



**Symposium  
2019**

**May 7 2019  
Diepenbeek, Belgium**

Reminder: Code of Conduct

WiFi:  
QUIC-SYMPOSIUM  
udpisthenewtcp2019



#QUICSYM

Livestream URLs:

<https://youtu.be/dmp2sFVOUB0>

<https://youtu.be/R4j7X5ktoT8>

# Planning

Time	Activity
10:00 - 10:20	Introduction
10:20 - 12:30	Talks
12:30 - 13:30	Lunch
13:30 - 15:00	Talks
15:00 - 17:00	Discussion in smaller groups
17:00 - 17:30	Afternoon break
17:30 - 18:00ish	Full group discussion and end
19:00	Optional dinner at <a href="#">Fifth Avenue</a>

# Planning : Talks

Time	Speaker : Talk
10:20 - 10:50	<b>Erik Sy</b> : Enhanced Performance and Privacy for the QUIC Protocol (remote)
10:50 - 11:10	<b>Maxime Piraux</b> : QUIC-tracker
11:10 - 11:40	<b>Quentin De Coninck</b> : Multipath QUIC
11:40 - 12:00	<b>Konrad Wolsing</b> : A Performance Perspective on Web Optimized Protocol Stacks
12:00 - 12:30	<b>Mirko Palmer</b> : Real-time media over QUIC
13:30 - 13:50	<b>Tim Vereecke</b> : QUIC at Akamai
13:50 - 14:10	<b>Francois Michel</b> : Forward Error Correction
14:10 - 14:30	<b>Jan R�uth</b> : Blitz-starting QUIC connections
14:30 - 14:40	<b>Mirja K�uhlewind</b> : QUIC logging - the in-network view
14:40 - 15:00	<b>Robin Marx</b> : Understanding QUIC with qlog and quicvis

# Oliver Hohlfeld

Professor - Brandenburg University - Germany



General:

- **Internet Measurement**
- SDN / NFV
- QoE
- Low latency networking

QUIC:

- QUIC deployment
- **New use cases for QUIC beyond the web**

# Robin Marx

3<sup>rd</sup> year PhD Student - UHasselt - Belgium



## General:

- **Web Performance**, network + frontend
- HTTP/2 : Resource prioritization, Server Push
- Edge workers
- Visualizations, tooling

## QUIC:

- Squeezing the first RTT for all it's got
- HTTP/3 details for page load speeds
- Unreliable for games
- Quicker (TypeScript) implementation
- **Logging and debugging tools**

# Tim Vereecke

Web Performance Architect - Akamai - Belgium



General:

- **WebPerf** impact (technical+business)
- CDN, RUM, **Full stack performance**

QUIC:

- **WebPerf**
- Fixing H2 issues



# Maarten Wijnants

Senior Researcher - UHasselt - Belgium



General:

- HTTP Adaptive Streaming
- **Multimedia streaming**
- Network bandwidth management
- Adaptive delivery of 360 video, light fields, ...

QUIC:

- **Multimedia streaming**
- **Innovative use cases / application scenarios**

# Mirja Kühlewind

Ericsson Research, Aachen, Germany

IETF transport AD and IRTF maprg co-chair



## General:

- Transport protocol design and congestion control
- Internet Measurement

## QUIC:

- QUIC logging and wire image
- Transport and congestion control
- QUIC support in mobile networks

# Maxime Piraux

PhD student - UCLouvain - Belgium

General:

- Transport protocol design
- Network protocol testing and tooling

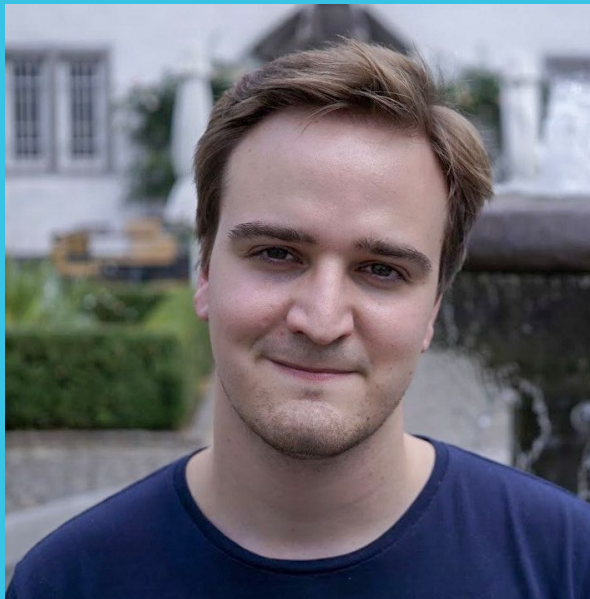
QUIC:

- **QUIC test tools and tooling**
- Internet measurements for QUIC support
- Multipath for QUIC
- Extending QUIC for other use-cases



# François Michel

PhD student - UCLouvain - Belgium



General:

- Transport protocol design
- Forward Erasure Correction

QUIC:

- **QUIC and Forward Erasure Correction**
- Multipath for QUIC
- QUIC and real-time communications
- Extending QUIC for other use-cases

# Quentin De Coninck

PhD student - UCLouvain - Belgium



## General:

- Transport protocol design
- Multipath transport protocols
- Mobile experience (smartphone)

