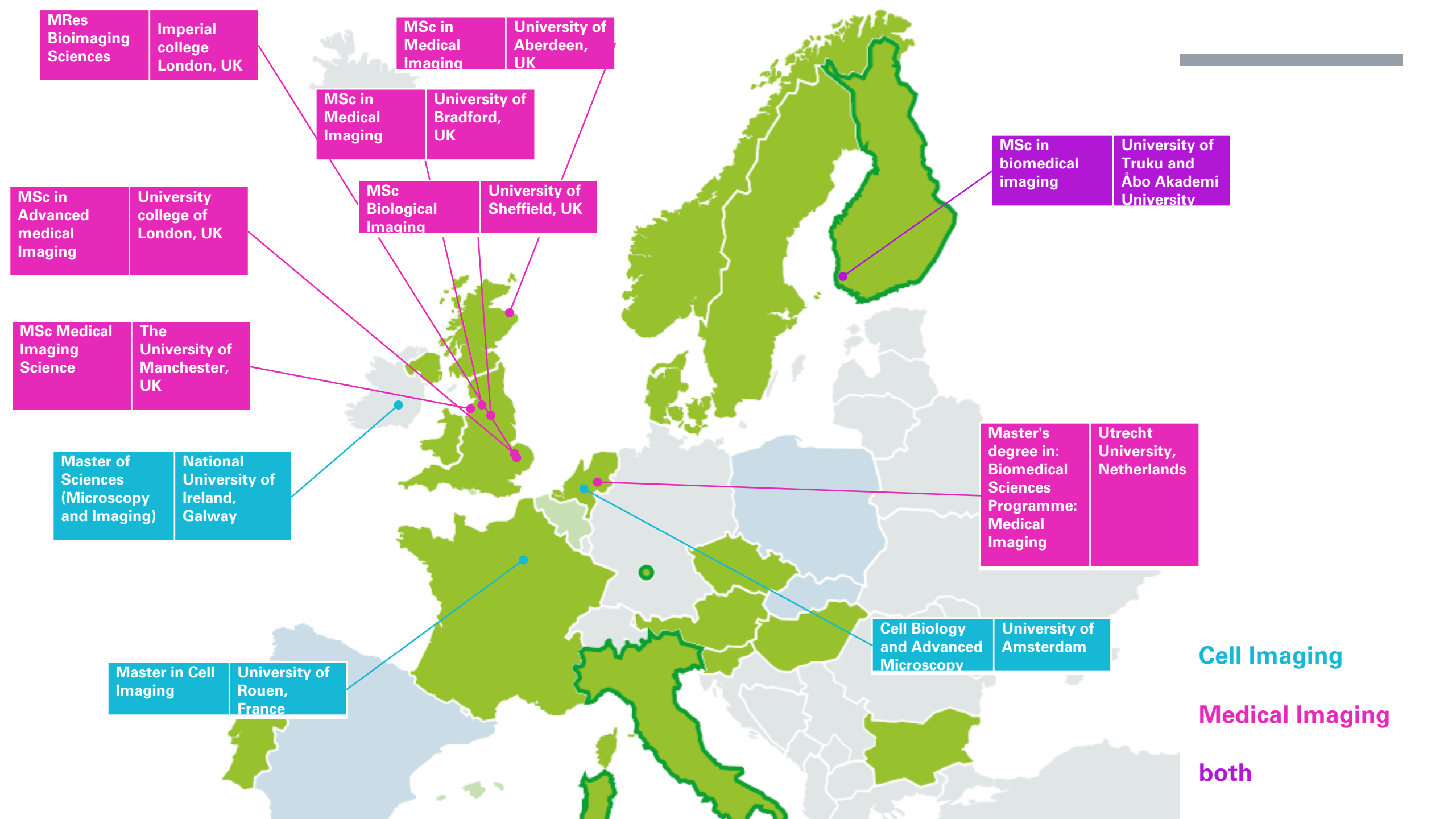

**INTERNATIONAL
BIOIMAGING MASTER'S
PROGRAMS:
AN EUROPEAN OVERVIEW**
22.1.2021

CHAIR PROF. JOHN
ERIKSSON



Cell Imaging

Medical Imaging

both

MSc degree programme in Biomedical Imaging

Åbo Akademi University and the University of Turku, Finland

Assoc. Prof. Diana Toivola and Joanna Pylvänäinen

Cell Biology and Advanced Microscopy

University of Amsterdam, The Netherlands

Prof. Dorus Gadella and Prof. Eric Reits,

Master in Cell Imaging

University of Rouen, France

