

## Curriculum Vitae

### Mrs. Sisi Zlatanova, Dr. Eng.

Dr. Sisi Zlatanova is an associate professor and a leader of the theme group 'Geo-information for Crisis Response' at the GIS Technology section, OTB, at the Delft University of Technology, the Netherlands. She has graduated as a surveyor at the University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria in 1983 and has obtained her PhD degree on '3D GIS for urban modelling' at the Graz University of Technology, Graz, Austria in 2000. She worked as a software programmer at the Central Cadastre in Sofia, Bulgaria (1984-1989), an assistant-professor at UACG, Sofia, Bulgaria (1989-1995) and a researcher at the International Institute for Geo-information Science and Earth Observation (ITC), Enschede, The Netherlands (1995-1999).

She is teaching '3D GIS', 'Spatial Information in Utilities' and 'Geo-information for disaster management' within the MSc course Geomatics ([www.geomatics.tudelft.nl](http://www.geomatics.tudelft.nl)). She is a coordinator of Module 8 'MSc Thesis' and teaching '3D spatial databases' in the MSc Course GIMA (<http://www.msc-gima.nl>). She has been a visiting lecturer at the University of Venice, Italy (2007, 2008), the Vespicci Summer School, Fiesole, Italy (2005) and the ISCRAM Summer School, Tilburg, the Netherlands (2006). She is supervising several MSc and the following PhD students: Karin Mertens (Belgium, started January 2008): Management of sensor data, Wiebke Tegtmeier (TUDelft, started Mei 2006), Harmonization of geo-information related to the lifecycle of civil engineering objects - with focus on uncertainty and quality of surveyed data and derived real world representations and Zhengjie Fan (TUDelft, started March 2009): Geo-information with formal semantics for disaster management

Her research interests are in 3D geo-information: 3D object reconstruction, 3D data structures, 3D geodatabases, 3D spatial relationships (topology) and 3D visualisation (VR and AR). Her qualifications are in object-relational database management systems (Oracle Spatial, PostGIS): structuring and organization of semantically rich 3D data (above, beneath and on the surface), organization of Level of Details (including textures), developing of new data types (e.g. freeform curves and surfaces), spatial functions (e.g. for navigation and evacuation), query and simplifications of IFC models (and their matching to CityGML schema), etc.

She is leading WPs within national and international projects for 3D data integration and harmonization, e.g. COST Action TU0801 'Semantic enrichment of 3D city models for sustainable urban development' ([www.semcity.eu](http://www.semcity.eu), representative for the Netherlands) and HUMBOLDT <http://www.esdi-humboldt.eu>. She has received the ISPRS Schermerhorn award given for the most significant contribution to a working group in the 4 years preceding the Congress for her work within the WP IV/8. Spatial Data integration for emergency services (2004-2008). She is responsible for the annual symposium Gi4DM (Geo-information for Disaster Management) and acting as chair and co-chair of several other conferences among which 3Dgeoinfo and UDMS.

### Recent publications:

#### *Peer reviewed Journals:*

- Kang, Z., J. Li, L. Zhang, Q. Zhao and S. Zlatanova, 2009, Automatic Registration of Terrestrial Laser Scanning Point Clouds using Panoramic Reflectance Images *Sensors* 2009, 9(4), 2621-2646;
- Basta C., J.M.M. Neuvel, S. Zlatanova and B. Ale, 2007, Risk-maps informing land-use planning processes: A survey on the Netherlands and the United Kingdom recent developments, *Journal of Hazardous Materials*, Vol. 145, pp. 241-249
- Louwsma, J., S. Zlatanova, R van Lammeren, and P. van Oosterom, 2006, Specifications and implementations of constraints in GIS, *GeoInformatica*, Vol. 10, No. 4, pp. 531-550
- Zlatanova, S., P.van Oosterom and E. Verbree, 2006, Geo-information supports management of urban disasters, *Open House International*, Vol. 31, No.1, March 2006, pp.62-79
- Zlatanova, S., A. A. Rahman and W. Shi, 2004, Topological models and frameworks for 3D spatial objects, *Journal of Computers & Geosciences*, May, Vol. 30, No. 4, pp. 419-428
- Billen, R. and S. Zlatanova, 2003, The Dimensional model: a useful concept for 3D cadastre? in: *Computer, Environment and Urban Systems*, Vol. 27 (2003) pp. 411-425

#### *Editorship Books:*

- Lee, J. and S. Zlatanova, 2008, *3D Geoinformation Sciences*, ISBN 978-3-540-87394-5, Springer Verlag 2009

Nayak and Zlatanova, 2008, Remote Sensing and GIS Technologies for Monitoring and Prediction of Disasters, 2008, ISBN 978-3-540-79258-1, e-ISBN: 978-3-540-79259-8, Springer-Verlag, Berlin Heidelberg, 271 p.

