



PONTIFICIA  
UNIVERSIDAD  
CATÓLICA  
DE CHILE



# Napari LatAm workshop

## #LIBRE Hub

### Flash-talk introduction slides

2023



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Tobias Wenzel

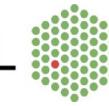
Assistant Professor, Pontificia Universidad Católica de Chile  
"From Constraints to Opportunities:  
Open Hardware Driving Global  
Biology Research"



# Tobias Wenzel (host) @MakerTobey @WenzelLab #LIBREhub

Asst. Prof. & LIBRE hub principal investigator at the  
Institute for Biological and Medical Engineering (IIBM),

Pontificia Universidad Católica de Chile; Ex  UNIVERSITY OF CAMBRIDGE & EMBL



# Fernando Olvera Martínez

I'm from Mexico, I'm 27 years old and I'm studying for my master's degree.

This course is interesting for me because it is something that I need in my research work. When I was in the High School, I started to learn about 3D modeling with Autocad and Solidworks. I really like computer science and how we can apply it unto natural sciences.



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# Monara Angelim

*Postdoc at Immunometabolism laboratory*

**PI: Pedro MMM Vieira**

(UNICAMP,Campinas, Brazil)

**Scientific project:** Extracellular mitochondria modulate neuronal function and metabolism.

**Methods:** Microscopy image analysis, molecular and cell biology, RNAseq.

Why Python and Napari?

To do and automate analysis of microscopic image data with image view, and other data, such as RNA sequencing.



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# Itzia Gómez Alonso

PhD. student at IPN, Mexico City

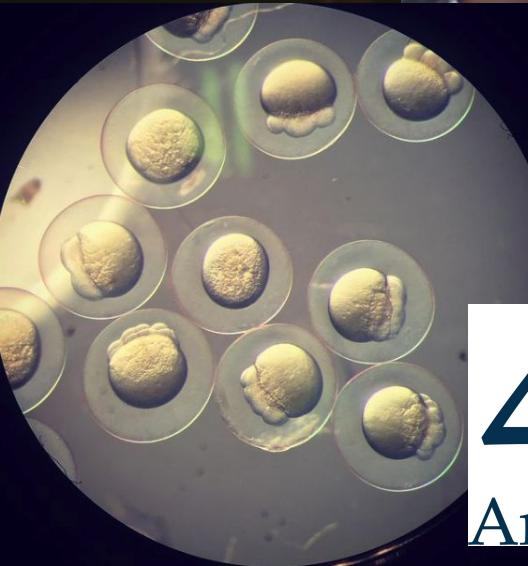
My project is understanding the mechanisms involved in infections caused by *S. epidermidis* in joint prostheses. In order to understand the mechanisms of resistance or immune evasion of this bacterium, we use techniques such as confocal microscopy among others.

I want to know advances techniques of images analysis and automated methods for to do this.



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# Jaime Carlos López Rodríguez

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PhD student at Instituto de Biotecnología, UNAM,  
Cuernavaca, México.

Project: Molecular effect of microcontaminants  
during zebrafish development.

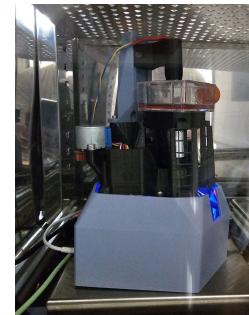
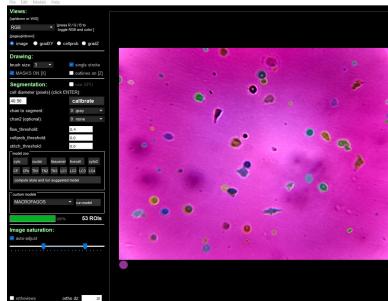
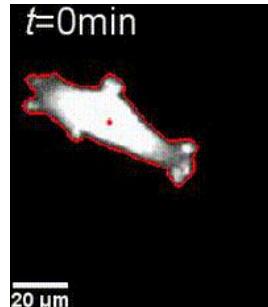
Lab methods: confocal microscopy, stereoscopic  
microscopy

I'm too lazy for spend thousands of hours clicking  
dozens of images by the same way than I rather  
create a Python code for image processing like  
Z-Stack, 16bits-8bits, gray scale...