Asst. Prof. Delphine Burel

MSc Advanced Biomedical Imaging

University College London, UK

Dr. Daniel Stuckey

Discussion





BIMA: MASTER'S DEGREE PROGRAMME IN BIOMEDICAL IMAGING

TURKU, FINLAND

EURO-BIOIMAGING VIRTUAL PUB

ASSOC. PROF. DIANA TOIVOLA AND JOANNA PYLVÄNÄINEN

22.1.2021



**UNIVERSITY
OF TURKU**



**Åbo Akademi
University**



- **Diana Toivola**

- Associate Professor
- Åbo Akademi University

- **Riku Klén**

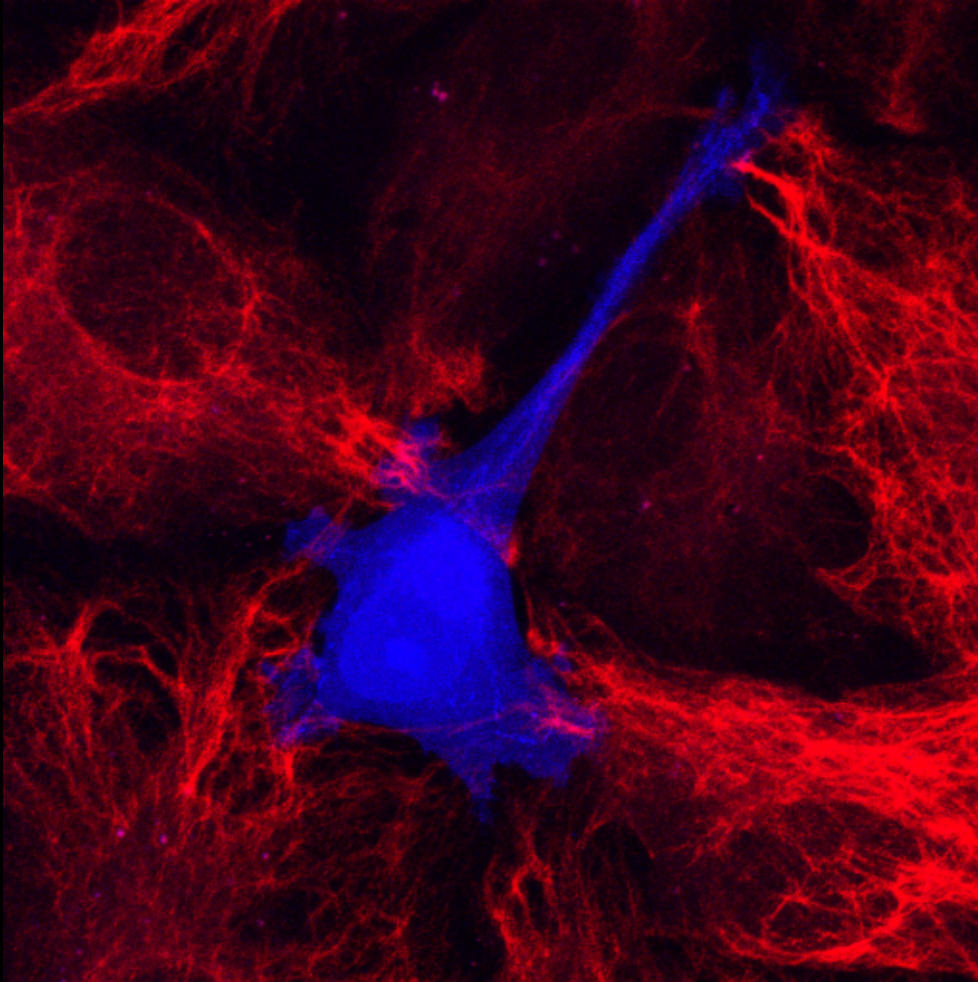
- Assistant Professor
- University of Turku

