

1st ELENA Project Technical Training School *November 12-18, 2017. Delft, The Netherlands*

Sunday November 12, 2017

19.30 Meet and Greet at the Best Western Museum Hotel Lobby Bar

Oude Delft 189, 2611 HD Delft <http://www.museumhotels.nl/en/>

Informal get-together, no dinner included

Monday November 13, 2017

City Centre, The Prinsenkwartier Conference Centre

St. Agathaplein 4, 2611 HR Delft, around the block from the Hotel (see attached map)

Start 09.30

- **9.30-10.00 Welcome**
Oddur Ingólfsson (Univ. Iceland) and Cornelis W. Hagen (TU-Delft)
- **10.00-11.00 Introduction into Lithography Techniques: Overview, FEBIP, and EUVL**
Cornelis W. Hagen (TU-Delft) and Danilo de Simone (IMEC)
- 11.00-11.30 Coffee
- **11.30-12.30 Chemistry in Resists**, Danilo de Simone (IMEC)
- **Lunch 12.30-13.45**
- **13.45-15.00 Fundamentals of Electron Induced Chemistry in FEBIP and EUVL**,
Oddur Ingólfsson (Univ. Iceland)
- 15.00-15.30 Coffee
- **15.30-17.30 ESRs No. 1-9 present their projects** (10-15 min each) to exchange
knowledge and expertise within the network. *Include a list of equipment/resources
available at your site!*
- **End 17.30**
- **19.00 Dinner at restaurant in Delft**, walking distance. Meet at lobby 18.50.
Cafe-restaurant 't Postkantoor, Hippolytusbuurt 14, 2611 HN Delft

Tuesday November 14, 2017

City Centre, The Prinsenkwartier Conference Centre

St. Agathaplein 4, 2611 HR Delft, around the block from the Hotel (see attached map)

Start 09.00

- **9.00-10.30 Surface Science Tools to Study Chemical Processes in Formation of FEBID Deposits and Reactions in EUVL Resists**

Petra Swiderek (Univ. Bremen)

- 10.30-11.00 Coffee
- **11.00-12.30 ESRs No. 10-15 present their projects** (10-15 min each) to exchange knowledge and expertise within the network. *Include a list of equipment/resources available at your site!*

Lunch 12.30-13.30

13.30 Walking to Delft University, Lorentzweg 1 room C117 (See attached map)

Restart 14.00

- **14.00-15.00 Lithography Equipment**, Cornelis W. Hagen (TU-Delft)
 - 15.00-15.30 Coffee
 - **15.30-17.30 Excursion to VLLAIR lab at TU Delft and Kavli Nanofacility** (1 hour each)
- End 17.30**
- **Free evening**

Wednesday November 15, 2017

Excursion Day

7.10 Hotel Lobby

10 minute walk

7.20 Bus Pick-up from Bus terminal at Delft Train Station (see attached map)

7.30 Bus Departure, Beuk Bus Company +31-71-3656509

Please observe: Identification card or passport is needed to enter ASML premises

- 9.30 Welcome to ASML in Veldhoven
- 10.00 Presentation of ASML
- 11.00 Visit ASML Experience Center
- 12.00 Q&A with PhD's of CS, Research and D&E
- 13.00 Lunch with PhDs and Recruiter
- 13.50 End visit
- 14.00 Bus pick-up
- 15.00 Phenom World in Eindhoven
- 17.00 End of visit
- 17.10 Bus pick-up
- 19.00 Arrival in Delft
- Walk to hotel 10 minutes and free evening

Thursday November 16, 2017
TU Delft, Building 22, Classroom 8
Lorentzweg 1, (See attached map)

Start 9.30

- **9.30-10.30 Materials Used in FEBIP and Practical Aspects of the Technique.**
Hans Mulders, Thermo Fischer Scientific
- 10.30-11.00 Coffee
- **11.00-12.00 Chemistry in EUVL Resist**, Fred Brouwer, ARCNL
- **Lunch 12.00-13.00**
- **13.00-15.00 Exchange fair.** Each ESR discusses with the two ESR's located at their secondment institute/company what they think they are going to do during their secondments. *Students need to prepare this with their supervisors! Bring your laptop for eventual discussions with partners over skype!*
- *Coffee during fair*
- 15.00 Walk to Mapper Lithography, 20 minutes from TU Delft
- **15.30-17.30 Visit at MAPPER Lithography BV** in Delft
- **End 17.30**
- Free evening

Friday November 17, 2017
TU Delft, Building 22, Classroom 8, Lorentzweg 1 (See attached map)

Start 09.30

- **9.30-10.30 Physics of Electron Matter Scattering and Simulations.**
Cornelis W. Hagen (TU-Delft)
- 10.30-11.00 Coffee
- **11.00-12.30 FEBIP Continuum Model and Precursor Injection Simulations**
Ivo Utke (EMPA).
- **Lunch 12.30-13.30**
- **13.30-16.30 Simulation demonstration session in 3 groups:** gas injection simulations and continuum model simulations, Ivo Utke (EMPA), electron scattering simulations (2 groups), Luc van Kessel and Kerim Arat (TU-Delft)
13.30-14.15 First station
14.20-15.05 Second station
15.05-15.35 Coffee
15.40-16.25 Third station
- **16.30-17.30 Get together for administrative issues** (Aðalheiður Guðjónsdóttir (Univ. Iceland)), discussion and wrap-up of course program.
- **18.00 Dinner** in city center, LEF Restaurant, Doelenplein 2, 2611 BP Delft