





SIRGAS SYMPOSIUM PLANNING 2024 DAY 1, NOVEMBER 18, 2024

SCHEDULE	ACTIVITY		
7:30 – 8:30 A.M.	Accreditation and poster placement		
8:30 – 9:00 A.M.	Welcome remarks to the SIRGAS 2024 Symposium		
	Gustavo Marulanda Morales, General Director Instituto		
	Geográfico Agustín Codazzi - IGAC		
	Cnel. Gustavo Caubarrére, President SIRGAS		
	Julio Fierro Morales, Director of Servicio Geológico Colombiano		
	SGC		
9:00 – 9:30 A.M.	Keynote Lecture		
	The International Association of Geodesy: 162 Years of Service		
	Richard Gross		
9:30 – 10:00 A.M.	Keynote Lecture		
	Unlocking the Power of Geodesy with the International GNSS		
	Service (IGS)		
	José Antonio Tarrío		
10:00 – 10:30 A.M.	SIRGAS authorities report 2022-2024		
	Cnel. Gustavo Caubarrére, President SIRGAS		
10:30 – 10:40 A.M.	Intervention by the Secretary General of the PAIGH- Antonio		
	Campuzano Rosales		
10:30 – 10:45 A.M.	BREAK		
10:45 A.M. – 12:00	GT 1 SIRGAS: Annual report (2022-2024)		
M.	José Antonio Tarrío		
	GT 2 SIRGAS: Annual report (2022-2024)		
	Demian Gómez		
	GT 3 SIRGAS: Annual report (2022-2024)		
	GT 3 SIRGAS: Annual report (2022-2024)		
	GT 3 SIRGAS: Annual report (2022-2024) Gabriel Guimaraes		
12:00 M. – 12:20	Gabriel Guimaraes		
12:00 M. – 12:20 P.M.	·		
	Gabriel Guimaraes Leica Geodetic Reference Systems: Basis for Modern Geomatics		
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P.M.	Gabriel Guimaraes Leica Geodetic Reference Systems: Basis for Modern Geomatics Miguel Menegusto LUNCH		
P.M. 12:20 M. – 1:15 P.M.	Gabriel Guimaraes Leica Geodetic Reference Systems: Basis for Modern Geomatics Miguel Menegusto LUNCH Geodetic Networks: National Geodetic System of the Dominican		
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P.M. 12:20 M. – 1:15 P.M. 1:15 – 1:40 P.M.	Gabriel Guimaraes Leica Geodetic Reference Systems: Basis for Modern Geomatics Miguel Menegusto LUNCH Geodetic Networks: National Geodetic System of the Dominican RepublicSaulimar Rodríguez Report on work for the year 2023-2024 Costa Rica Processing		
P.M. 12:20 M. – 1:15 P.M. 1:15 – 1:40 P.M. 1:40 – 2:05 P.M.	Gabriel Guimaraes Leica Geodetic Reference Systems: Basis for Modern Geomatics Miguel Menegusto LUNCH Geodetic Networks: National Geodetic System of the Dominican RepublicSaulimar Rodríguez Report on work for the year 2023-2024 Costa Rica Processing Center (CRI)Álvaro Álvarez		
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3:10 – 3:35 P.M.	Recent Advances of the CART (Chinese Argentine Radio- Telescope) Project Ana María Pacheco
3:35 – 4:00 P.M.	SIRGAS Ecuador adjustment of the active network regime, passive network renage, aligned to ITRF2020 David Alexander Cisneros Revelo









4:00 – 4:25 P.M.	Geodetic Reference Framework of Colombia and Sustainable	
	Development	
	Héctor Mora Páez	
4:25 – 5:25 P.M.	GT 1 meeting	