- **Joanna Pylvänäinen**

- **Raili Kronström**

- programme coordinators (ÅAU / UTU)





GOAL: to train international professionals with understanding and practical skills in a wide range of imaging technologies, methods and applications.

- Programme started 2010, 93 graduates
- Students from 35 countries
- approx. 50 active students
- Quota 20 (ÅAU) + 10 (UTU) students
- 120 ECTS / 2 years
- Teaching language: English
- No tuition fee for EU students
- Outside EU fee 12000 €/year (scholarships available)
- Application – January every year



TURKU
BIOIMAGING

BUILDING COLLABORATION BETWEEN UNIVERSITIES

BIMA has been assembled on the true imaging strongholds of Turku. It comprises an interdisciplinary array of prominent research groups.



Cell biology/biosciences (ÅAU)



UNIVERSITY
OF TURKU

Biophysics (UTU)

Nano-technology/
pharmacy (ÅAU)

Preclinical imaging
(TCDM/UTU)

Medical imaging (PET and University hospital, ÅAU ja UTU)



TURKU
BIOIMAGING

BUILDING COLLABORATION BETWEEN UNIVERSITIES

Access to facilities and courses in both universities



Åbo Akademi
University

Screening
unit

Cell
Imaging
core

Turku
Centre for
disease
modelling



UNIVERSITY
OF TURKU

Turku
PET
centre

Turku
Bioimaging

Electron
microscopy
core

