



# Maxim Van de Wynckel

**Date of birth:** 10/03/1995 | **Nationality:** Belgian | **Gender:** Male | **Phone number:** (+32) 489861848 (Home) | **Email address:** [me@maximvdw.be](mailto:me@maximvdw.be) | **Website:** <https://maximvdw.be> | **Bluesky:** <https://bsky.app/profile/maximvdw.be> | **ORCID:** <https://orcid.org/0000-0003-0314-7107> | **LinkedIn:** <https://linkedin.com/in/maximvdw> | **Google Scholar:** <https://scholar.google.com/citations?user=NB6760YAAAAJ> | **GitHub:** <https://github.com/Maximvdw> | **Mastodon:** <https://mas.to/@maximvdw> | **Address:** Invalidenlaan 178/5, 1160, Oudergem, Belgium (Home)

## ABOUT ME

I am a software engineer, researcher and project manager with a passion for interoperable (information) systems. My main expertise lies in linked open data, data spaces, sensor processing & RTLS. With my business skills and knowledge, I am capable of integrating innovation in existing business processes.

## WORK EXPERIENCE

**VRIJE UNIVERSITEIT BRUSSEL – ELSENE, BELGIUM**

**Business or Sector** Education | **Department** Department of Computer Science | **Address** Pleinlaan 2, 1050, Elsene, Belgium |

**Email** [maxim.van.de.wynckel@vub.be](mailto:maxim.van.de.wynckel@vub.be) | **Website** <https://vub.be>

### ACADEMIC AND TEACHING STAFF – 01/10/2019 – CURRENT

Teaching assistant for various Bachelor and Master courses such as: Databases, Open Information Systems, Web Technologies, Information Visualisation, Next Generation User Interfaces, Advanced Topics in Big Data. Researcher at the Web & Information Systems Engineering Lab on interoperability, linked data, internet of things, augmented reality, human-computer interaction and applied artificial intelligence.

**MVDW-SOFTWARE – OUDERGEM, BELGIUM**

**Business or Sector** Information and communication | **Address** Invalidenlaan 178/5, 1160, Oudergem, Belgium |

**Email** [maxim@mvdw-software.com](mailto:maxim@mvdw-software.com) | **Website** <https://mvdw-software.com>

### SOFTWARE ENGINEERING CONSULTANT – 01/07/2019 – CURRENT

Freelance software development and consultancy. Projects spanning from web development to IoT and AI integration into existing business processes. Project lead with external partners.

**CHEMSTREAM BV. – EDEGEM, BELGIUM**

**Address** Drie Eikenstraat 661, 2650, Edegem, Belgium | **Website** <https://chemstream.be>

### SOFTWARE ENGINEER – 01/07/2018 – 31/07/2018

(Student contract) Development of chemical database software.

**CHEMSTREAM BV. – EDEGEM, BELGIUM**

**Address** Drie Eikenstraat 661, 2650, Edegem, Belgium | **Website** <https://chemstream.be>

### SOFTWARE ENGINEER – 01/03/2016 – 30/04/2016

(Student contract) Maintenance of chemical database search by substructures.

**CHEMSTREAM BV. – EDEGEM, BELGIUM**

**Address** Drie Eikenstraat 661, 2650, Edegem, Belgium | **Website** <https://chemstream.be>

### **SOFTWARE ENGINEER – 01/09/2015 – 30/09/2015**

(Student contract) Development and maintenance of chemical database software.

 **CHEMSTREAM BV.** – EDEGEM, BELGIUM

**Address** Drie Eikenstraat 661, 2650, Edegem, Belgium | **Website** <https://chemstream.be>

### **SOFTWARE ENGINEER – 01/04/2015 – 30/04/2015**


(Student contract) Migration from Access database to Web-based chemical database software.

 **CHEMSTREAM BV.** – EDEGEM, BELGIUM

**Address** Drie Eikenstraat 661, 2650, Edegem, Belgium | **Website** <https://chemstream.be>

### **SOFTWARE ENGINEER – 01/08/2014 – 31/08/2014**

(Student contract) Development of PHP and MySQL based chemical database software.

