

DR. HANS-DIETER VIKTOR BÖHM

Qualifications:

- Toolmaker apprenticeship in VW-factory, Wolfsburg (1961-1964)
- M.Sc. in aeronautical engineering, Hamburg (1964-1967),
- Dipl.-Physicist and Astro-Physicist, UNI Hamburg (1967-1974),
- UNI Hamburg and Großforschungseinrichtung GKSS, Geesthacht (1974-1977),
- Dr. rer. nat. Thesis with Laser - Application, Laser - Spectroscopy (1977),



Positions and Working Experience:

- Großforschungseinrichtung GKSS, Geesthacht (1977-1978)
- Max Planck Institute for Laser-research (1978-1980)
- Engineer and physicist with EUROCOPTER Deutschland, GmbH, Munich, a division of EADS, developing advanced sensor systems for helicopters (1980 – 2005)

Hans-Dieter Viktor Boehm received the Diploma degree in Aeronautical Engineering in 1967 from the Hamburg University of Applied Sciences, Germany. A second Diploma degree in Physics (major Astrophysics) in 1974 and the Ph.D. in Physics (Laser technology) in 1977 both from the University of Hamburg, Germany.

From 1974 to 1977, he was a research assistant working for his Ph.D. with Laser-spectroscopy of Uranium at the Helmholtz Centre for Materials and Coastal Research (GKSS GmbH) in Geesthacht, Germany. From 1978 to 1980, he moved to the Max-Planck Institute in Garching near Munich, Germany working with the development of Laser technology. He changed then to the industry and became an engineer and physicist for sensor systems with Eurocopter Deutschland, GmbH, Munich, a division of EADS. He developed advanced sensor systems for helicopters and in the cockpit for human helmet interface presentation for day and night sensor images (1980-2005). Additionally he designed remote sensing methods for helicopters to monitor better the environment. He made for Eurocopter over 35 publications and many presentations in Europe, Indonesia and the USA.

Dr. Boehm became in parallel to Eurocopter director of Kalteng Consultants, a remote sensing company especially for tropical rain forest in Indonesia in 1995. His expertise includes the documentation of land use changes of peatlands and forest using Landsat, SPOT and SAR data (e.g. ERS-, JERS-, X-SAR, and SRTM). In 2007 and 2011 LiDAR technology were used to achieve high-resolution Digital Elevation Models (DEM) with DSM (surface) and DTM (terrain) and Ortho-Photos from the tropical Kalimantan area.

Current position:

Director of Kalteng Consultants (1995 – now)

Research Experience: Manager in the development department responsible for electro-optical sensorics / visionics, LIDAR- and RADAR systems, electro-magnetic interference

(EMI) and mission systems for helicopters; involved in the development of an 'environmental helicopter' equipped with different sensors. Currently involved in remote sensing projects on tropical rain forest in Central Kalimantan, Indonesia in which LANDSAT-, ERS-, JERS-, X-SAR, SPOT- and SRTM-images were processed for land use applications and maps mainly in peatlands. Since 2007 using Airborne Laser Scanners (ALS, LiDAR) to achieve high-resolution Digital

Elevation Models (DEM) with DSM and DTM and Ortho-Photos.

Publications:

- Boehm, H.-D.V., Haisch, S (1994) "Remote sensing with a thermal imager mounted on an environmental helicopter: first experimental results". **Paper presented at the 20th European Rotorcraft Forum, Amsterdam.**
- Boehm, H.-D.V., Haisch, S. and Friauf, E. (1995) "Environmental Helicopter with Modular Sensor Concept: Example on Forestry Monitoring". **Paper presented at the Conference on Remote Sensing and GIS, Jakarta, Indonesia June 6-8, 1995.**
- Boehm, H.-D.V., Haisch, S (1996) "Report on the Ground Truth Campaigns, including Aerial Survey in Kalimantan Tengah", 38 pp.
- Boehm, H.-D.V. and Siegert, F. (2000) "Application of remote sensing and GIS to monitor Peatland multi-temporally in Central Kalimantan". **Proceedings of the International Symposium on Tropical Peatland – TROPEAT, Bogor, Indonesia, November 1999, pp 329-347.**
- Boehm, H.-D.V., Siegert, F., Limin, S.H. and Jaya, A. (2003) "Land Use Change in Central Kalimantan over the Period 1991 - 2001 including Impacts of Selective and Illegal Logging, MRP Establishment and Fires". Proceedings of the International Symposium on **"Land Management and Biodiversity in Southeast Asia"**, Bali, Indonesia, Sept. 17-20, 2002, ISBN4-9901827-0-7, March 2003.
- Susan E. Page, Florian Siegert, John O. Rieley, Hans-Dieter Viktor Boehm, Adi Jaya and Suwido H. Limin (2002), "The Amount of Carbon released from Peat and Forest Fires in Indonesia during 1997", in **Nature, Vol. 420, 7th November 2002**
- Boehm, H.-D.V. and Siegert, F. (2004) "The impact of logging on land use change in Central Kalimantan, Indonesia". **International Peat Journal, 12: 3 – 10.**
- Boehm, H.-D.V., (2004) "Land cover change on peatland in Kalimantan Indonesia between 1999 and 2003", Proceedings of the **12th International Peat Congress (IPC), Tampere, Finland, 6 – 11 June 2004**
- Boehm, H.-D.V., Ramirez O.I. and Bustillo D. (2005) "Environmental field trials and GIS image analysis in the Tangkiling district along the river Rungan in Central Kalimantan", Indonesia, held during the **International Symposium in Palangka Raya, 23 Sept. 2005**
- Boehm, H.-D.V., (2006) "Precise Measurements of Peatland Topography and Tree/Canopy Height with a High-Resolution Airborne Laser-Scanner to calculate Carbon- and Bio-Mass", presented during the Workshop on **Vulnerability of Carbon Pools of Tropical Peatlands in Asia, Pekanbaru, Riau, Sumatra, Indonesia, 24-26 January 2006**
- Boehm, H.-D.V., Sulistiyanto, Y. (2006) "Carbon Storage in the Northern Sebangau Area between Tangkiling and Kasongan, Central Kalimantan" held during **5th**

