Personal Data

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		Languages:	Dutch, English, French

Training

2005 – 2009	Hasselt University **PhD in Theoretical Computer Science** Thesis: "Uncertainty Management in Spatio-temporal Databases" (May 19th, 2009)
1997 – 2001	K.U.Leuven (University) **Licentiaat Wiskunde (Master in Mathematics)** Thesis: "The Discrete Log Problem in GF(p)"
1993 - 1997	Sint-Gertrudisinstituut Landen (High school) Mathematics-Sciences

Experience

01/05/2012 – 31/07/2014	**University of Zürich** – Research and scientific coordinator COST Action IC0903 MOVE GIS, Database theory **PostDoc**
13/06/2011 – 17/05/2012	**Nanyang Technological University** – Research Database theory **PostDoctoral Fellow**
07/11/2010 – 06/05/2011	**University of Münster - IFGI** – Research Research on spatio-temporal modeling and various GIS topics **PostDoctoral Fellow**
11/01/2010 - 10/07/2010	**University of California - Santa Cruz** - Research Research on Data Inter-operability via Schema Mappings **PostDoc**
01/10/2005 – 30/09/2009	**Hasselt University** – Research/Education Research in Theoretical Computer Science in the Databases and Theoretical Computer Science group **Assistant – Researcher**
14/02/2005 – 30/06/2005	**Hogeschool West-Vlaanderen** – Lector Multimedia and Communication Technology
01/03/2004 – 14/02/2005	**Department of education** – Education **Teacher**
01/10/2001 – 30/09/2003	**K.U.Leuven** - Research/Education Research in Pure and Applied Differential Geometry at the department of mathematics of the KUL **Assistant – Researcher**
1999 – present	**Triade Systems** – Development Development of and maintaining the FGInt and related libraries **http://www.submanifold.be/**

Publications

Accepted for publication: *(Author's names are alphabetical, **primary author in bold**)*

- Bart Kuijpers and **Walied Othman**, ``Trajectory databases: data models, uncertainty and complete query languages" in Proceedings of 11th International Conference on Database Theory (ICDT'07), Lecture Notes in Computer Science, Vol. 4353, 224--238, Springer-Verlag, 2007.

- Jose Macedo, Christelle Vangenot, Walied Othman, Nikos Pelekis, Elias Frentzos, Bart Kuijpers, Irene Ntoutsi, Stefano Spaccapietra, Yannis Theodoridis, ``Trajectory data models ", Chapter 5 in Mobility, Data Mining and Privacy -- Geographic Knowledge Discovery, eds. Fosca Giannotti and Dino Pedreschi, 125--149, Springer-Verlag, 2007.

- Bart Kuijpers and **Walied Othman**, "An analytic solution to the alibi query in the bead model for moving object data", in the Proceedings of the Dagstuhl seminar 07212 "Constraint Databases, Geometric Elimination and Geographic Information Systems", 2007.

- Bart Kuijpers, Harvey J. Miller, Tijs Neutens and **Walied Othman**, "Anchor uncertainty and space-time prisms on road networks", in the Proceedings of the Dagstuhl seminar 08471 "Geographic Privacy-Aware Knowledge Discovery and Delivery", 2008.

- Bart Kuijpers, Rafael Grimson and **Walied Othman**, "An analytic solution to the alibi query in the space-time prisms model for moving object data", published in International Journal of Geographical Information Science, Vol. 25, Issue 2, pp 293--322, 2011. *(SCI-impactfactor:* **1.822**)

- Bart Kuijpers and **Walied Othman**, "Modeling uncertainty of moving objects on road networks via space-time prisms", published in International Journal of Geographical Information Science, Vol. 23, Issue 9, pp 1095--1117, 2009. *(SCI-impactfactor:* **1.822**)

- Bart Kuijpers and **Walied Othman**, "Trajectory databases: data models, uncertainty and complete query languages" published in Journal of Computer and System Sciences, Vol. 76, Issue 7, pp 538--560, 2010. *(SCI-impactfactor:* **1.185**)

- Bart Kuijpers, Bart Moelans, **Walied Othman** and Alejandro Vaisman, "Analyzing Trajectories using Uncertainty and Background Information", in Proceedings of 11th International Symposium on Advances in Spatial and Temporal Databases (SSTD'09), Lecture Notes in Computer Science, Vol. 5644, 135--152, Springer-Verlag, 2009.

