



European  
Network of  
Living Labs

# Welcome to our QoooooL School

Digital Innovations for a Happier, Healthier Aging:

A Transdisciplinary Training

Prof. Katarzyna Wac, MSc. Jing Forrest



UNIVERSITÉ  
DE GENÈVE

UNIVERSITY OF  
COPENHAGEN



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SCHOOL OF MEDICINE  
*Stanford University Medical Center*



Schweizerische Eidgenossenschaft  
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FONDS NATIONAL SUISSE  
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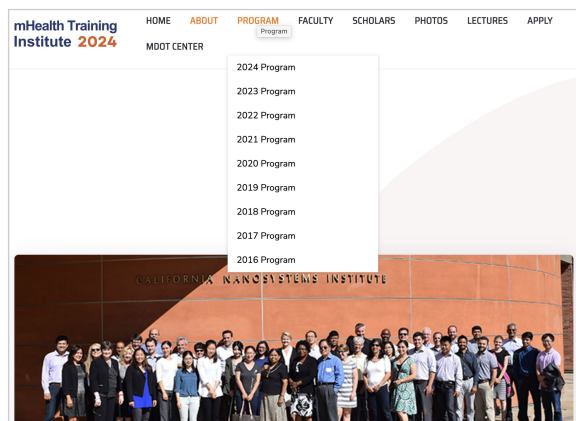
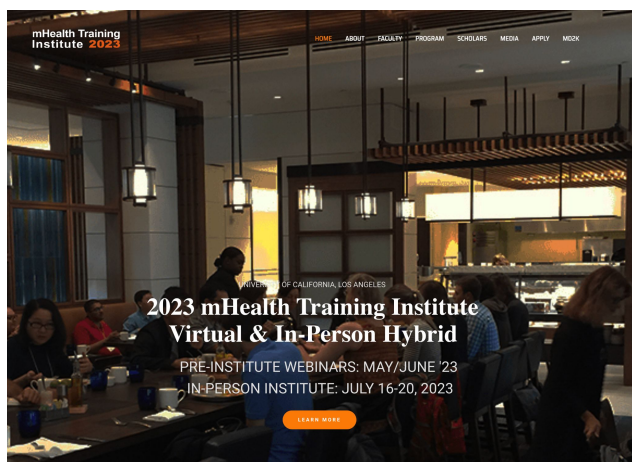


Research  
at Google

## My 2011 experience



National Institutes  
of Health



## Human Centered AI in the Service of Life Quality

LEARN MORE

QoLif 2022



QoLif Technologies ageint UNIVERSITÉ DE GENÈVE UNIVERSITÉ DE GENÈVE UNIVERSITÉ DE GENÈVE





## LEVERAGING INNOVATIVE TECHNOLOGIES FOR AGEING WELL: A TRANSDISCIPLINARY TRAINING

JULY 3 - 7, 2023

QoLife Technologies age.int



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## ...what can technologies do for us?



## DIGITAL INNOVATIONS FOR A HAPPIER, HEALTHIER AGING: A TRANSDISCIPLINARY TRAINING

Prof. Katarzyna Wac

1 - 5 JULY 2024

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# Practicalities



UNIVERSITÉ  
DE GENÈVE

Welcome at the UNIGE, *Center for Informatics*

Coffee, tea, chocolate and cookies (  )

Reusable water bottles (water fountain, SINK WATER)

Bathrooms

WiFi via SMS (see the 'how to' manuals on the wall)

