Tuesday 3rd of March
Venue: (NOT SYMPOSIUM's Venue) Centre Broca Nouvelle Aquitaine

14:00-15:00   Helpdesk: Registration

15:00 - 19:00   **SATELLITE MEETING for Bioimage Analysts**

15:00-16:45   Session 1: Machine Learning in Microscopy
                            3x Talks:
                            Estibaliz Gomez de Mariscal, Dmitry Ershov, Dominik Kutra
                            + Discussion

16:45   *Coffee*

17:15-19:00   Session 2: Biomage Analysis Facility Management
                            4x Talks
                            Stéphane Rigaud, Mafalda Sousa, Simon Noerrelykke,
                            Perrine Paul-Gilloteaux
                            + Discussion

19:00-   *Free Evening*

NEUBIAS 2020 at a glance

Wednesday 4th of March

08:50	INTRO/	Welcome
09:00	Session 1	4x Talks + 13 FlashTalks (2")
11:00	*Coffee*	
11:30		Panel Discussion
12:50	POSTERS	*with Lunch*
14:30	Session 2	
	Keynote	**SULIANA MANLEY**
15:15	F1000Research, Companies Techbites (2")	
15:40		*Coffee*
16:10	Company Workshops #1: Carl Zeiss, Nikon, ThermoFisher, Argolight	
	+ OsSL	round 1
17:10	OsSL	round 2
18:00	OsSL	round 3
19:00		*Free Evening*

Thursday 5th of March

09:00	Keynote	**EMMA LUNDBERG**
09:45	Session 3	2 Talks
		+ Platinum Sponsors Talk (ZEISS, NIKON)
11:00	*Coffee*	
11:25	Session 4	5 Talks
13:05	POSTERS	*with lunch*
	13:45	*NEUBIAS MC Meeting* **on invitation**
14:50	Company Workshops #2: Carl Zeiss, Nikon, ThermoFisher, Argolight	
15:50	*Coffee*	
16:40	Session 5	2x Talks
17:10		CALL FOR HELP
18:40	*Attendants registered to Gala dinner jump on the buses*	
19:00	*Buses Departure to Gala Dinner, sharp at 19:00 !*	

Friday 6th of March

09:00	Keynote	**KRISTIN BRANSON**
09:45	Session 6	*Special*: Deep Learning & ImageJ 3x Talks
		+ 1 Talk
10:55	*Coffee*	
11:25	Session 7	3x Talks + 1x STSMs Report
12:35	*special session*	Bioimage Analysis, Perspectives
13:30	Closing comments	
13:25	Lunch, end and departure	

NEUBIAS 2020 Symposium Detailed Program

Wednesday 4th of March 2020

08:00 – 08:50	Registration	
08:50 – 09:00	Welcome by organizers	*Florian Levet (IINS)*
		Fabrice Cordelières (BIC)
		Sebastian Munck (VIB Leuven)

Session I 　　　　　*Chair: Marion Louveaux*

09:00 – 09:25
invited

Peter Bankhead, University of Edinburgh (UK)
QuPath: Open source software (not just) for whole slide image analysis

09:25 – 09:40
selected

Allen Goodman & Beth Cimini, The Broad Institute (Boston, USA)
Piximi: a free and open-source web app for object recognition

09:40 – 09:55
selected

Sébastien Tosi, IRB Barcelona (ES)
LOBSTER: An environment to design bioimage analysis work flows for large and complex fluorescence microscopy data

09:55 – 10:10
selected

Christoph Moehl, DZNE (Köln, DE)
Introducing YAPiC: An Open Source tool for biologists to perform complex image segmentation with deep learning

10:10 – 10:35
invited

Robert Haase, MPI-CBG (Dresden, DE)
CLIJ: GPU-accelerated image processing for everyone

*FLASH TALKS (*Max 2'00''**)**

selected

Estibaliz Gomez de Mariscal, **Use of the p-value as a size-dependent function: model and applications**

Vanessa Isabell Jurtz, **Deep Learning reveals 3D atherosclerotic pla que distribution and composition**

David Barry, **GIANI: open-source software for automated analysis of 3D microscopy data**