- Kristof Ghys, Bart Kuijpers, Bart Moelans, Walied Othman, Dries van Goidsenhoven and Alejandro Vaisman, "Map Matching and Uncertainty: an Algorithm and Real-World Experiments", in 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2009) ACM, 2009

- Bart Kuijpers, Harvey J. Miller, Tijs Neutens and **Walied Othman**, "Anchor uncertainty and space-time prisms on road networks", published in International Journal of Geographical Information Science, Vol. 24, Issue 8, pp 1223--1248, 2010. *(SCI-impactfactor:* **1.822**)

- Tetsuo Kobayashi, Harvey J. Miller, **Walied Othman**, "Analytical methods for error propagation in planar space-time prisms", published in Journal of Geographical Systems, Vol. 13:4, pp 327—354, 2011. *(SCI-impactfactor:* **1.25**)

- Miller, H.J., Kobayashi, T. and **Othman, W.** (2010) "Error propagation in space-time prisms," in N. J. Tate and P. F. Fisher (eds.) Accuracy 2010: Proceedings of the Ninth International Symposium on Spatial Accuracy Assessment in the Natural Resources and Environmental Sciences, International Spatial Accuracy Research Association, pp. 37--40.
- Bart Kuijpers, Harvey J. Miller, **Walied Othman**, "Kinetic space-time prisms", in 19th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2011) ACM, 2011.
- **Rafael Grimson**, Bart Kuijpers and Walied Othman, "Quantifier elimination for elementary geometry and elementary affine geometry", published in Mathematical Logic Quarterly, Vol. 58:6, pp 399—416, 2012. *(SCI-impactfactor: 0.496*)
- Phokion Kolaitis, Walied Othman, Balder Ten Cate, "Data Exchange with Arithmetic Operations", Proceedings of the 16th International Conference on Extending Database Technology, pp 537—548, 2013.
- Georgios Technitis, Walied Othman, Kamran Safi, Robert Weibel, "From A to B, randomly: An origin-to-destination random trajectory generator for animal movement", published in International Journal of Geographical Information Science, , , , , 2015

In preparation:
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Submitted for publication:
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Research visits

04/2008 – 09/2008	University of Utah – United States Department of Geography - Prof. dr. Harvey J. Miller
01/2010 – 07/2010	University of California - Santa Cruz – United States Department of Computer Science Prof. dr. Phokion G. Kolaitis, Prof. dr. Wang-Chiew Tan
11/2010 – 04/2011	University of Münster - Germany Institute For GeoInformatics (IFGI) Prof. dr. Werner Kuhn
06/2011 – 04/2012	Nanyang Technological University – Singapore School of Computer Engineering – CAIS Prof. dr. Xiaokui Xiao
05/2012 – 07/2014	University of Zürich – Switzerland Department of Geography Prof. dr. Robert Weibel

About me

Though I 'm an abstract mathematician, my strong point is the ability to switch fluently between abstract concepts and ideas from reality, and thus ensue the best setting to manipulate the given objects.
Areas of interest include discrete mathematics, number theory, graph theory, information theory, combinatorics, public key cryptography, mathematical analysis, topology and differential geometry.

Triade Systems

In 1999 I single-handedly created a library for FreePascal And Delphi called FGInt to manipulate extremely large integers in a time when there existed none. Using this library I implemented classic public key algorithms like RSA, ElGamal, DSA and GOSTDSA. I also implemented state of the art public key algorithms like Elliptic Curve ElGamal and Elliptic Curve DSA. The very algorithms used to secure virtually all secured communications worldwide.
These libraries are used in Skype, see http://www.skype.com/intl/en-gb/legal/third-party-software/ .

Besides ongoing development and maintenance, I also provide help with the integration of my libraries. Some examples of these projects are:
- The use of FGInt by GS-soft Switzerland to provide asymmetric encryption systems for several Swiss army projects. Details about these projects are not available for public access but Mr Günther Schoch (see references below) could be contacted as a reference for my work.
- And then there is CEPTEST. CEPTEST is an application, which is used by developers of the ep2-protocol. The ep2-protocol is used to communicate between payment terminals and acquiring institutions in Switzerland. CEPTEST simulates this communication line. The RSA-encryption is performed by FGInt.

In 2012, I created the same libraries for Objective-C.

I also created gKnujOn and gSpamCop, which is a python script that forwards gmail's spam to KnujOn.com and spamcop.net respectively. After the demise of bluefrog KnujOn stepped in, but lacked the tools for their clients to submit their spam, this also applied to spamcop. I created these scripts to fill that need by choosing python I ensured this was not platform specific.

Pente Live was my first iPhone app that Pente Live lets you play turn-based games at pente.org. This app supports *all* turn-based games available at pente.org.
Features:
- Supports Pente, Connect6, Gomoku, Keryo-Pente, D-Pente, G-Pente, Poof-Pente, Boat-Pente. Turn-based games only.
- Play rated or unrated.
- Touch to zoom the board, then pan the zoomed board.
- Send invitations from your iPhone.
- Accept or decline invitations from your iPhone.
- Slide to cancel sent invitations.
- Slide to resign games.
https://itunes.apple.com/us/app/pente-live/id595426592?ls=1&mt=8

Hobbies

Rock climbing, mathematics, swimming, diving, programming, movies, music, playing music (flute), language

References

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