



## Curriculum Vitae

1944 Born in Breddorf, Germany

### Education

1950 - 1963 Primary and secondary school in Breddorf, Verden/Aller and Zeven, Germany  
1963 - 1965 Military service, instruction in Geodesy  
1965 - 1970 Study of Geodesy at Technische Universität Hannover (Dipl.-Ing.)  
1975 Doctor's degree from Technische Universität Hannover (Dr.-Ing.)

### Professional activities

1970 - 1976 Scientific assistant at Technische Universität Hannover, Germany  
1976 - 1977 Chief engineer at Technische Universität Hannover, Germany  
1977 - 1979 Professor at Universidad del Zulia, Maracaibo, Venezuela and  
Scientific advisor at Cartografía Nacional, Caracas, Venezuela  
1979 - 1994 Scientist at Deutsches Geodätisches Forschungsinstitut, München, Germany  
1982 - 1983 Lectureship "Satellite Geodesy", University FAF, München, Germany  
1985 - 2008 Lectureship "Geodetic Geodynamics", Technische Universität München  
1994 Honorary professor at Technische Universität München, Germany  
1994 Director of Deutsches Geodätisches Forschungsinstitut, München, Germany  
1995 - 2000 Lectureship "Geodynamics" at University FAF, München, Germany

### Key research fields

Since 1970 Gravimetry, physical geodesy (geoid determination)  
Since 1979 Geodetic geodynamics, plate kinematics, satellite geodesy  
Since 1994 Reference systems and frames in global and regional scale

### Major international positions

Since 1994 Representative of the International Association of Geodesy (IAG) to SIRGAS (Sistema de Referencia Geocéntrico para las Américas)  
1995 - 2003 Secretary / President of the IAG/COSPAR Commission on "International Coordination of Space Techniques for Geodesy and Geodynamics" (CSTG)  
1999 - 2007 Member of the International Laser Ranging Service (ILRS) Governing Board  
2001 - 2008 Member of the Bureau of the ICSU International Lithosphere Project (ILP)  
2001 - 2010 Chairman of the International Terrestrial Reference Frame (ITRF) Combination Centre at Deutsches Geodätisches Forschungsinstitut (DGFI)  
2003 - 2007 President of IAG Commission 1 "Reference Frames"  
2003 - 2007 Representative of the International Union for Geodesy and Geophysics (IUGG) to the United Nations Cartographic Bureau  
2003 - 2011 IUGG Representative to Pan-American Institute for Geography and History (PAIGH)  
2004 - 2009 Representative of IAG to the "Group on Earth Observation" (GEO), Committee on Capacity Building  
2005 - 2009 Steering Committee of IAG's Global Geodetic Observing System (GGOS)  
2015 - 2019 IUGG Representative to the United Nations Geospatial Information Section  
2007 - 2019 Secretary General of the IAG

### Principal Awards

1999 Fellow of the International Association of Geodesy (IAG)  
2005 Cavaleiro do Ordem do Mérito Cartográfico, Brazilian Society of Cartography, Photogrammetry and Remote Sensing  
2007 Cross of the Order of Merit of the Federal Republic of Germany  
2010 Huesped de Honor Extraordinario, National University of La Plata, Argentina  
2019 Fellow of the International Union of Geodesy and Geophysics (IUGG)