 **UZ BRUSSEL** – JETTE, BELGIUM

**Address** Laarbeeklaan 101, 1090, Jette, Belgium | **Website** <https://uzbrussel.be/>

### **SOFTWARE DEVELOPER INTERNSHIP – 01/02/2016 – 31/05/2016**

(Student contract) Development of QR-code based appointment system. Optimising the printing of appointments via Zebra printers. Google Fit integration for patients. Healthcare software development.

 **BITPOWER BV.** – EVERGEM, BELGIUM

**Address** 9940, Evergem, Belgium | **Website** [https://www.nieuwsblad.be/cnt/dmf20150604\\_01714431](https://www.nieuwsblad.be/cnt/dmf20150604_01714431)

### **SOFTWARE DEVELOPER INTERNSHIP – 01/10/2015 – 31/12/2015**

(Student contract) eID cloud authentication thesis preparatory training. Security testing and protocol analysis.

 **BITPOWER BV.** – EVERGEM, BELGIUM

**Address** 9940, Evergem, Belgium | **Website** [https://www.nieuwsblad.be/cnt/dmf20150604\\_01714431](https://www.nieuwsblad.be/cnt/dmf20150604_01714431)

### **SOFTWARE DEVELOPER – 01/08/2015 – 30/09/2015**

(Student contract) Security penetration testing of eID cloud authentication in C++.

 **VDW-CONSULTING BV.** – HUMBEEK, BELGIUM

**Address** Dijkstraat 17, 1851, Humbeek, Belgium | **Website** <https://vdw-consulting.com/>

### **SOFTWARE DEVELOPER – 01/07/2014 – 31/07/2014**

(Student contract) Web UI for print management software.

 **VDW-CONSULTING BV.** – HUMBEEK, BELGIUM

**Address** Dijkstraat 17, 1851, Humbeek, Belgium | **Website** <https://vdw-consulting.com/>

### **SOFTWARE DEVELOPER – 01/07/2013 – 31/08/2013**

(Student contract) File server deployment and print job submitting in C#.

## ● **EDUCATION AND TRAINING**

01/10/2019 – 01/09/2025 Elsene, Belgium

**DOCTOR OF SCIENCE (PHD), COMPUTER SCIENCE** Vrije Universiteit Brussel

Researching hybrid- and indoor positioning systems, interoperability of location data and discoverability of services using linked data and Solid. Further research on Augmented Reality, Virtual Reality, Artificial Intelligence, deep sensor fusion and internet of things.

**Address** Pleinlaan 2, 1050, Elsene, Belgium | **Website** <https://www.vub.be/en> | **Level in EQF** EQF level 8 | **Type of credits** ECTS |

**Number of credits** 285 | **Thesis** Interoperable and Discoverable Indoor Positioning Systems

01/10/2018 – 01/07/2019 Elsene, Belgium

## MASTER OF SCIENCE (MSC), APPLIED COMPUTER SCIENCE Vrije Universiteit Brussel

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Parallelism, distributed systems, multicore programming, software security and indoor navigation master thesis.

**Address** Pleinlaan 2, 1050, Elsene, Belgium | **Website** <https://www.vub.be/en> | **Final grade** magna cum laude |

**Level in EQF** EQF level 7 | **Type of credits** ECTS | **Number of credits** 60 | **Thesis** Indoor Navigation by Centralized Tracking

01/10/2016 – 13/09/2018 Elsene, Belgium

## BRIDGING PROGRAMME, COMPUTER SCIENCE Vrije Universiteit Brussel

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Bridging programme from professional bachelor (Ba) to academic bachelor (BSc).

**Address** Pleinlaan 2, 1050, Elsene, Belgium | **Website** <https://www.vub.be/en> | **Type of credits** ECTS | **Number of credits** 60

01/10/2013 – 01/07/2016 Anderlecht, Belgium

## BACHELOR (BA), APPLIED COMPUTER SCIENCE Erasmushogeschool Brussel

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Software Security, Software Development, Agile development, business management skills. Received an award for best final work (thesis).