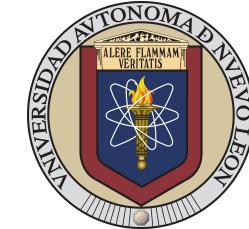
# Alejandro Flores Mayorga

I'm from Nuevo León, Mexico. I'm currently pursuing a bachelor's degree in Physics at the Autonomous University of Nuevo León, commonly referred to as UANL.

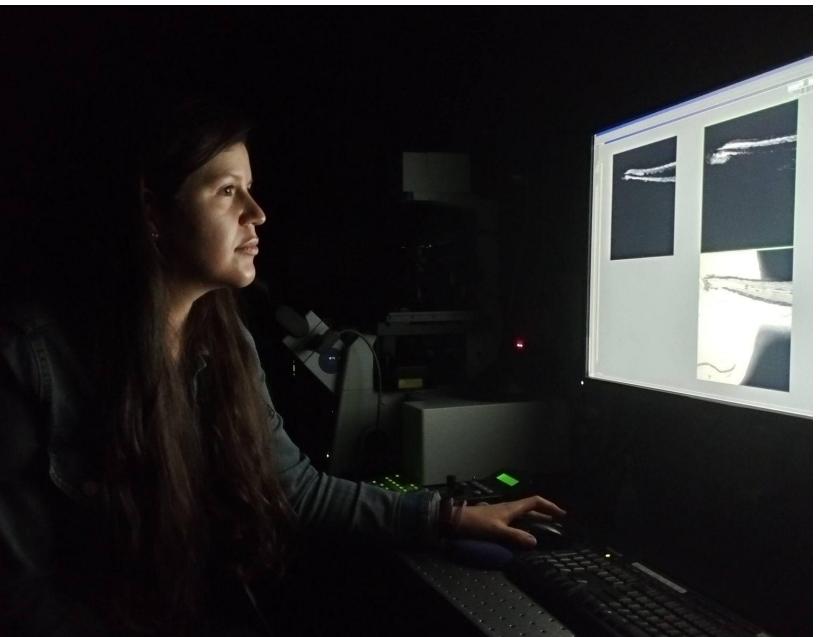
I am deeply involved in an exciting project alongside Dr. Jorge Luis Menchaca, focused on establishing a biophysics laboratory. Our primary objective is to characterize the physical properties of cancer cells. To achieve this, we employ a variety of microscopy techniques, which provide us with detailed and valuable images of these cells. Given the importance and intricacy of these images, it's essential to conduct thorough and meticulous analysis. This is where my interest in bio-imaging comes into play. I see Napari as a powerful and fitting tool for this purpose. It allows us to conduct advanced and detailed interpretations of bio-images, facilitating a more accurate characterization of cancer cells based on the images we capture.



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# Arlen Ramírez Corona



4  
Aniversario



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PhD student in Biochemical Sciences at the Institute of Biotechnology, UNAM.

Project: Reactive oxygen species and the regulation of endocytosis during zebrafish early development.

I'm interested in taking the course to further broaden my image analysis skills and familiarity with various tools. Also I want to learn how to use programming and Napari for 3D image analysis and visualization for in vivo imaging of zebrafish embryos.



# Diana Vazquez-Enciso

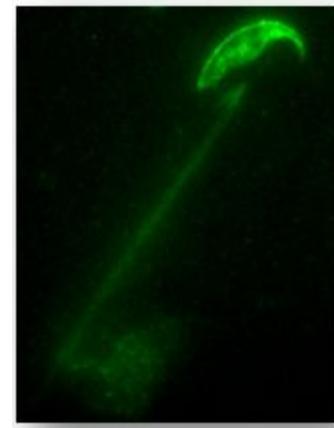


PhD student at Institute of Biotechnology  
(IBt) UNAM-México.

I am a very curious biochemical engineer, passionate for the pursuit of knowledge and science development. I love natural sciences and their representation through scientific illustration.

Currently, I am studying the changes of the mouse sperm membrane during different physiological states. So, I will be dealing with a substantial amount of data, which motivates me to explore more efficient ways of processing it using Napari.