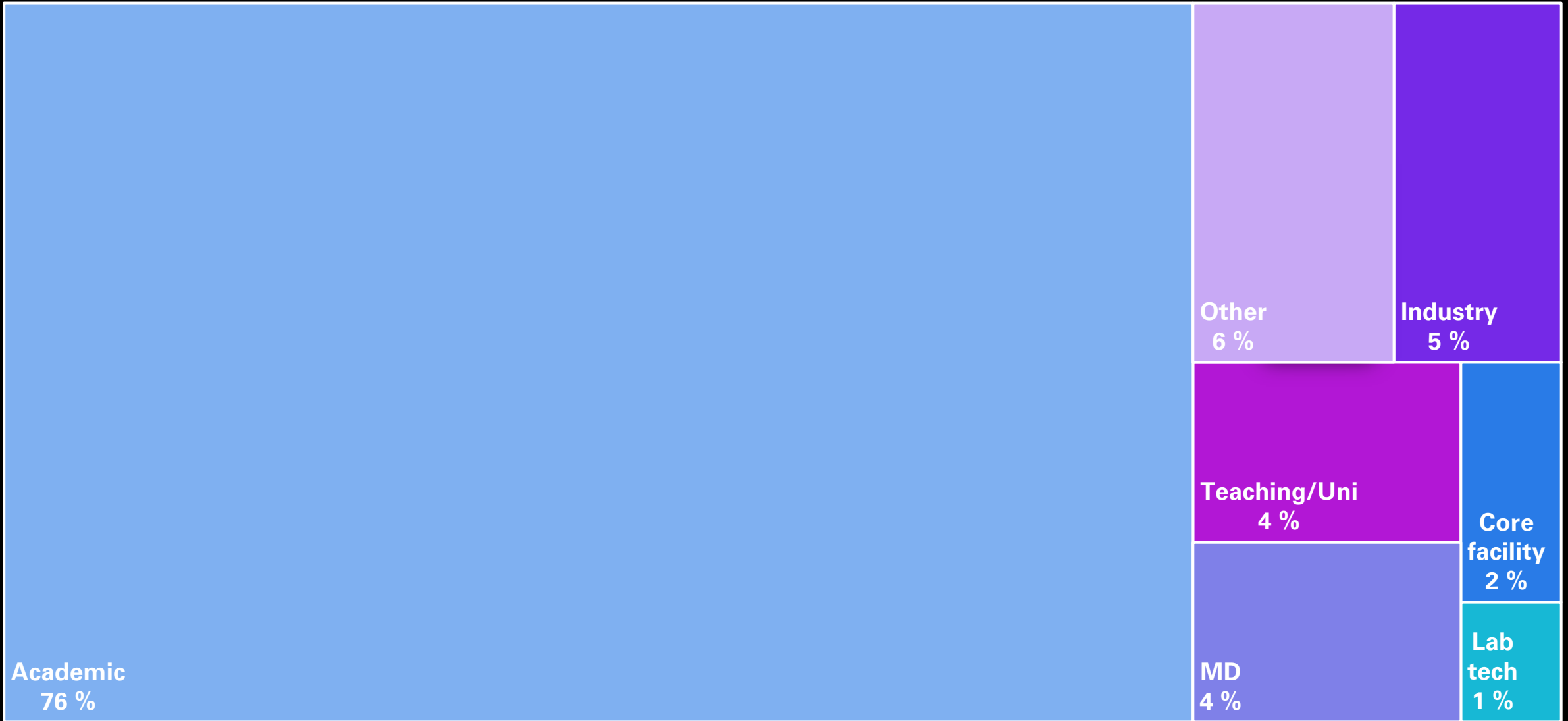
Euro-
Bioimaging

WHY TURKU?

- EXCELLENT INSTRUMENTATION AND INFRASTRUCTURE
- COMPACT CITY
- GREAT STUDENT BENEFITS
- BEAUTIFUL NATURE



After BIMA





PIRYANKA MOTIANI, PAKISTAN, 2016

- PhD, **Postdoc**
 - PET centre, Turku



ALEXANDER MORIN, RUSSIA, 2019

- PhD, **Scientist**
 - Roskamp institute, Florida



LAURA MAIRINOJA, FINLAND, 2016

- Turku Bioimaging coordinator
- **University teacher, PhD student**
 - University of Turku, Finland



JOANNA PYLVÄNÄINEN, FINLAND, 2013

- **Licenciate**
- **Turku Bioimaging coordinator, PhD student**
 - Åbo Akademi University, Finland



CIARAN BUTLER-HALLISEY, IRELAND, 2018

- **Microscopy Research Technician**
 - Turku Bioscience Cell Imaging Core
 - Finland



ANUP SHRESTHA, NEPAL, 2019

- **Research technician, Imaging Platform**
 - University of Copenhagen, Denmark



CONTENTS OF THE PROGRAMME



TOTAL 120 ECTS

Bridging studies (cell biology and biophysics)

0-8 ECTS

Major subject studies in Biomedical imaging, mandatory courses

37 ECTS

nanoscopic † cellular † biomedical † instrumentation † image analysis

Master's thesis in Biomedical imaging

40 ECTS

Thesis plan, seminar and practical laboratory part (20 ECTS)
written thesis (20 ECTS)