Sylvain Prigent, **BioImage-IT: Design data analysis workflows using tools from different languages and keep track of the metadata**

Hannah Jeckel, **BiofilmQ, a software tool for quantitative image analy sis of microbial biofilm communities**

Giada Bianchetti, **Microscopy pixel classification of intracellular sites of triglycerides and cholesteryl esters formation and storage through a machine-learning assisted polarity-driven segmen tation workflow**

E. Josiah Lutton, **Quantitative analysis of macropinocytosis in Dict yostelium captured with light-sheet microscopy**

Carl-Magnus Svensson, **Machine learning supported image analy
 sis of microfluidic droplets: Using Random Forest classi
 fiers and Bayesian inference for identification of experi
 mental conditions**
Dagmar Kainmueller, **PatchPerPix for Instance Segmentation**
Léo Guignard, **Contact-area dependent cell communications
 and the morphological invariance of ascidian embryogenesis**
Laura Nicolas-Saenz, **Automatic, non-supervised image registra
 tion and segmentation for the study of tumor heterogeneity maps**
Philippe Andrey, **Statistical modeling of spatial interactions in biolo
 gical patterns, with application to plant nuclear organization**
Thomas Fish, **GridSNAP: Automated Alignment of TEM Grid Mosaics
 for Correlative Imaging**

11:05 - 11:35	Coffee
11:35 – 12:50	***Panel Discussion*** *Moderator: Kota Miura*
12:50 - 14:30	POSTER SESSION I with Lunch

Session II   *Chair: Martin Jones*

Keynote Lecture

14:30 – 15:15	***SULIANA MANLEY,*** École Polytechnique Fédérale de Lausanne (CH) **Superresolution fluorescence microscopy for multi-color 3D particle reconstruction**
15:15 - 15:25 *invited*	*Vicky Hellon*, F1000Research (UK) **F1000Research - Gateways**
15:25 – 15:40	*TECHBYTES*, 2.5" pitch talks by industry partners
15:40 - 16:10	Coffee

16:15 - 17:15   **Open source**   AND   **Companies Workshop 1**
                 Software Lounge
                 (OsSL)

         3 rotations: *4 parallel workshops:*

         16:15 - 17:15   16:15-17:15
                                    Carl Zeiss Microscopy

         OsSL Round 1   **Nikon**

         with
         Digital Poster by
                                    Thermo Fisher

                                    Argolight

         17:15 - 18:10   **OsSL Round 2**

         18:10 - 19:00   **OsSL Round 3**

19:00 onwards   *Free evening*

Thursday 5th of March 2020

Session III   *Chair: Bertrand Vernay*

Keynote Lecture

09:00 – 9:45   **EMMA LUNDBERG**   SciLifeLab & KTH (Stockholm, SE)
                                         University of Stanford (USA)
                 Image-based spatiotemporal dissection of the human proteome

9:45 – 10:10   *Edward Cohen*, Imperial College (London, UK)
invited   **Resolution limit of image analysis algorithms**

10:10 – 10:25   *James Klatzow*,   EMBL-EBI (Cambridge, UK)
selected   **Mesh Correspondence pipeline for Biological Shape Analysis**

10:25 – 10:55   *Sebastian Rhode,* Carl Zeiss Microscopy (DE)
                 Opening the ZEN ecosystem for the Open Software Community – How to use your code and machine learning models inside ZEN using APEER and Intellesis

Platinum
Sponsors Talks   *Michael Davis,* NIKON (NL)
                 NIS.ai - a new machine learning toolbox for Nikon's NIS-Elements softwaree

                 Coffee
Session IV   *Chair:*   *Dagmar Kainmueller*

11:30 – 11:55   *Laure Blanc-Féraud,* CNRS (Sophia-Antipolis, FR)
invited   **Fluorescence Microscopy 3D resolution improvement with MA-TIRF reconstruction.**

11:55 – 12:10   *Ko Sugawara,*   IGFL / CNRS (Lyon, FR)
selected   **Semi-automated cell tracking with incrementally trainable convolutional neural networks**

12:10 – 12:25   *Emmanuel Bouillhol,* Univ. Bordeaux (FR)
selected   **Deep Learning approaches for reliable quantification of multi-omics cell imaging datasets to interrogate RNA and protein spatial and temporal subcellular interactions**