PAID: Lunch coupons, Tuesday UN visit thursday dinner

Social media : LinkedIn *katarzynawac*

We have abandoned facebook, twitter, .... for our QoL

ECTS: Certificates on friday after filling in evaluation









## Digital Innovations for a Happier, Healthier Aging: A Transdisciplinary Training

 July 01 - 05, 2024

 Uni-Battelle A, Route de Drize 7, CH-1227 Carouge, Switzerland



be on  
time  
please

|                      | Monday 01  | Tuesday 02   | Wednesday 03  | Thursday 04   | Friday 05   |
|----------------------|--|--|---|---|---|
| 9:00<br>TO<br>10:30  | Prof. Katarzyna Wac<br>QoL Lab<br>University of Geneva   | Industry Speaker<br>Broad Technology<br>Overview   | Group Project   | Prof. Christine Clavien<br>Science and Ethics<br>University of Geneva               | Dr. Mirana<br>Randriambelonoro<br>University of Geneva                                |
| 11:00<br>TO<br>12:30 | Group Formation  | Group Project  | Dr. Andrea Martani<br>University of Basel   | Group Project   | Group Project   |
|                      |                                     |                                     |  |  |  |
| 14:00<br>TO<br>15:30 | <br>Xenia Thévoz<br>Juliana Mordant | Group Project  | Group Project   | QoL speaker<br>Group Project  | Final Presentations   |
| 16:00<br>TO<br>17:30 | <br>Group Project                   | <br>Social Event: UN VISIT<br>Apero | Prof. Gregg Vanderheiden<br>University of Maryland<br>& Raising the Floor Org.      | Group Project   | Closing   |
|                      |  |  |   | Social Dinner   |   |

## Tuesday 16h - 'Pregny Gate' bring your ID

**United Nations**

The United Nations  
Office at Geneva

Menu ▾



### WELCOME TO THE UNITED NATIONS

Take a tour of the Palais des Nations and learn about the United Nations and the UN's work in Geneva. Our tour guides will inform you about the organization and its activities to maintain world peace, foster international relations and development.

You will discover the Palais des Nations, a unique building, formerly the headquarters of the League of Nations. The Palais des Nations, an outstanding testimony to twentieth century architecture, is situated in the beautiful Ariana park in Geneva, Switzerland.

Due to the ongoing renovations in the Palais des Nations, our tour offers are limited and subject to changes. Please read the below information carefully and check this page regularly for updates.

**Thursday 19h**  
**Pl. du Rondeau 7,**  
**1227 Carouge**



**Le Trois Quarts Bar**

Pour toute info, appelez-nous au

022 820 12 27 ou écrivez à [contact@letroisquarts.ch](mailto:contact@letroisquarts.ch)

**Leveraging Innovative Technologies for Ageing Well:  
A Transdisciplinary Training**

**3-7 July 2023**

**Summer School - UNIGE**



# 1st Prize

# ?your group?

## Congratulations !



bit.ly/qolschool



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For Students

Take QoL Survey

Join a Study



QoL Lab > Teaching > Courses at University of Geneva > Private: QoL Summer School Materials

## Private: QoL Summer School Materials

Hello World



University of Geneva  
Center for Informatics  
Switzerland

[katarzyna.wac@unige.ch](mailto:katarzyna.wac@unige.ch)

University of Copenhagen  
Department of Computer  
Science

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## QoL: inter / multi / trans- disciplinarity