Selectable studies on thematic
imaging areas
12-40 ECTS

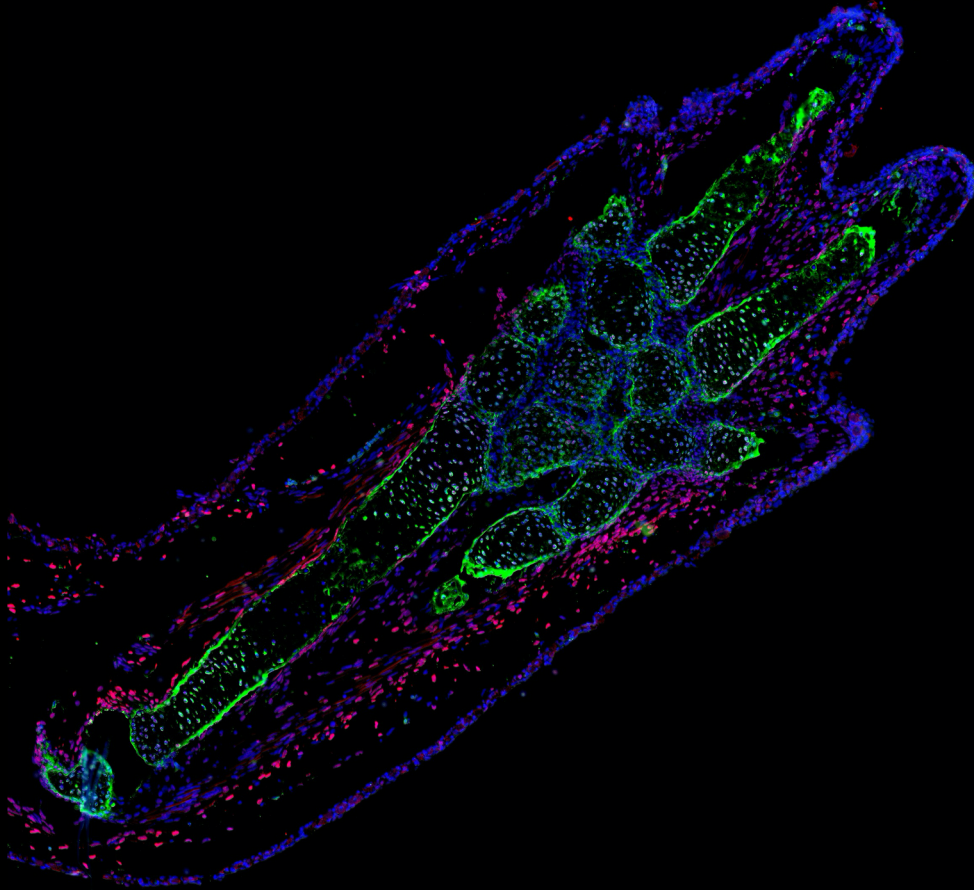
Optional studies
15 ECTS

Language studies (Finnish and
academic English)
3-8 ECTS



COURSE EXAMPLES

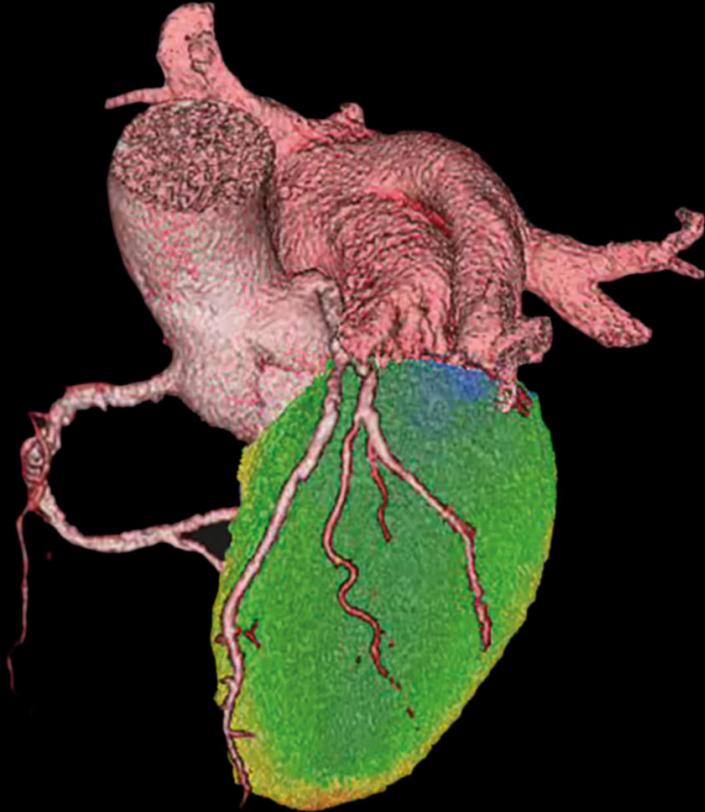
- Bioimaging and microscopy, 5 ECTS
- Electron Microscopy in Biomedical Sciences, 3 ECTS
- Presenting Science by Means of Multimedia 1, 5 ECTS
- Physical Basis of Medical Imaging, 4 ECTS
- Bioimage informatics 1 and 2 (5 + 4 ECTS)
- Practical training in *In vivo* Imaging Techniques. 4 ECTS
- Cell signaling, 10 ECTS
- Structure and function of the cytoskeleton, 10 ECTS





