# Gene Expression at Spatial Resolution - Virtual

**EMBL COURSE**

**EMBL Courses and Conferences during the Coronavirus pandemic**

With the onsite programme paused, many of our events are now being offered in virtual formats.

Registration is open as usual for many events, with back-up plans in place to move further courses and conferences online as necessary. Registration fees for any events affected by the COVID-19 disruption are fully refundable.

More information for participants of events at EMBL Heidelberg can be found here.

## Programme

Got something to say? Tweet it! **#EMBLSpatialOmics**

The following times are used in the programme below:

— Central European Summer Time (CEST): eg. Berlin, Amsterdam Paris

— Eastern Daylight Time (EDT): eg. New York, Quebec

To find out the equivalent time zone in your location, enter Berlin, the CEST programme time and your city into the Time Zone Converter.

— The virtual course includes live-streamed invited speakers with Q&A sessions after each talk.

&mdash; Information on the live stream and access to the discussion platform will be provided shortly before the start of the event.

&mdash; Access to the recorded talks will be available for 1 week after the start of the event.

SHOW ALL

## Day 0 - Monday 31 August 2020

| Time | Speaker |
|---|---|
| 14:00-15:00 (CEST)<br>08:00-09:00 (EDT) | Interactive:<br>**Introduction and Onboarding / IT setup test session for participants** |

## Day 1 - Tuesday 1 September 2020

| Time | Speaker |
|---|---|

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**Topic:**
**Introduction to the Course and Theory on the Visium Spatial Gene Expression Assay**

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| Time | Speaker |
|---|---|
| 13:00-14:00 (CEST)<br>07:00-08:00 (EDT) | Interactive:<br>**Welcome and Breaking the Ice**<br>Katharina Danielski - 10x Genomics, Germany<br>Elisabeth Zielonka - EMBL Heidelberg, Germany |
| 14:00-14:15 (CEST)<br>08:00-08:15 (EDT) | **Break** |
| 14:15-15:15 (CEST)<br>08:15-09:15 (EDT) | Live Lecture:<br>**Introduction to the Visium Spatial Gene Expression Workflow**<br>Natalia Anahi Juiz - 10x Genomics, France |
| 15:15-15:30 (CEST)<br>09:15-09:30 (EDT) | **Break** |
| 15:30-16:30 (CEST)<br>09:30-10:30 (EDT) | Live Lecture:<br>**Tissue Sample Preparation**<br>Natalia Anahi Juiz - 10x Genomics, France |
| 16:30 (CEST)<br>10:30 (EDT) | **End of day 1 - Continued access to networking and discussion platforms** |

## Day 2 - Wednesday 2 September 2020

| Time | Speaker |
|---|---|

|  | **Topic:** |
|  | Live Demonstration of the Visium Spatial Tissue Optimization Workflow |

| 09:00-11:00 (CEST) | Homework: |
| 03:00-05:00 (EDT) | **Workflow and Sample Preparation** |

| 11:00-13:00 (CEST) | |
| 05:00-07:00 (EDT) | **Break** |

| 13:00-14:00 (CEST) | Live Lecture: |
| 07:00-08:00 (EDT) | **Computational approaches for multi-comics and spatial omics integration** |
|  | Oliver Stegle - EMBL Heidelberg and German Cancer Research Center, Germany |

| 14:00-14:15 (CEST) | |
| 08:00-08:15 (EDT) | **Break** |

| 14:15-15:15 (CEST) | Live Lab Demo: |
| 08:15-09:15 (EDT) | **Cryosectioning** |
|  | Adam Jerauld - 10x Genomics, Sweden |
|  | Aleksandra Jurek - 10x Genomics, Sweden |

| 15:15-15:30 (CEST) | |
| 09:15-09:30 (EDT) | **Break** |

| 15:30-16:30 (CEST) | Live Lab Demo: |
| 09:30-10:30 (EDT) | **Visium Spatial Tissue Optimization Workflow** |
|  | Katharina Danielski - 10x Genomics, Germany |
|  | Elisabeth Zielonka - EMBL Heidelberg, Germany |

| 16:30 (CEST) | **End of day 2 - Continued access to networking and discussion** |
| 10:30 (EDT) | **platforms** |

## Day 3 - Thursday 3 September 2020

| Time | Speaker |
|---|---|

|  | **Topic:** |
|  | Data Analysis in Theory and Practice |

| 09:00-12:00 (CEST) | Interactive: |
| 03:00-06:00 (EDT) | **1-on-1 Project Consultancy (optional 30min time slot for each participant)** |
|  | Katharina Danielski - 10x Genomics, Germany |
|  | Adam Jerauld - 10x Genomics, Sweden |
|  | Natalia Anahi Juiz - 10x Genomics, France |

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|---|---|
| 12:00-13:00 (CEST)<br>06:00-07:00 (EDT) | **Break** |
| 13:00-14:00 (CEST)<br>07:00-08:00 (EDT) | Live Lecture:<br>**Whole-Transcriptome Spatial Mapping of the Healthy and Infarcted Human Heart**<br>Christoph Kuppe - Uniklinik RWTH Aachen, Germany |
| 14:00-14:15 (CEST)<br>08:00-08:15 (EDT) | **Break** |
| 14:15-15:00 (CEST)<br>08:15-09:00 (EDT) | Interactive:<br>**Q&A Homework (Workflow and Sample Preparation)**<br>Natalia Anahi Juiz - 10x Genomics, France |
| 15:00-15:15 (CEST)<br>09:00-09:15 (EDT) | **Break** |
| 15:15-16:15 (CEST)<br>09:15-10:15 (EDT) | Live Lecture:<br>**Space Ranger (Linux Pipeline)**<br>Adam Jerauld - 10x Genomics, Sweden |
| 16:15-16:30 (CEST)<br>10:15-10:30 (EDT) | Live Demo:<br>**Loupe Browser (Graphical User Interface)**<br>Adam Jerauld - 10x Genomics, Sweden |
| 16:30 (CEST)<br>10:30 (EDT) | **End of day 3 - Continued access to networking and discussion platforms** |

## Day 4 - Friday 4 September 2020

| **Time** | **Speaker** |
|---|---|
| | Topic:<br>Planning for the Future |
| 09:00-12:00 (CEST)<br>03:00-06:00 (EDT) | Homework:<br>**Data Analysis with Loupe Browser** |
| 12:00-13:00 (CEST)<br>06:00-07:00 (EDT) | **Break** |
| 13:00-14:00 (CEST)<br>07:00-08:00 (EDT) | Interactive:<br>**Q&A Homework (Data Analysis)**<br>Katharina Danielski - 10x Genomics, Germany |
| 14:00-14:15 (CEST)<br>08:00-08:15 (EDT) | **Break** |

| 14:15-15:15 (CEST)<br>08:15-09:15 (EDT) | Live Lecture:<br>**R&D Pipeline Expanding the Visium Spatial Assay Capabilities**<br>Adam Jerauld - 10x Genomics, Sweden |
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| 15:15-15:45 (CEST)<br>09:15-09:45 (EDT) | Interactive:<br>**Closing Remarks and Feedback**<br>Katharina Danielski - 10x Genomics, Germany<br>Adam Jerauld - 10x Genomics, Sweden<br>Natalia Anahi Juiz - 10x Genomics, France<br>Aleksandra Jurek - 10x Genomics, Sweden<br>Elisabeth Zielonka - EMBL Heidelberg, Germany |