I am excited to be part of this enriching learning experience and look forward to applying the newly acquired skills to advance our scientific endeavors.





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# Jonathan Jair Sánchez

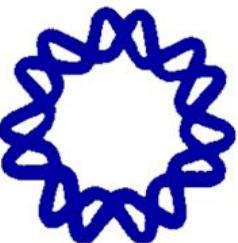


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Master student at Institute of Mathematics. (UNAM)

I am a Bachelor of Applied Mathematics and Computer Science from UNAM

Currently, I am working on my master's thesis, where I am developing models of artificial neural networks to locate and classify the damages caused in the lungs by the SARS-CoV-19 virus. This is achieved through the massive analysis of chest X-ray images.



Instituto de  
Matemáticas

**IBT - UNAM**

I collaborate with the National Laboratory of Advanced Microscopy, belonging to the Institute of Biotechnology at UNAM, where my main research objectives involve image processing, analysis, and super-resolution.

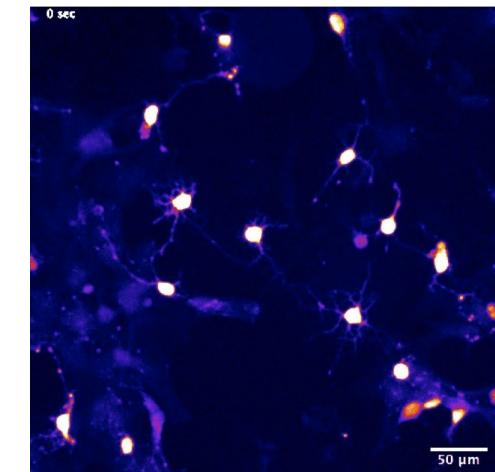
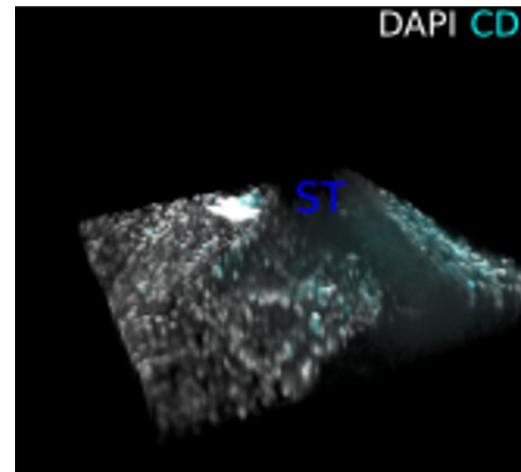
# Humberto Martinez Alvarez

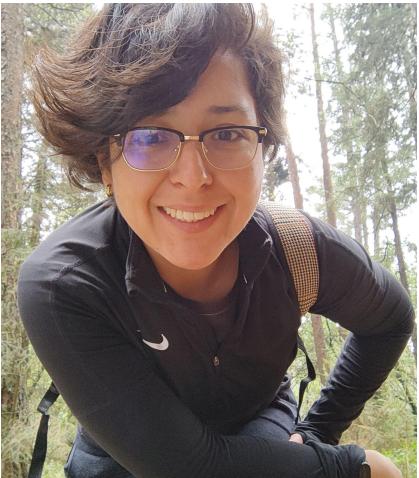
PhD student at IBT(UNAM, Mexico)

Studying neuro-immune communication and regulation. Working on the relevance of meningeal immune cells for brain function and disease progression during Alzheimer's disease.

Interests:

- Imaging to resolve physiology
- Immunofluorescence
- Calcium imaging
- Efficient reproducible analysis





# Haydee Hernández

PhD student

Image scientist interesting in microscopy image analysis. My current project is to classify human sperm beating from 3D+t data. I like to develop and collaborate with biologists with image processing and analysis.