- **European Conference on Ecological Restoration 2006 Paper for SER2006 in Greifswald, Germany, 21st – 25th Aug. 2006**
- Boehm, H.-D.V., Sulistiyanto, Y. (2006) "Peat depth, minerals below peat, carbon, fires and its characteristics a long transect between Tangkiling and Kasongan, Central Kalimantan" held at the **International Workshop of Tropical Rain Forest and Boreal Forest Disturbance and Their Affects on Global Warming in Palangka Raya, Indonesia** on 18. Sept. 2006
- Boehm, H.-D.V., Sulistiyanto, Y. (2007) "Carbon Storage in the Northern Sebangau Area between Tangkiling and Kasongan, Central Kalimantan and Peatland DEM-measurements with an Airborne Laser Scanner". Poster, presented at the **Symposium on Carbon in Peatlands, Wageningen, The Netherlands, 15-18 April 2007**
- Boehm, H.-D.V., Rieley, J.O., Limin, S.H., Frank, J., Syafrudin, M. (2007) "Successful Helicopter Flight Trials with Airborne Laser Scanning Technology to measure PSF height and Peat domes in Central Kalimantan". In **International Symposium, Workshop and Seminar on Tropical Peatland, "Carbon - Climate - Human Interactions - Carbon Pools, Fire, Mitigation, Restoration and Wise Use", Yogyakarta, Indonesia, 27-31 August**
- Boehm, H.-D.V., Frank, J. (2008) "Peat Dome Measurements in Tropical Peatlands of Central Kalimantan with a high-resolution Airborne Laser Scanner to achieve Digital Elevation Models". In **Proceedings of 13th International Peat Congress (IPC), Tullamore, Ireland, Section 5: Tropical Peatlands, 8-13 June 2008,**
- Boehm, H.-D.V., Liesenberg, V., Frank, J. (2010) "Relating tree height variations to peat dome slope in Central Kalimantan, Indonesia using small-footprint airborne LiDAR data", presented at the **International Silvilaser Conference, Freiburg, Germany, 14-17 Sept. 2010**
- Boehm, H.-D.V.; Liesenberg, V.; Frank, J. "The Potential of LiDAR Measurements on the Characterization of Tropical Peatlands." In: **1st Forestry Workshop: Operational Remote Sensing in Forest Management, 2011, Praha (Czech Republic).**
- Boehm, H.-D.V., Liesenberg, V., Frank, J., and Limin, S. (2011) "Characterizing Peat Swamp Forest Environments with Airborne LiDAR data in Central Kalimantan, Indonesia," Proceedings of the **11th International Conference on LiDAR, Applications for Assessing Forest Ecosystems. Hobart, Tasmania, Australia, 16-19 Oct 2011**
- Kronseder, K., Ballhorn, U., Böhm, V., Siegert, F. "Above ground biomass estimation across forest types at different degradation levels in Central Kalimantan using LiDAR data", **International Journal of Applied Earth Observation and Geoinformation 18 (2012) 37–48**
- Boehm, H.-D.V., Liesenberg, V., Frank, J., and Limin, S. (2012), "Multi-Temporal LiDAR-Survey in August 2007 and 2011 over Central Kalimantan's Peatland", presented at the **14th International Peat Congress (IPC), Peatland in Balance, Stockholm, Sweden, 3-8 June 2012**
- Boehm, H.-D.V., Liesenberg, V., Miraliakbari, A. and Limin, S. (2012) "Assessing Carbon Changes in Peat Swamp Forest Environments with Airborne LiDAR in

Central Kalimantan, Indonesia", presented at the **IEEE International Geoscience and Remote Sensing Symposium, IGARSS conference in Munich, Germany, 23-27 July 2012**

- Liesenberg, V.; Boehm, H.-D.V.; Limin, S., 2013. "Characterizing Peat Swamp Forest Physiognomies with Multifrequency SAR data". **In: 2nd Southeast Asian Gateway Evolution Meeting, 2013, Berlin (Germany).**
- Liesenberg, V.; Boehm, H.-D.V.; Limin, S., 2013. "Relating biophysical parameters across a Peat dome with airborne LiDAR data". **In: 2nd Southeast Asian Gateway Evolution Meeting, 2013, Berlin (Germany).**
- Rogers, S.S.; Boehm, H.-D.V.; Clague, A.; Liesenberg, V., 2013. "Ground Penetrating Radar Mapping of Peat Depth". **In: 2nd Southeast Asian Gateway Evolution Meeting, 2013, Berlin (Germany).**
- Boehm, H.-D.V.; Liesenberg, V.; Sweda, T.; Limin, S., 2013. "Peat Swamp Forest Regrowth and Peat Subsidence in Block C of the Ex-Mega Rice Project in Central Kalimantan (Indonesia)". **In: 2nd Southeast Asian Gateway Evolution Meeting, 2013, Berlin (Germany).**
- Boehm, H.-D.V., Liesenberg, V. and Limin, S. (2013) "Multi-Temporal Airborne LiDAR-Survey and Field Measurements of Tropical Peat Swamp Forest to Monitor Changes", **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Vol. 6, No. 3, June 2013, 1524-1530**, Digital Object Identifier 10.1109/JSTARS.2013.2258895

Address:

Kirchstockacher Weg 2,
D-85635 Höhenkirchen, near Munich, Germany,
Tel: + 49-(0)8102-774848
Mobile: +49-(0)170-316-1199
viktorboehm@t-online.de

Compound Rungan Sari, Jalan Tjilik Riwut Km36,
No.33, Palangka Raya 73225, Indonesia,
Tel: + 62-(0)821 50665491