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Curriculum Vitae

Education

- 1986 - 1993 Study of Geodesy at the *Universidad Distrital*, Bogotá, Colombia.
Graduation: *Ingeniera Catastral y Geodesta* (Ing.).
Thesis: *First approximation to the geoid in Colombia*, in Spanish.
- 2001 - 2003 Study of Geodesy at the *Technische Universität Dresden*, Germany.
Scholarship provided by the *Deutscher Akademischer Austauschdienst* (DAAD)
Graduation: *Diplom-Ingenieur Univ.* (Dipl.-Ing.).
Thesis: *Determination of the vertical reference surface for Colombia*, in German.
- 2014 Doctor graduation (Dr.-Ing.) at the *Technische Universität Dresden*, Germany.
PhD thesis: *Unified vertical reference system for South America within a global height reference system*, in German.

Language skills Spanish (mother language), English, German

Experience

- 1993 - 1996 Employee associate at the national mapping and geodetic agency of Colombia (*Instituto Geográfico Agustín Codazzi* - IGAC)
- Gravity data collection and processing.
 - Gravity field modelling: gravity anomalies, quasi-geoid determination.
- 1996 – 2005 Staff member at the national mapping and geodetic agency in Colombia (IGAC).
- Establishment of a national geocentric reference frame in Colombia as densification of SIRGAS (Geodetic Reference System for the Americas) and the ITRF (International Terrestrial Reference Frame).
 - Development of strategies for the continuous monitoring of the Colombia geodetic reference frame.
 - Modernization of horizontal and vertical datums in Colombia.
- 2005 - Research associate at the *Deutsches Geodätisches Forschungsinstitut*, integrated since January 2015 in the *Technische Universität München* (DGFI-TUM).
- Implementation of strategies for the establishment of a global unified height reference system, in particular the International Height Reference System (IHR).
 - Design and evaluation of computational approaches for the vertical datum unification.
 - Generation of methodologies for the precise combination of physical and geometric parameters in the Earth system modelling.
 - Development of strategies for the geodetic geocentric datum definition in regional reference frames.
 - Derivation and application of statistical methods for the analysis of GNSS time series.
 - Computation of surface deformation models and strain rate fields based on GNSS data.
 - Lecturer in the course *Advanced Aspects of Height Systems* at the *Technische Universität München*.

Memberships and boards (selection)

International Association of Geodesy (IAG)

- Global Geodetic Observing System (GGOS), Vice-president (since 2019)
- Global Geodetic Observing System (GGOS), Focus Area Unified Height System, Lead (since 2015)
- Global Geodetic Observing System (GGOS), Working Group on the Implementation of the International Height Reference Frame (IHRF), Chair (since 2019)
- Global Geodetic Observing System (GGOS), Working Group on the Realization of the International Height Reference System (IHRS), Chair (2015 - 2019)
- Global Geodetic Observing System (GGOS), Coordinating Board, Member (since 2015)
- Global Geodetic Observing System (GGOS), Bureau of Products and Standards, member (since 2011)
- Working Group for the establishment of the Global Geodetic Reference Frame (GGRF), member (2015 - 2019)
- Inter-Commission Committee on Theory, Joint Study Group: Geoid/quasi-geoid modelling for realization of the geopotential height datum, member (since 2019)
- Symposia Series, Assistant Editor-in-Chief (since 2015)
- Journal of Geodesy, Special Issue *Reference Systems in Physical Geodesy*, Guest Editor (since 2019)

International GNSS Service (IGS)

- Regional Network Associate Analysis Centre for SIRGAS, responsible (since 2010).
- GPS Tide Gauge Benchmark Monitoring - Working Group, Analysis Centre (since 2012).
- Governing Board, Network Representative (2014-2022).

International Service for the Geoid

- Scientific advisor (since 2016)

Sistema Geodésico para las Américas (SIRGAS)

- SIRGAS analysis and combination centre, responsible (since 2010)
- Scientific council, member (since 2015)
- Vice-president (2007-2015)
- SIRGAS working group on "Vertical Datum Unification", chair (2001-2007)

Statement supporting my candidacy for the post of Member-at-Large at the ISD Central Bureau

In my professional life, I have not been involved with DORIS data analysis, but I have some experience in geodetic reference frames and I am aware of the importance of this geodetic technique.

I believe there are two main characteristics that qualify me as a serious candidate for the position of member-at-large at the IDS-GB: the first is my outstanding track record in the scientific activities associated with the SIRGAS reference frame. The second is my involvement in the Coordinating Board of GGOS. The former can serve to open channels of communication between IDS-GB and colleagues in Latin America, either to extend the distribution of DORIS stations, or to develop training activities in data analysis in order to establish more IDS associates in that region. The latter may serve to make the central role of DORIS and the IDS in the measurement and observation of the Earth System even more evident or visible. While this role is well known and recognised within the International Association of Geodesy, I believe it would be possible to project DORIS and IDS importance more effectively outside the world of Geodesy. I think, I could help bring to the Governing Board and IDS more broadly, in a context where we seek to open up the Service, lower the barriers and encourage more people to take an interest in DORIS, and be involved in data analysis and product use.

I am very grateful to the IDS Nominating Committee for considering my name in this nomination. It is an honour for me to be on the list of candidates and I pledge to do my best if I am elected.

With my best regards,

A handwritten signature in black ink, appearing to read "Juan Carlos Sánchez". The signature is fluid and cursive, with a large initial 'J' and 'C'.