## QUIC:

- **Multipath for QUIC**
- Extending QUIC for other use-cases
- QUIC and Forward Erasure Correction

# Jonas Reynders

Master Student - UHasselt - Belgium



General:

- Network stack
- Data management

QUIC:

- QUIC Tooling & **Visualisations**
- Flow & **Congestion** control

# Wouter Vanmontfort

Researcher - UHasselt - Belgium



## General:

- Web technologies
- Multimedia
- (Game) Network architectures

## QUIC:

- Nothing specific, just general interest/staying up-to-date

# Tom De Decker

Bachelor student - UHasselt - Belgium



## General:

- Hard- and software exploitation e.g. console homebrew scenes (mostly like watching talks about it though)
- Networking in general
- Capture The Flag events

## QUIC:

- **Implementing HTTP/3 in QUICker**



# Sven Theunissen

Bachelor student - UHasselt - Belgium



General:

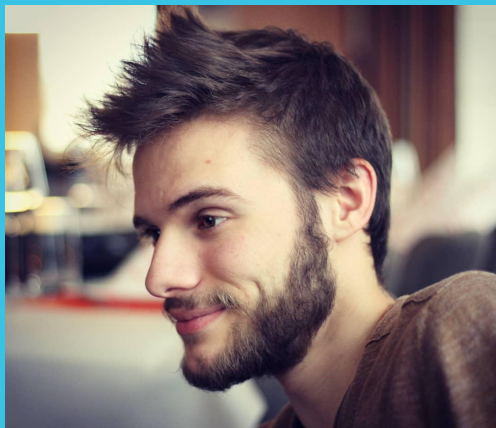
- General networking
- Flemish Programming competition

QUIC:

- **Congestion control in QUICker**

# Joris Herbots

Master Student - UHasselt - Belgium



General:

- Networking & Security
- HTTP Adaptive Streaming technologies

QUIC:

- **Multimedia streaming**

# Jan R uth

PhD Student - RWTH Aachen University - Germany



## General:

- Networking
- Performance Evaluations
- Internet measurements

## QUIC:

- **Running [quic.netray.io](https://quic.netray.io)**
- Performance testing
- Human perception
- Transport customization

# Konrad Wolsing

Master student - RWTH Aachen Univ. - Germany



## General:

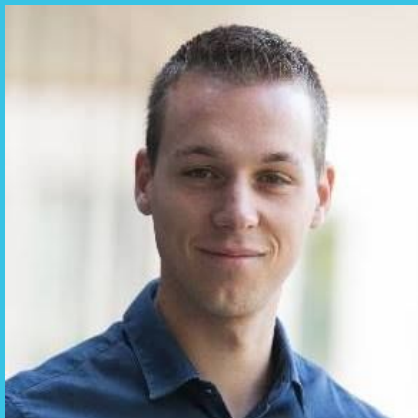
- Networking
- Performance Evaluations
- Internet measurements

## QUIC:

- **Human perception**
- Performance testing

# Jeroen van der Hoof

PhD Student - Ghent University, imec - Belgium



## General:

- HTTP Adaptive Streaming
- Virtual Reality (360° and 6DoF)
- Quality of Experience
- HTTP/2

## QUIC:

- Multimedia streaming
- Innovative applications



# Emilia Weyulu

1st year PhD student - MPI Informatics, Germany

General:

- Networking in general
- Congestion control
- Network measurements

QUIC:

- Congestion control algorithms
- Performance testing
- **Packet pacing in QUIC**



# Torsten Zimmermann

PhD Student - RWTH Aachen University - Germany

## General:

- Internet Architecture
- Internet Measurements
- **Web Performance**, HTTP/2 Server Push

## QUIC:

- QUIC and HTTP/3 interplay
- Use cases: Internet transport  $\neq$  web transport

# Mirko Palmer

PhD Student - Max-Planck-Institut für Informatik - Germany



## General:

- Transport protocols
- Video streaming
- Low-level nitty-gritty systems work

## QUIC:

- Media streaming
- Protocol details



# Hendrik Lievens

Researcher - UHasselt - Belgium



General:

- **Virtual Reality & Immersive Media Streaming**
- Front-end & Back-end Architectures
- Network Security

QUIC:

- General interest & staying up-to-date
- Multimedia streaming & applications



# Mariano Di Martino

PhD student - Hasselt University - Belgium

General:

- Traffic analysis, website fingerprinting.
- All privacy related aspects of Web Security

QUIC:

- General interest & staying up-to-date

# Erik Sy

PhD Student - University of Hamburg - Germany



## General:

- Performance of connection establishments
- Web tracking
- Network Security
- Cross-layer optimizations
- Browser measurements

## QUIC:

- **Privacy and performance of QUIC's connection establishment**

# Daan De Meyer

Master Student - UHasselt - Belgium



## General:

- Performance (low-level)
- Developer tooling

## QUIC:

- Tooling (h2vis)
- **HTTP/3 in Chromium: QUIChrome**
- **HTTP/3 Implementation: h3c**



# Mike Kosek

PhD Student - RWTH Aachen University - Germany

General:

- Internet Architecture
- (Crowd-Sourced) Internet Measurements

QUIC:

- No specific interest (yet)

# Thanks to our sponsors



Before I forget...

[bit.ly/quicsurvey](https://bit.ly/quicsurvey)