

Report on the Symposium SIRGAS2018

The current activities, advances, and new challenges of SIRGAS are reported, discussed, and re-oriented (if required) in the annual SIRGAS Meetings, which are held since 1993. This year, SIRGAS celebrated together with the geodetic community of Latin America the 25 years since that important meeting in Asunción, Paraguay, 1993 (Fig. 1). During a special session, an account was made of the main achievements of SIRGAS in these 25 years and a tribute was paid to the geodesits that have accompanied SIRGAS during the course of its history (Fig. 2).

The Symposium SIRGAS2018 took place in Aguascalientes, Mexico, from October 9 to 12, 2018. It was organized by the *Instituto Nacional de Estadística y Geografía (INEGI) of Mexico*, with the support of the International Association of Geodesy (IAG) and the Pan-American Institute of Geography and History (PAIGH). In the frame of this symposium, two additional activities were programmed: A “Conversation SIRGAS in practice” on October 8 (5 presentations); and a workshop about “Vertical Datum” from October 15 to 17, 2018.



Fig. 1. Participants of the International Conference for the Definition of a South American Geocentric Datum, Asunción 1993



Fig. 2. SIRGAS tribute to the geodesits that have accompanied SIRGAS during the course of its history, Aguascalientes, Mexico, 2018

The symposium SIRGAS2018 was attended by 97 participants (Fig. 3) from 21 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, England, Germany, Guatemala, Honduras, Mexico, Panama, Paraguay, Slovakia, Spain, United States, Uruguay, and Venezuela). The main topics included improvement and maintenance of the SIRGAS reference frame (11 presentations); practical applications aimed at the adoption of SIRGAS at the sub-regional and national level and SIRGAS infrastructure in real time (8 presentations); studies of the atmosphere and analysis of the Earth System based on SIRGAS infrastructure (7 presentations); advances in SIRGAS Unified Vertical Reference System (12 presentations); gravity and geoid (8 presentations); tribute to the 25 years of SIRGAS (6 presentations); and general reports (4 presentations). Five invited lectures were presented: Challenges to be faced by Geodesy in the coming years from the perspective of the International Association of Geodesy (IAG) (Hermann Drewes, IAG Secretary General, Germany); Strategy for the establishment of the International Height Reference System (IHRs) (Laura Sanchez, DGFI-TU Munich, Germany); The development of SIRGAS over 25 years and prospective challenges of science and humanity (Hermann Drewes, IAG Secretary General, Germany); Participation and geodetic development of Latin American countries during the 25 years of the SIRGAS project and SIRGAS in future time (Melvin Hoyer, Universidad del Zulia, Venezuela). In total, 43 oral contributions and 13 posters were presented.



Fig. 3. Participants of the Symposium SIRGAS2018, INEGI, Aguascalientes, Mexico, October 9 to 12, 2018

During the meeting of the SIRGAS Directing Council held on October 11, SIRGAS granted by resolution the distinction of Honorary President of SIRGAS to Prof. Dr. Hermann Drewes as public proof of admiration, respect and gratitude for being the founding father of SIRGAS and for his 25 years of uninterrupted support (Fig. 4).



Fig. 4. SIRGAS granted the distinction of Honorary President of SIRGAS to Prof. Dr. Hermann Drewes, October 2018 (left). Coordination of the First SIRGAS GPS Campaign, La Plata, Argentina 1994 (right)

Report on the SIRGAS Working Group III “Vertical Datum” Workshop 2018

The SIRGAS Working Group III “Vertical Datum” Workshop 2018 was attended by 33 participants (Fig. 5) from 13 countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Dominican Republic, Uruguay, Venezuela and Slovakia). Issues related to the unification of the vertical datum for the SIRGAS member countries were developed again, such as the guidelines and actions for the materialization of the IHR (International Height Reference System). Classes were taught with theoretical foundations (Fig.6) and practical tasks were performed with data provided by the countries attending the workshop (Fig 7). The Workshop was coordinated by Prof. Dr. Sílvio R.C. de Freitas (Brazil), Chair of the SIRGAS WG III. The basis of data processing was a software package developed by Prof. Dr. Hermann Drewes and Dr. Laura Sánchez. Preliminary analyses of the consistency of national nets were done by using a software package developed by Prof. Dr. Roberto Teixeira Luz (Brazil) who also acted as instructor in the Workshop. Hernan Guagni (Argentina) and Jose Luis Carrión (Ecuador) were instructors in the Workshop, too.



Fig. 5. Participants of the SIRGAS Working Group III “Vertical Datum” Workshop 2018, INEGI, Aguascalientes, Mexico, October 15 to 17, 2018



Fig. 6. Prof. Dr. Sílvio R.C. de Freitas, during a session in the Workshop GT III SIRGAS2018, Aguascalientes, 2018.



Fig. 7. Workshop GT III SIRGAS2018, Aguascalientes, 2018.