Koen van Hove

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WHO AM I?

My name is Koen van Hove, I am a computer scientist from the Netherlands. My main field is computer networking, specifically with a focus on network security. I also enjoy the challenges that come with distributed computing. I like to do things that have a meaningful, positive impact on the lives of others – whether that is creating a piece of software that makes a task easier, or finding and disclosing a security vulnerability.

DETAILS

NATIONALITY
Dutch
DATE OF BIRTH
4 January 1999
DRIVING LICENCE
B and AM

EXPERIENCE

Jan. 2023 – now	**Software & Research Engineer**	**NLnet Labs**

Developing software for the benefit of the Internet, contributing to standards and Open Source software development.

Mar. 2023 – now	**External PhD Candidate**	**University of Twente**

Researching a holistic view of internet protocol security and vulnerability disclosure.

Oct. 2013 – now part time	**Founder**	**Koenvh**

Independent one person software development firm, primarily Astiga (see projects for more details).

Mar. 2018 – Dec. 2022 part time	**Researcher**	**University of Twente**

Working on DDoS Clearing House, a novel method to categorise the aspects of DDoS attacks in order to enable operators to create effective blocking rules minimising collateral damage, presented at RIPE 78 in Iceland.

Sep. 2022 – now volunteer	**Researcher level 2**	**Dutch Institute for Vulnerability Disclosure**

Primarily working on SPooFd (see projects). Asked to join by the CISO of the ACM, Fleur van Leusden.

May 2020 – now volunteer	**Development & IT operations**	**Rennsimulanten**

Volunteer work. Managing the servers of the association, as well as creating tooling necessary to support the work of the association (e.g. server plug-ins, game support, etc.).

Feb. 2016 – Nov. 2017 part time	**Software developer**	**Altios**

Creating (internal) applications for a small telecommunications and ICT consultancy firm in Apeldoorn, mainly on the ticketing system, as well as management interfaces for end-users.

Nov. 2014 – Dec. 2016 part time	**ICT assistant**	**Veluws College**

Repairing students' laptops (both hardware and software), providing laptop support for students and parents.

| Oct. 2013 – Oct. 2017 volunteer | **System administrator** | **RTV Apeldoorn** |

Volunteer work. Managing workspaces, configuring servers and rolling out applications. Additionally being first-line support for users.

EDUCATION

Feb. 2020 – Aug. 2022   **Master Computer Science**   **University of Twente**

Custom Master programme with a focus on research, half of the courses taken from the PhD programme. Master thesis about "rpkiller: Threat Analysis from an RPKI Relying Party Perspective" (graded 10/10). Graduated cum laude. During the research phase, I built a proof of concept. I found vulnerabilities in all current Relying Party implementations, as well as vulnerabilities that are inherent to the protocol and cannot be resolved without making an amendment. Together with the NCSC-NL I coordinated the CVD process with the parties involved. This resulted in CVE-2021-3907, '-3908, '-3909, '-3910, '-3911, '-3912, '-43172, '-43173, '-43174, '-2022-29154, NCSC-2021-0987, and an OpenBSD errata. I created a draft RFC for solving the issue with the protocol. This draft is being discussed in the IETF sidrops working group, and was presented at APRICOT 2022 and IETF 113.

Sep. 2017 – Jan. 2020   **Bachelor Technical Computer Science**   **University of Twente**

Graduated cum laude in less than nominal time. Bachelor thesis about "DDoS fingerprinting".

Sep. 2011 – Jun. 2017   **Secondary school**   **Veluws College Walterbosch**

VWO sciences track with economics, graduated cum laude.

CERTIFICATES

September 2021   **Security Hall of Fame**   **RIPE NCC**

Found and responsibly disclosed security issues in the RIPE NCC RPKI Validator 3.

June 2017   **Urkunde Deutsch**   **Vereniging van Leraren in Levende Talen**

Certificate for achieving a high final grade for the exam of German Language and Literature.

June 2016   **Cambridge English: Advanced**   **Cambridge Assessment English**

Cambridge English Level 3 Certificate in ESOL International, grade A with an overall score of 202. Equivalent to C2 on the CEFR scale.

PROJECTS

Jan. 2017 - Aug. 2021   **Astiga**   **Koenvh**

Platform to play back music from the cloud (WebDAV, OneDrive, Dropbox etc.) to the browser and mobile devices. In August 2021 around 17,000 users, sold in 2021 for $12,500.

Mar. 2021 - Sep. 2023   **rpkiller**   **University of Twente**

Testbed for RPKI Relying Party software – a practical component of the research effort of the Master looking into the abilities for malicious certificate authorities and repositories to disrupt the global operation of RPKI.

Aug. 2022 – now	**SPooFd**	**Koenvh & University of Twente & Dutch Institute for Vulnerability Disclosure**

Project regarding the ability to spoof email at shared webhosters, allowing us to pass SPF/DMARC checks (and sometimes DKIM too). Resulted in a CVD with governments and semi-governments throughout Europe. Presented at the 35th Annual FIRST Conference, SECCON 2023, ONE Conference 2023, NLUUG. Known as "Your Vulnerability Disclosure Is Important To Us" which appeared in national media (e.g. `https://nos.nl/l/2492689`) and appeared on the "Met Nerds Om Tafel" podcast.

Mar. 2019 – now	**Rally SatNav**	**Koenvh**

Android app that generates simplified Jemba Inertia Notes System pacenotes for one's own routes.

Feb. 2018 – Apr. 2020	**Scalable Blockchain for Digital Cash**	**University of Twente**

Model for a scalable Blockchain alternative that does not have the same throughput limit as the traditional Blockchain by tracking the owner of the coins themselves (each coin is its own chain), rather than keeping track of the transactions.

May 2018 – now	**European Public Broadcasting**	**Koenvh**

A website for watching videos from European public broadcasters (ARD, DR, NPO, NRK, SVT, ZDF) with automatically translated subtitles.

Nov. 2016 – now	**Local Radio for ATS/ETS2**	**Koenvh**

An application that, based on the user's relative position in American Truck Simulator or Euro Truck Simulator 2, offers a set of radio stations that realistically could be received in that area. For example, whilst driving in Malmö, Sweden, Swedish and Danish stations will be available. When continuing further to Oslo, Norway, the reception of the Danish stations will get less. At some point Norwegian stations will be receivable, until finally the reception for the Swedish stations fades away.

LANGUAGES

DUTCH
native
ENGLISH
proficient (C2)
GERMAN
proficient (C1)

HOBBIES

I enjoy toying around with networking, security, and open data. I also like designing, printing, and working with paper. I am an avid driver and "sim racer" (virtually racing cars around circuits worldwide, aiming to get as close to reality).

REFERENCES

References are available on request.