

## Sander Demeester

---

Dubbelsingel 6  
Brugge, Sint-kruis  
04 76 86 48 84  
demeester.sander@gmail.com  
www.sanderdemeester.be  
1990/01/17

### Personal

I'm Diagnosed with autism, Because of this, my academic career is somewhat unconventional. My big passions are information networks and number theory.

### Work experience

*Software developer* Summer intern 2013  
Developing of a Python program to analyze large amount of logging information generated by the Ugent supercomputer through static data analysis and machine learning algorithms. At High performance and computing infrastructure (University Ghent).  
(github.com/hpcugent)

*Administrative and ICT employee* 2010 - 2011  
Stage at Province of West Flanders department ICR.  
In my final year of secondary education I started doing some administrative. This work quickly evolved to ICT work. At the end of the year the result was a security model I had developed involving the WiFi Security specification (802.11i)

### Education

*Secondary education*, Extraordinary education for people with autism.  
**Spermalie** BRUGES (2002 - 2010)

*Informatics*, **Ghent University**.

Courses passed:

1st bachelor (2010-2011)	Programming 1 and 2 Communication Skills Intellectual property law Linux Computing (advanced) Scripting Languages (advanced use of Linux)
1st, 2nd and 3rd bachelor (2010-2013)	Algorithms and Data Structures
2nd bachelor (2011-2012)	Software Development 1 and 2 Computer Architecture
3rd bachelor (2011-2012)	Operating Systems Computer Networking Interdisciplinary Project Internet technology
1st master (2012-2013)	Information Security and Cryptography Study of programming languages and models

<b>Language knowledge</b>	<p>Dutch (Native speaker)</p> <p>English (Fluent reading, writing and speaking)</p>
<b>Education related projects.</b>	<p><i>Algorithms &amp; Data Structures:</i> AD3zip, ZW-tree</p> <p>Own implementation of data compression algorithms.</p> <ul style="list-style-type: none"> <li>• Burrows Wheeler</li> <li>• lz77</li> <li>• Huffman</li> </ul> <p><i>Avank-bebras:</i> Interdisciplinary Project</p> <p>System administrator &amp; Software developer.</p> <p><a href="http://github.com/SanderDemeester/bebras-avank">http://github.com/SanderDemeester/bebras-avank</a>.</p> <p><i>Project information security:</i> Designing and implementing of an online banking application using a multi-factor authentication scheme on Android (HOTP).</p>
<b>Personal projects</b>	<p><i>Design, configuration and management of an advanced home network</i></p> <p>I have built and now maintain an IPv6 home network by running OpenBSD on embedded platforms: Alix 2D2 (AMD Geode, x86) and raspberry PI (ARMv6).</p> <p>Building compute cluster with raspberry PI.</p> <p><i>Author of several open source projects.</i></p> <p>Refer to <a href="http://github.com/SanderDemeester">github.com/SanderDemeester</a></p> <ul style="list-style-type: none"> <li>• Network analysis tools</li> <li>• Own implementation of cryptographic algorithms (with the purpose of gaining a better understanding of their inner workings).</li> </ul> <p><i>ZeusWPI</i></p> <p>Active member of ZeusWPI, a student organization at Ghent University with a passion for IT projects.</p> <ul style="list-style-type: none"> <li>• <a href="http://zeus.ugent.be">http://zeus.ugent.be</a></li> <li>• <a href="http://github.com/ZeusWPI">http://github.com/ZeusWPI</a></li> </ul> <p><i>Ethical Hacking Workgroup</i></p> <p>Active member of the Ethical Hacking Workgroup at the ELIS department of Ghent University, a faculty-organized initiative striving to teach interested students about IT security.</p> <p><i>Attend IT-related conferences &amp; events</i></p> <ul style="list-style-type: none"> <li>• FOSDEM - Free and Open Source Developers, European Meeting (2007-2013)</li> <li>• BruCON - annual security and hacker conference (2012)</li> <li>• VPW - Flemish programming contest (2011-2013)</li> <li>• Blackberry developer conference (2012)</li> </ul> <p><i>SHA3 workshop</i></p> <p>Cryptography workshop about SHA3 and permutation based cryptography, organized by VUB.</p> <p><i>Reading international academic publications from IEEE and ACM.</i></p>

## Computer literacy

### Programming languages

<ul style="list-style-type: none"><li>- Java (Excellent)</li><li>- C / C++ (Good)</li><li>- Python (Good)</li><li>- Javascript (Good)</li><li>- .NET (Good) ASP.NET</li><li>- x86 assembler en ARM assembly (Good)</li><li>- Scripting Bash, Sed en awk. Powershell.</li></ul>	<b>Frameworks en Library</b> <ul style="list-style-type: none"><li>- libxml2</li><li>- ncurses</li><li>- Play framework</li><li>- Android (basic)</li><li>- Sage Mathematics</li><li>- scikit-learn</li><li>- JDBC</li><li>- jbox2d</li><li>- Swing</li><li>- sigma.js</li><li>- node.js</li></ul>
--	--

### System administrator

- Linux en OpenBSD
  - DNS/BIND (dnssec)
  - advanced knowledge of TCP/IP and networking techniques.
  - Good knowledge of IPv6 + deploy techniques.
  - Knowledge VPN technologies. (TLS/IPSEC)
  - Routing and dispatching algorithms (RIPv2, BGP basic).
  - Excellent knowledge of the two biggest firewall based rule engines (IPTables and PF).
  - Experience with NetFlow packet analysis.
  - Experience with Apache.
  - Experience with OpenSSL.
  - Network Engineering.
  - Network Architecture.
- Experience with Windows, Linux (Debian based, Gentoo, CentOS en Back-Track) and OpenBSD.
  - Scripting, bash, sed en awk.

### Tools

<ul style="list-style-type: none"><li>- Wireshark</li><li>- Postgresql</li><li>- MySQL</li><li>- NoSQL</li></ul>	<ul style="list-style-type: none"><li>- Graylog2</li><li>- Logstash</li><li>- Jenkins</li><li>- ZAP</li><li>- Eclipse</li></ul>
--	---

## Varia

- Blog (<http://www.sanderdemeester.be/blog>)
- Interest in semantic web en Linked Data
- Continuous integration.
- OWASP
- Version control
  - git
  - basic knowledge SVN
  - basic knowledge Mercurial SCM.
- Basic knowledge databank normalization

## References

*Luis Fernando Munoz*  
*[luis.munoz@ugent.be](mailto:luis.munoz@ugent.be)*

*HPC Systems engineer at Ghent University*

*Jens Timmerman*  
*[jens.timmerman@ugent.be](mailto:jens.timmerman@ugent.be)*

*System Engineer HPC at Ghent University*

*Kenneth Hoste*  
*[kenneth.hoste@ugent.be](mailto:kenneth.hoste@ugent.be)*

*HPC system administrator at Ghent University*

*Jeroen De Wachter*  
*[jeroen.de.wachter@telenet.be](mailto:jeroen.de.wachter@telenet.be)*

*IT Consultant at Addestino*