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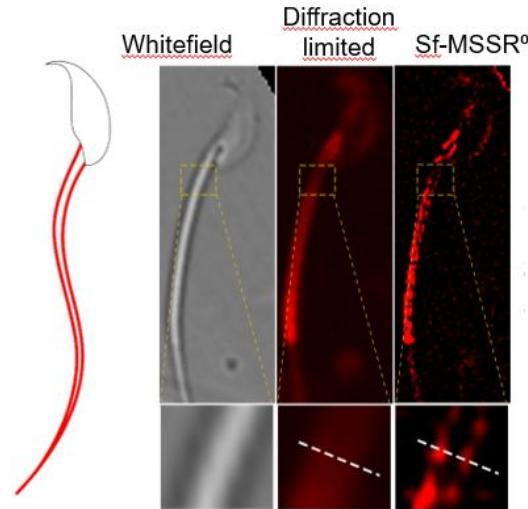


# Victor Xavier Abonza Amaro

Master student of at Institute of Biotechnology (IBt) UNAM-México.

Currently, I am currently a Master's student in biochemical sciences, i work in the National Laboratory of Advanced Microscopy, belonging to the Institute of Biotechnology at UNAM, where i studying different super-resolution microscopy techniques.

The goal of the project is to assess the resolution of cytometry images and in combination with MSSR, I'm going to extend the resolution of the images to see nanoscopic structures. For this purpose, I'm going to study physiological changes in the flagellum middle piece in mouse sperm during the acrosomal reaction and population heterogeneity behavior



# Nabanita Chatterjee, PhD



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I am a Light Microscopy core facility scientific officer at Centre for Cellular Imaging, University of Gothenburg, Sweden interested in Microscopy and image data analysis.

I am interested in this workshop to provide improved automated image analysis workflows to our facility users.

Email : [nabanita.chatterjee@gu.se](mailto:nabanita.chatterjee@gu.se)

Twitter : [https://twitter.com/naba\\_chatterjee](https://twitter.com/naba_chatterjee)

Linkedin : [www.linkedin.com/in/chatterjeen](https://www.linkedin.com/in/chatterjeen)

Github : <https://github.com/DataTracer>

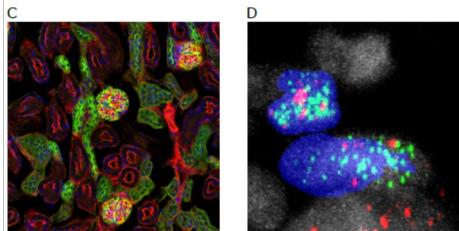
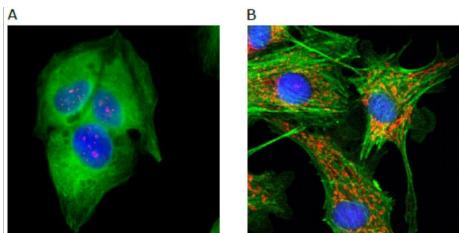


# Rocco D'Antuono

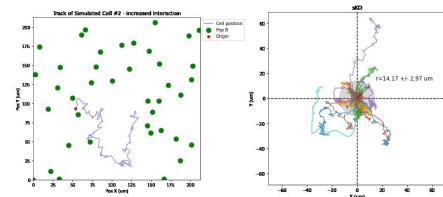


Principal Microscopist  
(and Image Analyst)

Crick Advanced Light Microscopy STP,  
London, UK



Numerical simulation with python  
v. tracking immune cells



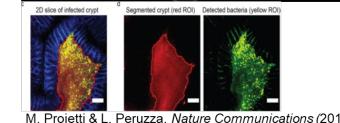
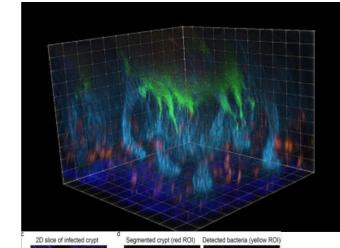
Front. Comput. Sci. 3:796117, doi:  
10.3389/fcomp.2021.796117



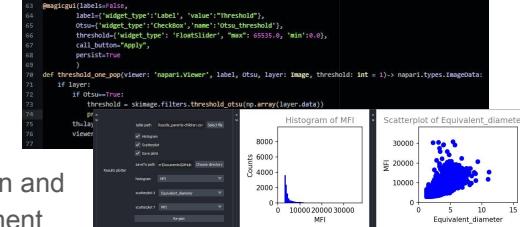
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3D analysis with  
ImageJ macro



napari.org



3D segmentation and  
plugin development

# Dan Díaz



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Postdoc at Imaging Laboratory  
(Instituto de Biotecnología, UNAM)