**Address** Nijverheidskaai 170, 1070, Anderlecht, Belgium | **Website** <https://www.erasmushogeschool.be/en> |

**Final grade** magna cum laude | **Level in EQF** EQF level 6 | **Type of credits** ECTS | **Number of credits** 180 |

**Thesis** eID IO - Applicatie Besturing

30/06/2013 Hoboken, Belgium

## INDUSTRIAL ICT Don Bosco Hoboken

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Electrical engineering, networking, hardware, software development. Received an award for best final work.

**Address** Salesianenlaan 1, 2660, Hoboken, Belgium | **Website** <https://www.donboscohoboken.be/>

## LANGUAGE SKILLS

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Mother tongue(s): **DUTCH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C1	C1	C1	C1+
<b>FRENCH</b>	B1	B1	B1	B1	B1

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## SKILLS

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### Research

Semantic interoperability | Semantic Web and Linked Data | Indoor robot navigation | Localisation and Positioning

### Technical

Distributed systems | Software architecture | Full stack development | Software security | Software development | Database management and design

### DevOps

Docker | AWS | Cybersecurity | CI/CD | Git

### Programming

TypeScript | JavaScript | Java | Python | C#

## ● PUBLICATIONS

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2025

### **Interoperable and Discoverable Indoor Positioning Systems**

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Satellite positioning systems such as GPS have made outdoor navigation highly accessible. They enable us to find destinations, locate services, and support technologies like autonomous vehicles and delivery tracking. However, once indoors, these systems no longer function reliably. Determining one's position inside a building is a different challenge altogether. Indoor positioning systems aim to address this need and have found applications in environments such as airports, hospitals, shopping centres, and warehouses. They support tasks like navigation, asset tracking, smart building management, and robotic automation.

Despite their growing relevance, most indoor positioning systems are isolated solutions that rely on different technologies and proprietary software. As a result, they are often limited to a single building or use case and cannot easily be reused elsewhere. Users frequently have to install separate applications or accept new conditions to access these systems, leading to a fragmented experience and raising privacy concerns. For building managers and developers, the high cost and complexity of deploying such systems can be a barrier to adoption. Moreover, the lack of standardisation makes it difficult for systems to share data or work together effectively.

This dissertation investigates how to improve the interoperability of indoor and outdoor positioning systems. It proposes a framework for enabling consistent and seamless exchange of location data across different platforms and technologies. The research introduces new machine-readable vocabularies that make it easier for systems to interpret and share information about locations. It also explores methods for systems to discover each other and exchange data without requiring prior coordination, increasing flexibility and reducing dependence on tightly integrated setups. An important aspect of the proposed solution is the emphasis on user control. By supporting privacy-aware data management and reducing reliance on closed, vendor-specific applications, the framework aims to offer a more open and user-centric alternative. The ultimate goal of this research is to support the development of a unified ecosystem for positioning systems, where location data can be managed and shared efficiently across various contexts while preserving trust and interoperability.

Van de Wynckel, M. (2025). Interoperable and Discoverable Indoor Positioning Systems [PhD thesis]. Vrije Universiteit Brussel – WISE lab.

**Link** <https://maximvdw.be/publications/2025/phd/>

2025

### **OpenHPS: A Modular Framework to Facilitate the Development of FAIR Positioning Systems**

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Positioning systems determine the location of people and objects using various technologies and algorithms. While GPS dominates outdoor positioning, indoor and smaller-scale systems often require alternative technologies for lower latency, higher accuracy, or greater efficiency. These systems are frequently developed as single-use prototypes with no standard data format, hindering reusability and expansion. OpenHPS addresses these challenges by providing a modular, graph-based framework for creating versatile positioning systems on multiple platforms. It supports a wide range of algorithms and enables extensibility through custom nodes for sensor fusion and algorithm integration.

