.022 ± 0.075 m				EASTING: 696750.055m				125309.036m			
X: 2354442.655 ± 0.027 m				CONVERGENCE: 0.58174400°				-0.22093920°			
Y: -5584473.262 ± 0.069 m				POINT SCALE: 1.00007860				0.99999400			
Z: 1980933.746 ± 0.012 m				COMBINED FACTOR: 1.00008285				0.99999825			
ORTHO HT: 13.718 ± 0.126 m											



LA HUELLA DEL TARZÁN: Punto de Control Geodésico *SU DISEÑOS*

La huella del TARZÁN se diseñó recogiendo la cronología de los programas en nuestro departamento y nuestra universidad. Los cuatro dedos de la huella son círculos de 12 pulgadas de diámetro divididos en dos hemisferios, perpendiculares de un radio que parte del centro de la chapa del TARZÁN. El primero o el más al este en el hemisferio superior lee "CAAM" por Colegio de Agricultura y Artes Mecánicas y en el hemisferio inferior lee "1911", fecha en que se fundó nuestro recinto. Le sigue por el círculo que tiene en el hemisferio superior escrito "IN CI" por Ingeniería Civil y en el hemisferio inferior lee "1913", fecha en que se estableció el programa de Ingeniería Civil. En el tercer dedo lee en el hemisferio superior "RUM" por Recinto Universitario de Mayagüez y en el hemisferio inferior tiene la fecha de 1966, siendo la fecha de la Nueva Ley Universitaria que designa nuestro campus como Recinto Universitario de Mayagüez. El cuarto y último dedo de la huella del TARZÁN en su hemisferio superior lee "AGTO" por Agrimensura y Topografía, y en el hemisferio inferior tiene la fecha de 1978, cuando se estableció el Programa de Agrimensura y Topografía en nuestra universidad.



En la palma de la huella está la marca de bronce denominada TARZÁN de 8 pulgadas de diámetro, siendo el centro de un círculo de 26 pulgadas de diámetro, el cual se divide en cuatro cuadrantes con líneas orientadas de norte a sur y otra de este a oeste. Tanto los cuadrantes de la palma como los hemisferios de los dedos de la HUELLA DEL TARZÁN están pintados de verde y blanco alternado y las letras de colores inversos.

MARCA DEL CENTENARIO DEL DEPARTAMENTO DE INGENIERIA CIVIL Y AGRIMENSURA 1913-2013 UBICADA EN EL EXTREMO SUROESTE DEL EDIFICIO DE INGENIERIA CIVIL Y AGRIMENSURA, EN LO QUE DENOMINAMOS LA PLAZA DE LA HUELLA DEL TARZAN





Don Rafael Aristegui Vélez
Conde de Mirasol
Gobernador de Puerto Rico desde 1843 al 1847

EL 1RO DE ENERO DE 1846 SE PROMULGA EL
“REGLAMENTO PARA EL CUERPO DE AGRIMENSORES
DE LA ISLA DE PUERTO RICO, MANDADO OBSERVAR
POR EL EXCMO. SR. CONDE DE MIRASOL, GOBERNA-
DOR Y CAPITAN JENERAL DE LA MISMA, EN 1846”

DICHO DOCUMENTO CUENTA CON 44 ARTICULOS,
INDICANDO EL ROL DE LOS AGRIMENSORES Y SUS
RESPONSIBILIDADES.

CONMEMORANDO ESTE EVENTO, HEMOS PREPARADO
DOS HITOS, EL PRIMERO CELEBRANDO LOS 160 AÑOS
(1846 AL 2006) INSTALADO EN EL COLEGIO DE INGENIEROS
Y AGRIMENSORES DE PUERTO RICO Y EL QUE SE INSTALARA
EN EL MUSEO FORTIN CONDE DE MIRASOL EN VIEQUES,
QUE MARCA LOS 170 AÑOS (1846 AL 2016).

MARCA CONMEMORANDO LOS 160 AÑOS DE LA AGRIMENSURA EN PUERTO RICO (1846 AL 2006) UBICADA EN LA SEDE DEL COLEGIO DE INGENIEROS Y AGRIMENSORES DE PUERTO RICO EN SAN JUAN, PUERTO RICO



El sábado, 18 de noviembre del 2006,
la **profesora Linda L. Vélez**, Presidenta
del Instituto de Agrimensores (IA) junto al
Ingeniero Juan Pérez, Presidente del
Colegio de Ingenieros y Agrimensores de
Puerto Rico (CIAPR), a su izquierda
develan la marca.



MARCA CONMEMORANDO LOS 170 AÑOS DE LA AGRIMENSURA EN PUERTO RICO (1846 AL 2016) A SER UBICADA EN EL MUSEO FORTIN CONDE DE MIRASOL EN VIEQUES

EL FORTIN CONDE DE MIRASOL
Isabel Segunda, Vieques. Puerto Rico



INSPECCION OCULAR
EL 10 DE AGOSTO DE 2017,
LINDA VELEZ JUNTO A ROBERT
RABIN, DIRECTOR DEL MUSEO FORTIN
CONDE DE MIRASOL EN VIEQUES



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Concrete Survey Markers

Survey Monuments

Survey Nails & Survey Washers

Marca Conmemorativa de los 170 años de la Regulación de la Agrimensura en Puerto Rico



¿QUIERES SER PARTE DE LA HISTORIA?

¿COMO?

Participando en uno de los siguientes Talleres:

- 1- Monumentación de las marcas;
- 2- Observaciones con los sistemas de posicionamiento global o GPS (antes) ahora GNSS (Global Navigation Satellites Systems) y su procesamiento en OPUS, para ser incluida en OPUS Shared;
- 3- Nivelación geodésica a la marca desde el Puerto de Vieques en Isabel Segunda hasta el Fortín.

Marca Conmemorativa de los 170 años de la Regulación de la Agrimensura en Puerto Rico-su sistema de anclaje denominado “anchor stem”.

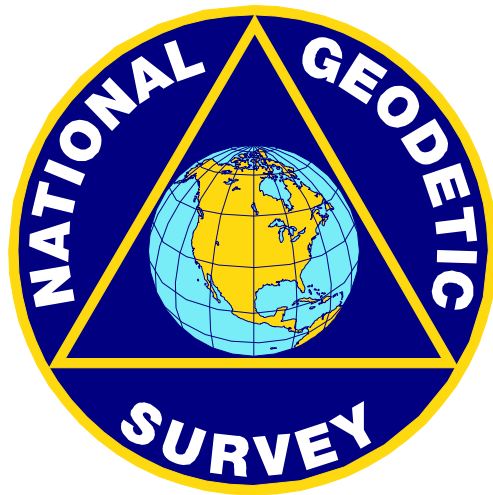


Vista de los tres anclajes



Vista de perfil de la marca

**GOOD COORDINATION BEGINS WITH
GOOD COORDINATES**



GEOGRAPHY WITHOUT GEODESY IS A FELONY