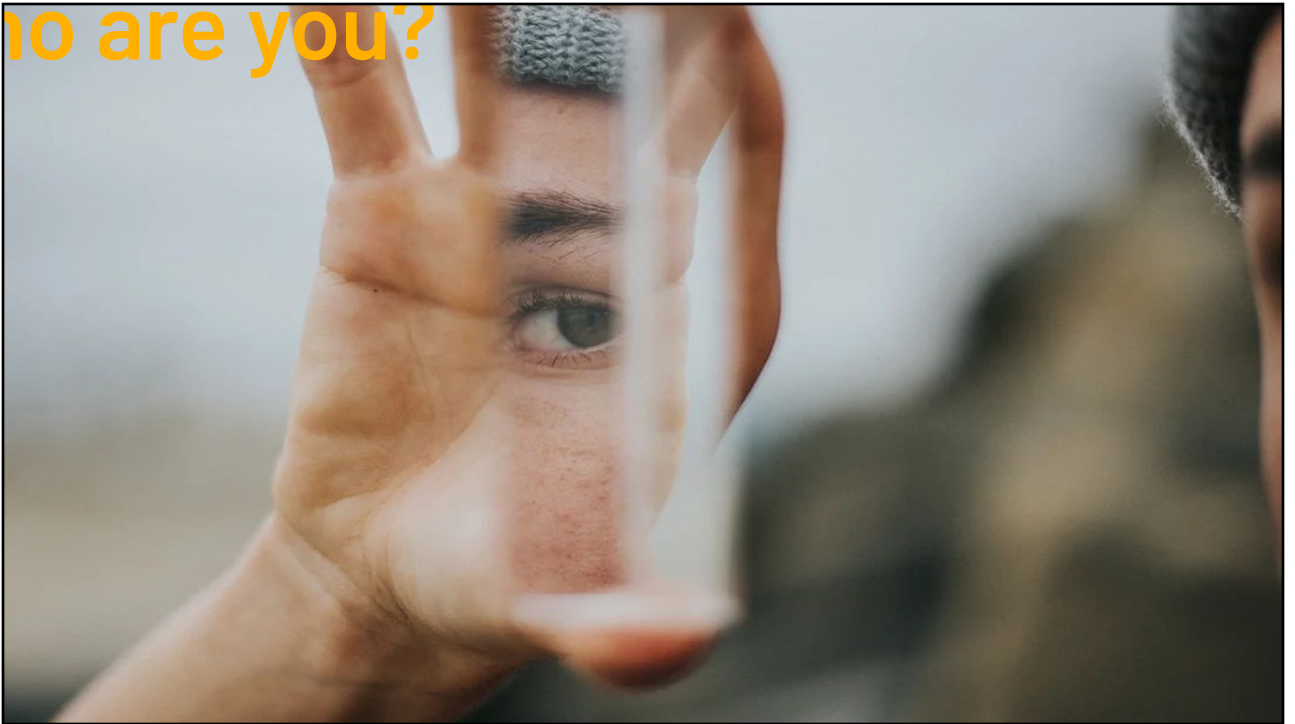


**multidisciplinary** - perspectives from different disciplines, without necessary an integration of insights

**interdisciplinary** - integrate perspectives from different disciplines: methods, tools, concepts, theories, or insights

**transdisciplinary** - multiple stakeholders come together to work on implementation of solutions for a complex problem - perspectives from different disciplines and practice brought by stakeholders - patients, caregivers, MDs, startup owners, pharma, policymakers/regulators, payers, insurers, etc.

Who are you?



## FormANTion of Design Teams



| Group | First Name                | Last Name            | Email                                | Country                  | MENTOR                 |
|-------|---------------------------|----------------------|--------------------------------------|--------------------------|------------------------|
| A     | Tsz Ki                    | Liu                  | kateliu0325@gmail.com                | China (Hong-Kong)        | <b>Xenia Thévoz</b>    |
| A     | Tenzin                    | Younten              | txf503@york.ac.uk                    | United Kingdom           |                        |
| A     | Saurabh                   | Nautiyal             | s.nautiyal@iitg.ac.in                | India                    |                        |
| A     | Raja Omman                | Zafar                | roz@du.se                            | Sweden                   |                        |
| A     | Anna                      | Ferrari              | ferranna87@yahoo.it                  | Switzerland              |                        |
| B     | Riley                     | Workentin            | workentinr@gmail.com                 | Canada                   | <b>Juliana Mordant</b> |
| B     | Maria                     | Gattuso              | maria.gattuso@unibg.it               | Italy                    |                        |
| B     | Alexander                 | Horst                | alexander.horst@etu.unige.ch         | Switzerland              |                        |
| B     | LAY KIN                   | LIAU                 | liau@mahsa.edu.my                    | Malaysia                 |                        |
| B     | Frances                   | Palen                | fapalen@yahoo.com                    | Switzerland              |                        |
| C     | Ruohan                    | Dai                  | dairuohan2013@gmail.com              | United States of America | <b>Xenia Thévoz</b>    |
| C     | Sophia                    | Ropelewski           | sophia.ropelewski@gmail.com          | France                   |                        |
| C     | AMRUTHA LAKSHMI           | JINKA VENKATARAMAIAH | qpn510@york.ac.uk                    | United Kingdom           |                        |
| C     | Monika                    | Freund Schoch        | monika.freund@ost.ch                 | Switzerland              |                        |
| C     | Osman                     | Yakubu`              | osman.yakubu@gcuc.edu.gh             | Ghana                    |                        |
| D     | Rachel                    | Robles               | rachel.robles94@gmail.com            | Switzerland              | <b>Juliana Mordant</b> |
| D     | Seyedeh Hiva              | Houshyar Yazdian     | seyedeh.hiva.houshyar.yazdian@vub.be | Belgium                  |                        |
| D     | Mai                       | Mashimo              | mimashimo@gmail.com                  | France                   |                        |
| D     | Leonardo Alfonsius Paulus | Lalenoh              | leonardo.alfonsius@ui.ac.id          | Indonesia                |                        |
| D     | Ulrike                    | Bechtold             | ulrike.bechtold@oeaw.ac.at           | Austria                  |                        |

## Assignment of Themes for the Projects

### Technology-Driven Social Inclusion for Seniors: Addressing Isolation and Enhancing Well-being

**Social Inclusion**  
May focus on the critical role of technology in promoting social connections and improving the quality of life for older adults. This research explores how various digital tools and platforms, including social networking sites, virtual reality (VR), augmented reality (AR), lifelong learning programs, and community services, can be leveraged to reduce feelings of loneliness and social isolation among seniors. addresses the barriers to technology adoption among older adults and explores solutions to enhance digital literacy and accessibility. The ultimate goal is to harness innovative technological solutions to enhance social inclusion, ensuring that seniors remain connected, engaged, and supported in their communities, thereby improving their overall happiness and health.