Van de Wynckel, M., & Signer, B. (2025). OpenHPS: A Modular Framework to Facilitate the Development of FAIR Positioning Systems. Journal of Open Source Software, 10(110), 8113. <https://doi.org/10.21105/joss.08113>

**Link** <https://maximvdw.be/publications/2025/vandewynckel2025joss/>

2025

### **Survey on the Privacy and Transparency of Location Data**

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Pseudonymised survey results of our 2025 survey on the privacy and transparency of location data

Van de Wynckel, M., & Signer, B. (2025). Survey on the Privacy and Transparency of Location Data. <https://doi.org/10.5281/zenodo.15564050>

**Link** <https://maximvdw.be/publications/2025/vandewynckel2025survey/>

2025

### **Jong Talent: Maxim Van de Wynckel (30) zoekt oplossingen om gebruikers meer controle te geven over hun locatiegegevens**

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'Locatiegegevens zijn big business', zegt doctoraatsonderzoeker Maxim Van de Wynckel. Zulke data worden door een hele rist aan applicaties en andere diensten opgeslagen. 'Denk aan navigatie- en fitnessapps, maar ook aan wifi- en bluetooth-signalen. Gebruikers zijn zich vaak niet bewust van die onzichtbare vormen van dataverzameling'. Recente gebeurtenissen tonen aan hoe kwetsbaar locatiegegevens zijn.

(Press article)

**Link** <https://www.knack.be/nieuws/technologie/jong-talent-maxim-van-de-wynckel-30-zoekt-oplossingen-om-gebruikers-meer-controle-te-geven-over-hun-locatiegegevens/>

2025

### **Sphero Dead Reckoning and CV Tracking Dataset**

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Computer vision tracking and dead reckoning sensor fusion of a Sphero robot

Van de Wynckel, M., & Signer, B. (2025). Sphero Dead Reckoning and CV Tracking Dataset. Kaggle. <https://doi.org/10.34740/KAGGLE/DS/6760212>

**Link** <https://maximvdw.be/publications/2025/vandewynckel2025sphero/>

2025

### **Garage Positioning Dataset**

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A fingerprinting dataset consisting of WLAN, BLE and IMU data in a garage

Van de Wynckel, M. (2025). Garage Positioning Dataset. Kaggle. <https://doi.org/10.34740/KAGGLE/DS/6654647>

**Link** <https://maximvdw.be/publications/2025/vandewynckel2025kaggle/>

2024

### **Towards Distributed Intelligent Tutoring Systems Based on User-owned Progress and Performance Data**

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This paper proposes a decentralised approach to intelligent tutoring systems by storing learning progress and performance data in user-owned Solid Pods, enhancing learner autonomy and privacy.

Malaise, Y., Van de Wynckel, M., & Signer, B. (2024). Towards Distributed Intelligent Tutoring Systems Based on User-owned Progress and Performance Data. Proceedings of the 2nd Solid Symposium (SoSy'24), 3947. <https://ceur-ws.org/Vol-3947/short3.pdf>

**Link** <https://maximvdw.be/publications/2024/sosy2024yoshi/>

2024

### **Discoverable and Interoperable Augmented Reality Environments Through Solid Pods**

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In this paper, we propose a novel solution to store 3D manipulations in AR spaces within a Solid pod. Using this solution, multiple users can work together in the same environment while also ensuring interoperability between AR applications.

Van de Wynckel, M., & Signer, B. (2024). Discoverable and Interoperable Augmented Reality Environments Through Solid Pods. Proceedings of SoSy 2024 (Poster), 2nd Solid Symposium, Leuven, Belgium, May 2024, 3947.

**Link** <https://maximvdw.be/publications/2024/sosy2024maxim/>

2024

### **FidMark: A Fiducial Marker Ontology for Semantically Describing Visual Markers**

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In this publication, we propose an ontology called FidMark for semantically describing fiducial markers. This ontology is useful for AR and robotics applications to ensure interoperability between systems.

Van de Wynckel, M., Valadez, I., & Signer, B. (2024). FidMark: A Fiducial Marker Ontology for Semantically Describing Visual Markers. Proceedings of The Semantic Web (ESWC 2024), 235–250. [https://doi.org/10.1007/978-3-031-60635-9\\_14](https://doi.org/10.1007/978-3-031-60635-9_14)

**Links** [https://videlectures.net/videos/eswc2024\\_van\\_de\\_wynckel](https://videlectures.net/videos/eswc2024_van_de_wynckel) | <https://maximvdw.be/publications/2024/eswc2024/>

2023

## **SemBeacon: A Semantic Proximity Beacon Solution for Discovering and Detecting the Position of Physical Things**

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In this publication we propose the SemBeacon specification, which is a semantic beacon solution to discover and detect the position of physical things such as IoT devices, environments or services.