Laboratory internship to learn basic methods in biology or physics


- 5-15 ECTS depending on project length and a written report
- Basic lab work in a research groups
- Might lead to MSc thesis project and later to PhD



Specialization fields during MSc thesis

- Light microscopy imaging
- *In vivo* & clinical Imaging
- Imaging in nanotechnology and material sciences
- Microscopy techniques and instrument design

*List of all programme graduates and thesis topics:
bioimaging.fi/program*



“ *The BIMA programme enables me to sharpen my scientific skills with its multidisciplinary courses to choose. I enjoy taking and analysing images from the micro-world for my research, and they are worth a thousand words.*

Nicko - Indonesia

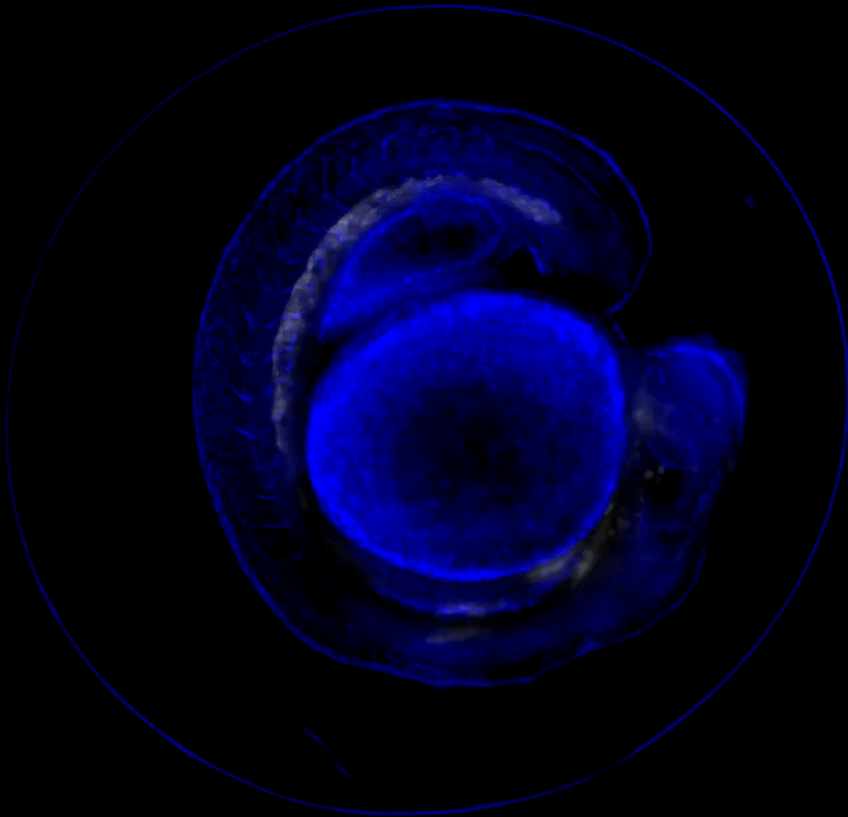
Next application round

- Application time January 2022
- More information: bioimaging.fi/program
- Contact: bima-office@bioimaging.fi



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Master's degree programme
in Biomedical Imaging



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