SIRGAS SYMPOSIUM PLANNING 2024 DAY 2, NOVEMBER 19, 2024

SCHEDULE	ACTIVITY
9:00 – 9:25 A.M.	ITRF2020 usage and maintenance in a global dense network for commercial applications Youssef Tawk
9:25 – 9:50 A.M.	Characterization of the behavior of the quality parameters used in the evaluation of GNSS observations from the reference stations of continuous operation of the Colombian Geodetic Network Lizeth Vanessa Rodríguez León Valentina Lara Rodríguez
9:50 – 10:15 A.M.	Implementation of the Experimental Processing Center in Bolivia Hernán José Guerra Trigo
10:15 – 10:40 A.M.	Analysis of results of GNSS solutions from the UCR Experimental Processing Center Betsy Loaiza
10:40 – 10:55 A.M.	BREAK
10:55 – 11:20 A.M.	Modernization of the geodetic network of Uruguay Walter Humberto Subiza Piña
11:20 – 11:45 A.M.	Progress on the International Terrestrial Gravity Reference System (ITGRS) and perspectives for South-America Ezequiel Darío Antokoletz
11:45 A.M. – 12:10 M.	Establishment of processing centres for VLBI and SLR techniques Sergio Cimbaro
12:10 M. – 12:35 A.M.	Local TIN Interpolation (LTI) for the calculation of horizontal velocity components, based on weekly time series from SIRGAS-CON stations Ileanis Arenas
12:35 M. – 1:50 P.M.	LUNCH
1:50 – 2:15 P.M.	Anomaly detection in weekly SIRGAS GNSS time series: A TimesNet assessment on real data Luiz Claudio Oliveira de Andreade
2:15 – 2:40 P.M.	Kinematic Reference Frames: Implementation Strategies, Benefits and Challenges in Geodetic Applications (IDEA R&D Project 2023 ID23I10147) José Antonio Tarrío
2:40 – 3:05 P.M.	RAIB - High Precision Altimetric Network of ITAIPU Binacional Roberta Dal Bosco Carletto
3:05 – 3:20 P.M.	BREAK
3:20 – 3:45 P.M.	NORTH: Reference Center for Space Technologies in the ITAIPU BINACIONAL Region Vinícius Amadeu Stuani Pereira
3:45 – 4:10 P.M.	Spatial Variability of the Horizontal Error of Rapid Static GPS Surveing: the Case in the Road Inventories at South-Western of Colombia Nixon Alexander Correa Muñoz







4:10 – 4:35 P.M.	National Geodetic Control: Leadership in the effective and precise administration of geodetic data for the territorial and technological development of Colombia Darwin Baquero
4:35 – 5:35 P.M.	GT 2 meeting









SIRGAS SYMPOSIUM PLANNING 2024 DAY 3, NOVEMBER 20, 2024

SCHEDULE	ACTIVITY		
9:00 – 9:25 A.M.	GNSS Monitoring of Slope Movement in the City of Cuenca Using the SIRGAS – COM Reference Framewo Chester Sellers		
9:25 – 9:50 A.M.	Verification measurements of the GALILEO and NTRIP HAS system in Bogotá, Colombia Melvin Hoyer		
9:50 – 10:15 A.M.	SIRGAS Working Group Report Real Time 2024 David Alexander Cisneros Revelo		
10:15 – 10:40 A.M.	Strategies for Connecting Oceanic Vertical Datums to SIRGAS Tulio Santana		
10:40 – 10:55 A.M.	BREAK		
10:55 – 11:20 A.M.	Update of the Quasi-geoidal Model for Colombia, an input for the multipurpose cadastre Leidy Moisés		
11:20 – 11:45 A.M.	The geoid model for South America (SAM_GEOID2023) and the connection of local vertical data with IHRF Gabriel Guimarães		
11:45 A.M. – 12:10 M.	Use of Cluster Analysis in the calculation of hybrid Quase Geoid Model Tiago Lima Rodríguez		
12:10 M. – 12:35 A.M.	Geoidal models for the state of São Paulo using the SHGEO computational package Ana Cristina de Oliveira Cancoro de Matos		
12:35 M. – 1:50 P.M.	LUNCH		
1:50 – 2:15 P.M.	Towards a Modern Height System for Mexico Ana Isela Vidal Vega		
2:15 – 2:40 P.M.	IHRF Geopotential Number in UYPT and UYTA and its comparison with the vertical datum Cabildo Walter Humberto Subiza Piña		
2:40 – 3:05 P.M.	Efforts for the Regional Calculation of IHRF in the State of São Paulo Denizar Blitzkow		
3:05 – 3:20 P.M.	BREAK		
3:20 – 3:45 P.M.	UFPR Contribution to the Colorado Experiment Based on the Free Scalar Solution of PVCG and Numerical Integration of Stokes Integrals Thiago Padilha		
3:45 – 4:10 P.M.	2024 Readjustment of the National Gravimetric Network Walter Humberto Subiza Piña		
4:10 – 4:35 P.M.	Densification of the Gravimetric Network on Leveling Lines and Updating of the International Reference Framework for Physical Heights - IHRF in Colombia Daniela Martínez		
4:35 – 5:35 P.M.	GT 3 meeting		