Van de Wynckel, M., & Signer, B. (2023). SemBeacon: A Semantic Proximity Beacon Solution for Discovering and Detecting the Position of Physical Things. Proceedings of the 13th International Conference on the Internet of Things, 9–16.

**Link** <https://maximvdw.be/publications/2023/iot2023/>

2023

## **802.11 Management frames from a public location**

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In this dataset, two separate datasets were recorded in a Belgian train station to collect 802.11 wireless management frames. The datasets were anonymised and contain data on the SSIDs, signal strengths and MAC addresses.

Vermunicht, B., Van de Wynckel, M., & Signer, B. (2023). 802.11 Management frames from a public location. <https://doi.org/10.5281/zenodo.8003771>

**Link** <https://maximvdw.be/publications/2023/vermunicht2023/>

2023

## **Object Tracking on a Monopoly Game Board**

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In this dataset, a Monopoly game was recorded from a first person perspective. The aim of this dataset is to conduct pawn and object tracking using computer vision algorithms.

Hoebeke, N., Van de Wynckel, M., & Signer, B. (2023). Object Tracking on a Monopoly Game Board. <https://doi.org/10.5281/zenodo.7990434>

**Link** <https://maximvdw.be/publications/2023/hoebeke2023/>

2022

## **POSO: A Generic Positioning System Ontology**

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In this publication we propose the POSO ontology, which is a positioning system ontology to semantically describe positioning systems, the data they produce and the environments in which these systems are deployed.

Van de Wynckel, M., & Signer, B. (2022). POSO: A Generic Positioning System Ontology. The Semantic Web – ISWC 2022, 231–247. [https://doi.org/10.1007/978-3-031-19433-7\\_14](https://doi.org/10.1007/978-3-031-19433-7_14)

**Links** [https://openhps.org/publications/2022/5b3-Van de Wynckel-Video-MQ.mp4](https://openhps.org/publications/2022/5b3-Van%20de%20Wynckel-Video-MQ.mp4) | <https://maximvdw.be/publications/2022/iswc2022/>

2022

## **A Solid-based Architecture for Decentralised Interoperable Location Data**

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In this publication we propose a solution to decentralise location data and positioning systems in Solid pods using linked data.

Van de Wynckel, M., & Signer, B. (2022). A Solid-based Architecture for Decentralised Interoperable Location Data. Proceedings of the 12th International Conference on Indoor Positioning and Indoor Navigation (IPIN'22), CEUR Workshop Proceedings,

**Links** [https://openhps.org/publications/2022/WiP65\\_MaximVandeWynckel.mp4](https://openhps.org/publications/2022/WiP65_MaximVandeWynckel.mp4) | <https://maximvdw.be/publications/2022/ipin2022/>



2021

## **Indoor Positioning Using the OpenHPS Framework**

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In this publication, we propose OpenHPS, an open source hybrid positioning system. We demonstrate how OpenHPS can be used to create indoor positioning systems.

Van de Wynckel, M., & Signer, B. (2021). Indoor Positioning Using the OpenHPS Framework. 2021 International Conference on Indoor Positioning and Indoor Navigation (IPIN), 1–8. <https://doi.org/10.1109/IPIN51156.2021.9662569>

**Link** <https://maximvdw.be/publications/2021/ipin2021/>

2021

## **OpenHPS: Single Floor Fingerprinting and Trajectory Dataset**

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In this dataset, we collected fingerprints of Wi-Fi access points and BLE beacons in a building. The fingerprints are collected in four directions and cover an entire floor.

Van de Wynckel, M., & Signer, B. (2021). OpenHPS: Single Floor Fingerprinting and Trajectory Dataset. <https://doi.org/10.5281/zenodo.4744380>

**Link** <https://maximvdw.be/publications/2021/dataset/>

2020

## **OpenHPS: An Open Source Hybrid Positioning System**

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In this technical report, we provide a technical overview of the OpenHPS framework. OpenHPS is a framework to design a wide range of hybrid positioning systems using TypeScript.