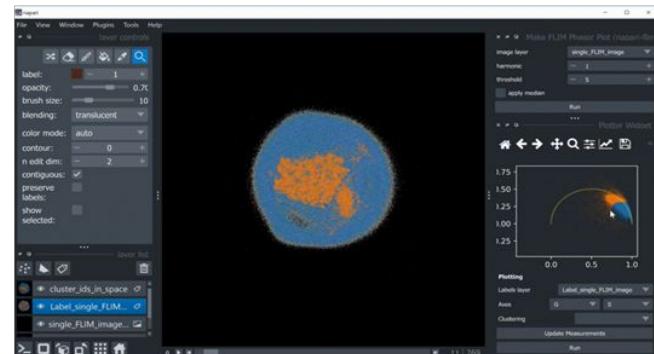
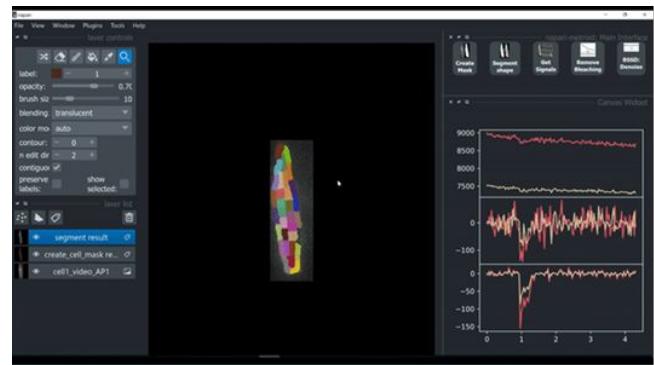
Scientific project: Quantitative metrics from the flagellar movement of human spermatozoa.

I'm already involved in python programming, but the image processing and in particular the napari package is very important to improve my project.

# Marcelo L. Zoccoler



- Biomedical / Electrical Engineer
- Image Data Scientist
- Post-doc at Bio-Image Analysis Technology Development group - Physics of Life - TU Dresden
- Bio-Image + Signal Processing
- FLIM Data Analysis
- Napari plugins



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# Luciana Gallo



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Hi, I am a Researcher at the University of Buenos Aires in Argentina.

I am interested in studying the budding and transport of vesicles from the Golgi to the plasma membrane. I would like to expand my understanding of imaging analysis tools and believe that learning how to use Napari will highly impact on my image analysis skills.

# Adan Guerrero

I work at the National Laboratory for Advanced Microscopy in Mexico (associate professor).

I'm participating in developing the napari-superres plugin together with Julian Mejia and Rocco, D' Antuono.

I would love to learn much more about napari, and mastering it.

I'm part of the support team in this workshop.



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# Pierre Padilla Huamantinco

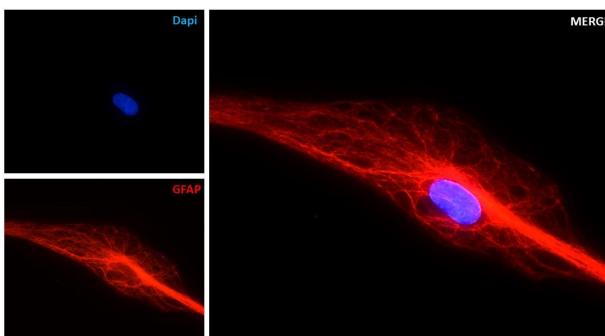


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I am Pierre, PhD student at Wenzel Lab from Pontificia Universidad Católica de Chile, Santiago, Chile. I am also Technology Fellow with LIBRE Hub Project at Institute for Biological and Medical Engineering.

My research interest includes microbiome analysis using open hardware and microfluidics.

# Yadira Gasca Martínez.



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Hello, I am a student of the Licentiate in Biology at the University of Guadalajara. The importance that the taller has for me is to complement my training, I am specializing in the area of microscopy and image analysis.

# YOUR NAME

Information about you (in english) with images

The oral presentation can be in your native language if you prefer, but we will have international trainers and spanish as well as portuguese speakers present who might not be able to understand. Question support during the course will be given in English, Spanish and Portuguese.



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Initiative 

# YOUR NAME

Information about you (in english) with images

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