### Intergenerational Bonding: Leveraging Technology for Shared Growth

**Social and Emotional Support**  
**Benefits to Ageing People**  
**Benefits to Younger Children**  
Possible to explore how technology can foster intergenerational relationships between ageing people and younger children, focusing on enhancing social and emotional support, improving digital literacy and mental well-being for older adults, and providing educational and cultural benefits to young children. The research examines how digital platforms and communication tools can reduce loneliness and provide mutual support, while also helping older adults stay updated with technological trends and younger children learn valuable life lessons and develop empathy.

### Harnessing Technology for Dementia: Prevention, Early Detection, and Supportive Care

**Dementia Prevention and Caring**  
Possible to explore various technological interventions for dementia prevention and care. It examines the effectiveness of digital interventions in delaying dementia onset, the use of AI and machine learning for early diagnosis, and the ethical considerations of monitoring technologies. Additionally, it investigates how assistive technologies can enhance the quality of life for dementia patients and caregivers, and the role of cognitive training apps in maintaining cognitive function in older adults at risk of dementia.

### Smart Home, Assistive Technology, IoT, etc. Support Independent Living





**Ageing in Place**  
How the integration of advanced technologies to enable older adults to live independently and safely in their own homes or community housing. Possible to deploy smart home systems that incorporate Internet of Things (IoT) devices, such as sensors, smart thermostats, and automated lighting, to enhance the daily living environment. Assistive technologies, including wearable health monitors, fall detection systems, and voice-activated assistants, are examined for their role in providing real-time health monitoring and emergency assistance. The ultimate goal is to create a seamless and supportive living environment that adapts to the needs of seniors, ensuring they can maintain their independence and quality of life.

### General Technologies for Ageing

Identify the critical aspects of integrating technology to enhance the lives of older adults. Key areas include identifying the factors that influence the adoption of new technologies by the elderly, and how user-centered design can improve the usability and accessibility of these technologies. The research focuses on managing chronic diseases in older adults and how robotics and automation can support their daily activities. Additionally, what are the necessary policies and regulations to ensure the safe and ethical use of technologies for ageing populations. The goal is to provide insights that will drive the development and implementation of effective technological solutions to improve the quality of life for seniors.



# QoL challenges and potential solutions...

| QoL Domain   | Facets incorporated within QoL domains   |
|--|--|
| <b>Physical Health</b><br>      | Activities of daily living<br>Dependence on medicinal substances and medical aids<br>Energy and fatigue<br>Mobility<br>Pain and discomfort<br>Sleep and rest<br>Work capacity  |
| <b>Psychological</b><br>        | Bodily image and appearance<br>Negative feelings<br>Positive feelings<br>Self-esteem<br>Spirituality/religion/personal beliefs<br>Thinking, learning, memory and concentration   |
| <b>Social relationships</b><br> | Personal relationships<br>Social support<br>Sexual activity  |
| <b>Environment</b><br>          | Financial resources<br>Freedom, physical safety and security<br>Health and social care: accessibility and quality<br>Home environment<br>Opportunities for acquiring new information and skills<br>Participation in and opportunities for recreation/leisure act.<br>Physical environment (pollution / noise / traffic / climate)<br>Transport |



**World Health Organization**

## QoooL: fun & wacky

### EXPECTED OUTCOMES

- One pager (your proposed solution)
- Final pitch
- Prototype
- Video (optional)

### RULES FOR THE PITCH

- Duration: 15 mn
- Be fun and innovative
- Show your team spirit
- Make sure you apply the theoretical knowledge aquired during the week

### PITCH EVALUATION CRITERIA

- Originality and clarity of the pitch
- Ethical considerations
- Innovative / disruptive characteristics of the solution
- Usefulness and potential impact of the solution
- Feasibility of the solution

break, lunch break, ...

14:00  
TO  
15:30

PROGRAMME  
Patients  
Partenaires **3P** Pratiques  
Professionnelles  
Public **HUG**  
Xenia Thévoz  
Juliana Mordant

16:00  
TO  
17:30

**faclab**  
Group Project