12:25 – 12:40   *Minh Son Phan,* CNRS/INSERM/école Polytechnique (Palaiseau,FR)
selected   **Quantitative geometry methods for analyzing 3D neuronal trajectories with GeNePy3D**

12:40 – 13:05   *Tammy Riklin Raviv,* Ben Gurion Univ. (IL)
invited   **Diving Deep into Cell Segmentation in Microscopy Videos**

13:05 - 14:50   POSTER SESSION II with Lunch
                      + *13:45 - 15:45* NEUBIAS MC Meeting (on invitation)

14:50 - 15:50   *4 parallel workshops:*

                  Carl Zeiss Microscopy

                  Nikon

                  Thermo Fisher

                  Argolight

15:50 - 16:10   Coffee

Session V   *Chair: Arrate Muñoz-Barrutia*

16:10 – 16:35   *Marcel Mueller*, Univ. Bielefeld (DE)
invited   **fairSIM - image processing for structured illumination microscopy**

16:35 – 17:00   *Thomas Walter,* MinesTech /Curie (Paris, FR)
invited   **Machine Learning for computational phenotyping: how to get
                      around massive manual annotation**

17:00 – 18:30   ***"Call For Help"*   *aka Shout your problem, Analysis Clinics....***
                         Chair: Jan Eglinger,
                         Team: Laure Plantard, Szymon Stoma, ...

            Interactive Session: *Life Scientists and BioImage Analysts facing
            Image Analysis Roadblocks in their research projects have
            submitted their problem, Developers and Analysts will address them,
            build and benchmark solutions. 10' per project with plenary discussion*

19:00 *Sharp*   Bus departure to Gala Dinner

            Wine Castle Visit + Dinner

            Return Bus from 23h (about 40min drive) to a Bordeaux center and Venue

Friday 8th of February 2019

Session VI   *Chair: Sebastian Munck*

Keynote Lecture

09:00 – 9:45	**KRISTIN BRANSON**, HHMI Janelia Campus (Ashburn, USA) **TBA**
9:45 – 10:40	*Special Session: Deep Learning and ImageJ*
9:45 - 10:00 *invited*	*Deborah Schmidt*, MPI-CBG (Dresden, DE) **Deep dive with Fiji**
10:00 - 10h15 *selected*	*Arrate Muñoz Barrutia,* Univ. Carlos III (Madrid, ES) **DeepImageJ: Bridging Deep Learning to ImageJ**

10:15 - 10h30
selected
	Martin Weigert, MPI-CBG (Dresden, DE)
	             **Nuclei Detection and Segmentation in Fluorescence Micros
	             copy Images with Learned Shape Representations**
	+ Discussion

10:40 – 10:55 *selected*	*Elisabeth Wetzer,* Uppsala Univ. (SE) **Cross-modal Representation Learning for Efficient Registra tion of Multiphoton and Brightfield Microscopy Images of Skin Tissue**
10:55 - 11:25	Coffee

Session VII   *Chair: Natasa Sladoje*

11:25 – 11:50 *invited*	*Fabrice de Chaumont,* Pasteur (Paris, FR) **Real time tracking and analysis of mice in rich environment**

11:50 – 12:05
selected
	Nadezhda Koriakina, Univ. Uppsala (SE)
	             **Uncovering hidden reasoning of convolutional neural networks
	             in biomedical image classification by using attribution methods**

12:05 – 12:20
selected
	Lassi Paavolainen, FIMM (Helsinki, FI)
	             **Learning representation of microscopy images by weakly-su
	             pervised deep learning**

12:20 – 12:45	*Short-term Scientific Missions: Julia Fernandez-Rodriguez*
	Devrim Unay, Izmir University (TR) **Automated detection and segmenta-
	                          tion of bacteria from multimodal microscopy images**
	Ana Stojilijkovic, University of Bern (CH)
	             High-content characterisation of canine induced pluripotent stem cells

12:40 – 13:20	*Bioimage Analysis Perspectives, NEUBIAS TEAM*
13:30	*Closing Comments and Lunch*