# QUINTEN Coucke

* Born in Knokke-Heist
* 15th December 1994
* Currently living in Zulte (9870)
* Curious and versatile researcher with a mind for technology and the future

# Education

* B.S. in Biochemistry and Biotechnology, KU Leuven division Kortrijk (KULAK), 2012-2016
* M.S. in Biochemistry, KU Leuven, 2016-2018 (Master thesis: Studying multimerization of Integrase during HIV infection using a FLIM-based FRET phasor analysis)
* Ph.D in Biochemistry, KU Leuven, 2018-2023 (expected June 2023))

# Work experience

* Summer 2018: Research Assistant (R&D)

Nelson Labs NV (A Sotera Health Company)

Duties included: Development of automated gas chromatography protocols

Supervisor: Prof. F. De Smedt (Director of Lab Operations)

* Fall 2018: Research Assistant

KU Leuven

Duties included: Optimizing a homebuilt confocal time resolved microscope

Supervisor: Prof. J. Hofkens

# Skills

* Teamwork
* A PhD learned me to optimize experimental work and interlaboratory collaborations with fellow researchers. I found a transparent environment with clear communication key and will always work with the team in mind.
* Problem Solving and microscopy protocol validation
* Having 5 years of experience building and adapting custom built confocal time-resolved microscopes I learned valuable and transferable skills on developing clear protocols and validating performance of such systems
* Microscopy
* Förster Resonance Energy Transfer (FRET) applications
* Fluorescence Lifetime Imaging Microscopy (FLIM) using Phasor Analysis
* Troubleshooting and alignment of custom microscopes (experience with Thorlabs setup equipment)
* Sample preparation involving fixations, FCS samples to check setup alignment (confocal volume), cell culture and transfections

# Publications

# Workshops

* NanoMacro Microscopy Workshop 5-7 sept 2018, Hasselt (attended & gave workshop)
* Organizer and presenter of the ‘Feel the Force summer school’ 2021. This was a 3 day intensive course to force measuring with biosensors and TFM. I was organizer, gave a plenary lecture on phasor-FLIM and in addition provided small group hands-on classes at the microscope. This was supported by the Arenberg Doctoral School (ADS)

# Conference presentations

* Pacifichem 2021 conference (online-only conference due to COVID-19 regulations)

https://pacifichem.org/

“Phasor for FLIM-FRET analysis of intracellular vinculin tension sensors”

* Plenary session on FRET analysis for biosensors at the 2021 ‘Feel the Force summer school’ at KU Leuven

(https://www.kuleuven.be/english/summer-schools/feeltheforce/home )

“Analysis of FRET Data using Intensity and FLIM methods”

* Open presentation for the chemistry department

"Phasor analysis for FLIM-FRET biosensor data:  
a case study of HIV-Integrase oligomerization and vinculin tension sensors"

# Conference poster presentations

* Dutch Biophysics 2018 Veldhoven, The Netherlands
* Satellite Workshop of the DGfB biannual meeting "Advanced Fluorescence Spectroscopy and Imaging" 2018 Düsseldorf, Germany
* 25th PicoQuant ‘Single Molecule, Spectroscopy and Super-resolution Microscopy in the Life Sciences’ meeting 3-6 sept 2019 Berlin, Germany
* Let there Be …Light – Frans De Schryver Symposium – October 2019 Leuven
* EACR tumor microenvironment 2020 - March 2020, Lisbon, Portugal

# Software packages

* Illustrator
* Adobe Acrobat
* Microsoft Office applications
* Matlab (plotting, scripts and (image) data analysis)
* Python (self-though basics)
* ImageJ
* OneNote (reports of meetings, logbook, data sharing hub, project pages)
* Teams/Zoom/Skype
* Audacity, Leica LasX, PicoQuant Sypmhotime64, GitHub

# Languages

* German (basic)
* French (basic)
* English (very good)
* Dutch (native)

# Teaching

* Advanced Fluorescence, a course by Prof. J. Hofkens (KU Leuven)

Course on the in-depth application of fluorescence spectroscopy and imaging. The course covers a broad range of imaging techniques from basics to advanced: Confocal vs widefield imaging STORM, PALM, TIRF, FLIM, STED, ... . Additionally students are introduced to optics, calculating fluorescence quantum yields and determining FRET efficiencies. As a master topic this course keeps a focus on research applied cases.

# Current job scope:

\*\* Currently open for job opportunities in the Ghent region \*\*