Oosterom and Zlatanova, 2008, Creating Spatial Information Infrastructures: Towards Spatial Semantic Web, 2008, ISBN 978-1-4200-7068-2 (hardback), CRC Press, Taylor & Francis Group, Boca Raton, USA, 185 p.

Oosterom, Zlatanova, Penninga&Fendel, 2008, Advances in 3D Geoinformation Systems, 2008, ISBN 978-3-540-72134, Springer-Verlag, Berlin Heidelberg, 441 p.

Zlatanova and Li, 2008, Geospatial Information Technology for Emergency Response, 2008, ISBN 13: 978-0-415-42247-5 (hbk), ISBN 13: 987-0-203-92881-3 (ebook), Taylor & Francis Group, London, UK, 381 p. (ISPRS book series num. 6)

Li, Zlatanova and Fabbri, 2007, Geomatics Solutions for Disaster Management, ISBN 10 3-540-72106-1 Springer-Verlag, Berlin Heidelberg, 444 p.

Zlatanova and Prospero, 2006, Large-scale 3D Data Integration: Challenges and Opportunities, ISBN 0-8493-9898-3, CRCpress, Taylor & Francis Group, Boca Raton, FL, 245 p.

#### *Editorship Conference proceedings:*

Krek, A. M. Rumor, Zlatanova & Fendel, 2009, Urban and Regional Data Management: UDMS Annual 2009, ISBN 13: 978-0-415-55642-2 (hbk), Taylor & Francis Group, London, UK, 523 p

Coors, Rumor, Fendel and Zlatanova, 2008, Urban and Regional Data Management: UDMS Annual 2007, ISBN 13: 978-0-415-44059-2 (hbk), Taylor & Francis Group, London, UK, 523 p

Rahman, Zlatanova, Coors, 2006, Innovations in 3D Geo Information Systems, ISBN 10 3-540-36997-4, Springer, Berlin, Heidelberg, New York, 760 p.

Oosterom, Zlatanova and Fendel, 2005, Geo-information for Disaster Management, ISBN 3-540-24988-5, Springer, Berlin, Heidelberg, New York, 1434 p.

#### *Book chapters:*

Isikdag, U, s. Zlatanova, 2008, Towards defining a framework for automatic generation of buildings in CityGML using Building Information Models, in Lee&Zlatanova (eds.) 3D geo-information Sciences, Springer, pp. 79-96

Hofstra, H, H.J. Scholten, S. Zlatanova and A. Scotta, 2008, Multi-user tangible interfaces for effective decision-making in disaster management, In: S. Nayak and S. Zlatanova (Eds.); Remote Sensing and GIS Technologies for monitoring and prediction of disasters, Springer-Verlag, Berlin Heidelberg, pp. 243-266

Lee, J. and S. Zlatanova, 2008, A 3D data model and topological analyses for emergency response in urban areas, in: Zlatanova & Li (Eds.), Geospatial information technology for emergency response (ISPRS book series) (pp. 143-168). Taylor & Francis Group, London, UK

Emgard, L. & S. Zlatanova, 2008, Implementation alternatives for an integrated 3D information model, in: Van Oosterom, Zlatanova, Penninga and Fendel (eds.), 2008, Advances in 3D Geoinformation Systems, Lecture Notes in Geoinformation and Cartography, Springer-Verlag, Heidelberg, pp. 313-329

Khuan, T.C., A. Abdul-Rahman & S. Zlatanova, 2007, 3D Spatial Operations in Geo DBMS Environment for 3D GIS, In: O. Gervasi and M. Gavrilova (Eds.); ICCSA 2007, LNCS 4705, Part I, Berlin, pp. 151-163

Kang, Z., Z. Zhang, J. Zhang & S. Zlatanova, 2007, Rapidly realizing 3D visualisation for urban street based on multi-source data integration, in: Li, Zlatanova&Fabbri (Eds.) Geomatics Solutions for Disaster Management, Lecture Notes in Geoinformation and Cartography, Springer-Verlag Berlin, Heidelberg, pp. 149-163

Xu, W. and S. Zlatanova, 2007, Ontologies for Disaster Management, in: Li, Zlatanova&Fabbri (Eds.) Geomatics Solutions for Disaster Management, Lecture Notes in Geoinformation and Cartography, Springer-Verlag Berlin, Heidelberg, pp. 185-200

#### *Papers in conference proceedings:*

(full list available at <http://www.gdmc.nl/zlatanova/publications> )

#### **Contact data:**

Section GIS Technology,  
OTB Institute for Housing, Urban and Mobility Studies,  
Delft University of Technology,  
Jaffalaan 9, 2628 BX, Delft, the Netherlands,  
P.O. Box, 5030, 2600 GA Delft, the Netherlands  
tel: +31152782714/ fax: +31 152784422,  
e-mail: s.zlatanova@tudelft.nl  
url: <http://www.gdmc.nl/zlatanova>