Van de Wynckel, M., & Signer, B. (2020). OpenHPS: An Open Source Hybrid Positioning System (WISE-2020-01). Vrije Universiteit Brussel. <https://doi.org/10.48550/ARXIV.2101.05198>

**Links** [https://video.fosdem.org/2022/L/lightningtalks/lt\\_openhps.webm](https://video.fosdem.org/2022/L/lightningtalks/lt_openhps.webm) | <https://maximvdw.be/publications/2020/openhps2020/>

2019

## **Master thesis: Indoor Navigation by Centralized Tracking**

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The goal of my Master thesis was to design an indoor navigation system that guides patients and visitors inside a hospital. The solution was designed to require minimal setup and interaction by both the hospital and users.

Van de Wynckel, M. (2019). Indoor Navigation by Centralized Tracking [Master's thesis, Vrije Universiteit Brussel]. <https://researchportal.vub.be/en/studentTheses/indoor-navigation-by-centralized-tracking>

**Links** <https://youtu.be/fMFZu4Z49SU> | <https://maximvdw.be/publications/2019/thesis/>

2016

## **Bachelor thesis: eID IO - Applicatie besturing**

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My bachelor thesis was designed for the company BITPOWER. Using the European Identity card (eID), remote authorisation access could be granted via a mobile application.

My bachelor thesis was to provide remote actions for eID authentication. It was awarded the best thesis of the class of 2016.

**Link** <https://maximvdw.be/publications/2016/thesis/>

2013

## **Final work: WisaReg**

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My final work during the last year of my highschool was a database migration tool for migrating the Flemish student database to other platforms used by students.

WisaReg is an application that provides newly registered students from the Wisa database with accounts for various services. It was awarded the best final work of 2013.

Link <https://maximvdw.be/publications/2013/gip/>

## ● CONFERENCES AND SEMINARS

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01/02/2025 – 02/02/2025 Brussels, Belgium

### Presentation at FOSDEM 2025

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Presentation titled 'Discovering Indoor Environments and Positioning Systems'

**Links** <https://fosdem.org/2025/schedule/event/fosdem-2025-4526-discovering-indoor-environments-and-positioning-systems/> | <https://video.fosdem.org/2025/aw1120/fosdem-2025-4526-discovering-indoor-environments-and-positioning-systems.av1.webm> | <https://maximvdw.be/presentations/2025/fosdem2025/>

26/05/2024 – 30/05/2024 Hersonissos, Crete, Greece

### Conference presentation at ESWC 2024

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Paper presentation titled 'FidMark: A Fiducial Marker Ontology for Semantically Describing Visual Markers'

**Links** <https://2024.eswc-conferences.org/accepted-papers/> | [https://videlectures.net/embed/videos/eswc2024\\_van\\_de\\_wynckel](https://videlectures.net/embed/videos/eswc2024_van_de_wynckel) | <https://maximvdw.be/presentations/2024/eswc2024/>

02/05/2024 – 03/05/2024 Leuven, Belgium

### Poster presentation at SoSy 2024

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Poster presentation titled 'Discoverable and Interoperable Augmented Reality Environments Through Solid Pods'

**Links** <https://events.vito.be/sosy2024> | <https://maximvdw.be/presentations/2024/sosy2024/>

07/11/2023 – 10/11/2023 Nagoya, Japan

### Conference presentation at IoT 2023

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Paper presentation titled 'SemBeacon: A Semantic Proximity Beacon Solution for Discovering and Detecting the Position of Physical Things'

**Links** <https://iot-conference.org/iot2023/> | <https://maximvdw.be/presentations/2023/iot2023/>

12/05/2023 – 12/05/2023 Brussels, Belgium

### Poster presentation at BeJS conf 2023

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Poster presentation of the OpenHPS framework

**Links** <https://www.react.brussels/conferences/bejs-conf-2023> | <https://maximvdw.be/presentations/2023/bejsconf/>

23/09/2022 – 27/09/2022 Hangzhou, China

### Conference presentation at ISWC 2022

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Paper presentation titled 'POSO: A Generic Positioning System Ontology'

**Links** <https://iswc2022.semanticweb.org/index.php/accepted-papers/index.html> | <https://openhps.org/publications/2022/5b3-Van-de-Wynckel-Video-MQ.mp4> | <https://maximvdw.be/presentations/2022/iswc2022/>