## 25 principal publications

- Drewes H., J. Adám: The International Association of Geodesy: from an ideal sphere to an irregular body subjected to global change. *Hist. Geo Space Sci.*, 10, 151–161, 2019, <https://doi.org/10.5194/hgss-10-151-2019>.
- Ihde J., L. Sánchez, R. Barzaghi, H. Drewes, Ch. Förste, T. Gruber, G. Liebsch, U. Marti, R. Pail, M. Sideris, Definition and proposed realization of the International Height Reference System (IHRs), *Surveys in Geophysics*, <https://doi.org/10.1007/s10712-017-9409-3>, 2017.
- Drewes H., F. Kuglitsch, J. Adam, Sz. Rozsa (Eds.): *The Geodesist's Handbook 2016*. J. Geodesy (90) 907-1205, <https://doi.org/10.1007/s00190-016-0948-z>, 2016.
- Drewes H., J. Adam: The International Association of Geodesy - Historical Overview. *J. Geodesy* (90) 913-920, 2016.
- Sánchez L., Drewes, H.: Crustal deformation and surface kinematics after the 2010 earthquakes in Latin America. *J. Geodynamics* (100), <https://doi.org/10.1016/j.jog.2016.06.005>, 2016.
- Drewes H.: From different spheres to the Global Geodetic Observing System. [https://iag.dgfi.tum.de/fileadmin/IAG-docs/Drewes\\_2015\\_History\\_of\\_Geodesy\\_at\\_IUGG\\_GA.pdf](https://iag.dgfi.tum.de/fileadmin/IAG-docs/Drewes_2015_History_of_Geodesy_at_IUGG_GA.pdf), 2015.
- Drewes H., D. Angermann, M. Seitz: Alternative definitions of the terrestrial reference systems and its realizations in reference frames. Springer, IAG Symposia, Vol. 138, 39-44, [https://doi.org/10.1007/978-3-642-32998-2\\_7](https://doi.org/10.1007/978-3-642-32998-2_7), 2013.
- Drewes H., O. Heidbach: The 2009 horizontal velocity field for South America and the Caribbean. Springer, IAG Symposia, Vol. 136, 657-664, <https://doi.org/10.1029/2001RG000107>, 2012.
- Drewes H.: How to fix the geodetic datum for reference frames in geosciences applications? Springer, IAG Symposia, Vol. 136, 67-76, <https://doi.org/10.1007/s00190-008-0270-5>, 2012.
- Drewes H.: The Actual Plate Kinematic and crustal deformation Model (APKIM2005) as basis for a non-rotating ITRF. Springer, IAG Symposia, Vol. 134, 95-99, [https://doi.org/10.1007/978-3-642-00860-3\\_15](https://doi.org/10.1007/978-3-642-00860-3_15), 2009.
- Drewes H.: Reference systems, reference frames, and the geodetic datum - basic considerations. Springer, IAG Symposia, Vol. 133, 3-9, 2009.
- Drewes H.: Science rationale of the Global Geodetic Observing System (GGOS). Springer, IAG Symposia, Vol. 130, 703-710, 2007.
- Drewes H.: The changing objectives in geodetic research. *Z. f. Verm.wesen* (131) 292-298, 2006.
- Drewes H., O. Heidbach: Deformation of the South American crust estimated from finite element and collocation methods. Springer, IAG Symposia, Vol. 128, 544-549, 2005.
- Beutler G., H. Drewes, A. Verdun: The Integrated Global Geodetic Observing System (IGGOS) viewed from the perspective of history. *J. Geodynamics* (40) 414-431, 2005.
- Drewes H., L. Sánchez, D. Blitzkow, S. Freitas: Scientific foundations of the SIRGAS vertical reference system. Springer, IAG Symposia, Vol. 124, 297-301, 2002.
- Drewes H.: Combination of VLBI, SLR and GPS determined station velocities for actual plate kinematic and crustal deformation models. Springer, IAG Symposia, Vol. 119, 377-382, 1998.
- Drewes H., W. Torge, R.H. Röder, C. Badell, D. Bravo, O. Chourio: Absolute and relative gravimetric surveys of national and geodynamic networks in Venezuela. *J. South Am. Earth Sciences* (4) 273-286, 1991.
- Drewes H., M. Radon: Numerical analysis of Earth rotation and atmospheric angular momentum parameters. Springer, IAG Symposia, Vol. 105, 107-114, 1990.
- Drewes H.: Significance of kinematic plate parameters derived from actual satellite laser ranging data. *Adv. Space Res.* (6) No. 9, 67-70, 1986.
- Drewes H.: A geodetic approach for the recovery of global kinematic plate parameters. *Bull. Geod.* (56) 70-79, 1982.
- Drewes H.: *Precise Gravimetric Networks and Recent Gravity Changes in Western Venezuela*. Dt. Geod. Komm., München, Reihe B, Nr. 251, 1980.
- Drewes H.: Zur Ausgleichung von Gravimeternetzen. *Z. f. Verm.wesen* (103) 485-496, 1978.
- Drewes H.: Berechnung regionaler Geoidundulationen durch gravimetrisches Nivellement mit Prädiktion der Schwereanomalien. *Wiss. Arb. Geod., Univ. Hannover*, Nr. 63, 1976.
- Drewes H.: A method of direct gravimetric determination of differences of geoid undulations. *Dt. Geod. Komm., München, Reihe B, Nr. 221*, 13-20, Frankfurt, 1975.