SIRGAS SYMPOSIUM PLANNING 2024 DAY 4, NOVEMBER 21, 2024

SCHEDULE	ACTIVITY		
8:35 – 9:00 A.M.	How to mitigate the effects of GNSS scintillation by up to 100 Eleazar Quiñimil		
9:00 – 9:25 A.M.	Strengthening Education in Spatial Geodesy: Methodology for processing VLBI data at the District University – Bogotá Miguel Ángel Molina Nova Daniel Alejandro Rico Edilberto Suárez Torres		
9:25 – 9:50 A.M.	Seismic Modeling and its Implementation in Geodetic Processing: Integration of earthquakes in REDGEOMIN and SIRGAS-CON José Antonio Tarrío		
9:50 – 10:15 A.M.	Comparative Analysis of GR vs GRE Ephemerides in the Processing of SIRGAS Weekly Solutions Catalina Cáceres Valeria Vásquez		
10:15 – 10:35 A.M.	Homogenization of the ZTD series from the reprocessing of the SIRGAS network to IGS14 María Virginia Mackern		
10:35 – 10:50 A.M.	BREAK		
10:50 – 11:10 A.M.	ZTD calculation from the integration of radiosonde data and its implementation for the validation of ZTD time series of the SIRGAS-CON network María Laura Mateo		
11:10 – 11:30 A.M.	Two decades of GNSS Integrated water vapour in the SIRGAS network: Validation and long-term trends Patricia Alejandra Rosell		
11:30 – 11:50 A.M.	Compilation and statistical review of Costa Rican meteorological data for water vapor estimation Álvaro Álvarez		
11:50 A.M. – 12:10 M.	Estimation of atmospheric water vapor from SIRGAS ZTDs and in situ meteorological records, in different climatic region María Fernanda Camisay		
12:10 – 12:35 P.M.	Conclusions of the Symposium		



Exhibition Banner

<u>Exhibition Banner</u>	
Determination of local quasigeoid models in Argentina for the	Agustín Reynaldo Gómez
establishment of the International Height Reference Frame (IHRF)	
Precision Geodesy at the CART (Chinese Argentine Radio-	Alejandro Navarro
Telescope) site	-
Geocentric and Topographic Geodetic Systems of Brazil and	Plinio Temba
Argentina – Transformation and updating for SIRGAS 2000	
Error analysis of GALILEO satellite positioning in local geodetic	Dennys Alexander
networks. Case study: Rumiñahui-Ecuador	Enríque Hidalgo
Geological controls on subsidence patterns in the city of Bogotá, as	Jillian Pearse
observed using Interferometric Synthetic Aperture Radar (InSAR)	
LatitUD: Citizen Geodesy	Edilberto Suárez-Torres
Comparative Analysis between Topographic Surveying with Total	Patricio Alexander Duque
Station and Non-Conventional Surveys such as GNSS RTK	Paramo
Positioning and Short Range Photogrammetry	
Network of Meteorological Stations of Ecuador (REGMET) and its	Karina Rosero
Contribution to the Estimation of Atmospheric Water Vapor	
Estimation of the Detection Efficiency of the Total Lightning Network	Rominger Buritica Angulo
of Earth Networks for the Colombian Territory	
Spatial Analysis in Rock Art Research: the Case of the Rock	Judith Trujillo
Paintings of Nuevo Tolima, Serranía de la Lindosa, Colombia	
Cutting-edge Technologies in Aerotopography and	Leandro Alberto Olivares
Aerophotogrammetry: A Case Study in the Maricunga Strip	Aguero
REGME-IP NTRIP Real Time Service, experiences and results after	David Alexander Cisneros
4 years of operation	Revelo
Study on the impact of ionospheric scintillation and mitigation in	Eleazar Quiñimil
continuously operating HP/GNSS receivers	
Automation with Python for Daily Drift Control in Gravimetric	Alejandro Tabares
Measurements	