05/09/2022 – 07/09/2022 Beijing, China

### Conference presentation at IPIN 2022

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Paper presentation titled 'A Solid-based Architecture for Decentralised Interoperable Location Data'

**Links** <https://ipin-conference.org/2022/> | [https://openhps.org/publications/2022/WiP65\\_MaximVandeWynckel.mp4](https://openhps.org/publications/2022/WiP65_MaximVandeWynckel.mp4) | <https://maximvdw.be/presentations/2022/ipin2022/>

05/02/2022 – 06/02/2022 Brussels, Belgium

### Presentation at FOSDEM 2022

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Presentation titled 'Rapid Prototyping of a Positioning System Using the OpenHPS Framework'

**Links** [https://archive.fosdem.org/2022/schedule/event/lt\\_openhps/](https://archive.fosdem.org/2022/schedule/event/lt_openhps/) | [https://video.fosdem.org/2022/L.lightningtalks/lt\\_openhps.webm](https://video.fosdem.org/2022/L.lightningtalks/lt_openhps.webm) | <https://maximvdw.be/presentations/2022/fosdem/>

29/11/2021 – 02/12/2021 Lloret de Mar, Spain

## Conference presentation at IPIN 2021

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Paper presentation titled 'Indoor Positioning Using the OpenHPS Framework'

**Links** <https://ipin-conference.org/2021/> | <https://maximvdw.be/presentations/2021/ipin2021/>

## PROJECTS

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01/01/2014 – CURRENT

### ChemStream Intranet

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Development of an intranet database for storing and searching chemicals and other data.

01/10/2019 – CURRENT

### OpenHPS: An Open-Source Hybrid Positioning System

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OpenHPS is an open source hybrid positioning system to help developers fuse various positioning technologies and algorithms. The system offers a modular data processing framework with each modules ranging from computer vision to common algorithms such as fingerprinting or data persistence of sampled data.

**Link** <https://openhps.org>

01/04/2022 – CURRENT

### POSO: Positioning System Ontology

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The positioning system ontology is a vocabulary for describing positioning systems and the techniques these systems use to determine a position. With POSO we aim to provide semantic meaning on how a positioning system is deployed and how results are calculated.

**Link** <https://poso.openhps.org>

01/10/2022 – CURRENT

### SemBeacon

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SemBeacon is an ongoing project for the development of a semantic Bluetooth Low Energy beacon specification that helps to describe the beacon itself, its deployment and the positioning system used within.

**Link** <https://sembeacon.org>

01/07/2013 – CURRENT

### SpigotMC Plugins

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I am an active member of the SpigotMC.org developer community. Having developed software that has been sold to more than 20,000 users since 2014

**Link** <https://www.spigotmc.org/members/maximvdw.6687/>

01/09/2015 – 01/07/2018

### EhB Rooster

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EhBRooster.be was a project aimed at improving the usability of timetables for Erasmushogeschool Brussel, gaining significant interest from students and staff. Developed in Java and PHP, the website influenced the adoption of a new timetable system before its discontinuation in 2018.

**Link** <https://web.archive.org/web/20180812082356/https://ehbrooster.be/>

01/08/2015 – 01/07/2016

### eIDIO Cloud Authentication

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eIDIO was a platform developed by BITPOWER to provide secure eID access to buildings. I was tasked to expand this platform with cloud authentication.

01/04/2009 – 01/07/2013

## Shutti

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Shutti was a set of software tools developed for Windows that enabled users to optimize, schedule and automate their computer's power management settings.

**Link** <https://web.archive.org/web/20130831040157/http://www.shutti.co.nr:80/>

01/08/2012 – 30/06/2013

## WisaReg

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My final work at my highschool was a project called WisaReg. WisaReg is a database migration tool to convert data from the Wisa database to other internal databases. The tool aimed to help the ICT administrators to automatically create new user accounts in LDAP, Chamilio, Smartschool and other internal databases.

## ● **HOBBIES AND INTERESTS**

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### Scuba diving

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3\* (Bachelor) diver at the VUB Diving Center

**Link** <https://www.vubdivingcenter.be>

### Scuba diving

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2\* CMAS diver

**Link** <https://www.nelos.be>