Multi-dimensional Chromatography
13 - 17 July 2015, 09:30 - 17:00, 5 days
University of Amsterdam, Science Park 904, Amsterdam

Content
This five-day course will teach you the ins and outs of Multi-dimensional Chromatography and gives you a deeper insight in the different techniques. This course will consist of a combination of lectures and exercises.

Target audience
The course is taught in the framework of the MSc+ program for talents in Master education (University). The course is appropriate for employees at a corresponding level. The course is also aimed at PhD-students in analytical sciences or related fields, who want to specialize in chromatography (ANAC-advanced course). Finally, the course is suitable for graduates (BSc, MSc and PhD) interested in chromatography and seeking a sound foundation.

Topics & Schedule
Tentative program

Day 1, 13 July 2015
Morning: Introduction to the course | Peter Schoenmakers (UvA)
GCxGC for oil analysis | Jan Blomberg (Shell TCA)
SFCxSFC | Jan Blomberg (Shell TCA)
Afternoon: Fundamentals of GCxGC | Peter Schoenmakers
GCxGC Exercises
GCxGC in forensic science | Andjoe Sampat (UvA)

Day 2, 14 July 2015
Morning: Introduction to LCxLC | Bob Pirok (UvA), Peter Schoenmakers (UvA)
LC-MS and LCxLC in food science | Anna Baglai (UvA), Peter Schoenmakers (UvA)
Afternoon: LCxLC in environmental science | Xiyu Ouyang (IVM VU)
Orthogonal separations (including exercises) | Michelle Camenzuli (UvA)

Day 3, 15 July 2015
Morning: Optimizing LCxLC separations | Bob (PIOTR) Pirok (UvA)
Pareto-optimization of LCxLC systems | Ekaterina Davydova (UvA)
Designing microfluidic systems for LC and LCxLC | Ekaterina Davydova (UvA)
Afternoon: Modulation in LCxLC | Henrik Cornelissoon van de Ven | UvA
Multi-dimensional separations of proteins and peptides | Andrea Gargano (UvA)

Day 4, 16 July 2015
All day: Data analysis for comprehensive two-dimensional chromatography | Gabriel Vivó Truyols (UvA)

Day 5, 17 July 2015
Morning: LCxLC of polymers | Rosa Toledano Torres (UvA), Ron Peters (DSM), Peter Schoenmakers (UvA)
MTF and MTFxSEC | Rob Edam (Shell TCA)
Afternoon: Laboratory visit University of Amsterdam

Lecturers

Prof. Dr. Ir. Peter Schoenmakers
Professor Analytical Chemistry at the University of Amsterdam and COAST Educational Director

Peter Schoenmakers obtained his PhD from the TU Delft in 1981. After a career in industry at Philips Research Labs (Eindhoven) and Shell (Amsterdam and Houston), he became full-time professor of polymer analysis and analytical chemistry at the University of Amsterdam in 2002. His current research focus is on comprehensive two-dimensional (liquid) chromatography and on applications of analytical chemistry in forensic science.

In 2009 he won the Eastern Analytical Award for Outstanding Achievements in Separation Science and in 2010 he received the Martin Gold Medal of the Chromatographic Society. In 2014 he received the prestigious Knox Medal.

Speakers include several co-workers, PhD-students and PostDocs from the University of Amsterdam and Xiyu Ouyang from the Institute for Environmental Studies (IVM VU).

Speakers from industry include:
Jan Blomberg, Senior Scientist Analytical Separations, Shell TCA
Ron Peters, Science Manager Analytics at DSM Coating Resins
Rob Edam, Researcher LC, Shell TCA

At the end of the course

You will have gained a sound understanding of Multi-dimensional Chromatography and detailed knowledge in a number of key areas, including applications and recent developments.

Course duration and time investment

Course duration: 5 days from 09:30 till 17:00
Participant’s investment: 5 days + optional self-study
**Extra Information**

This course is taught as a Summer Course in the MSc+ program and is taught every two years.

Course fees:
- €800 (ex. BTW/VAT) per day
- COAST members pay a reduced fee of €400 per day (ex. BTW/VAT) or use a wildcard
- ASTP / MSc+ students: Free

Special fees can be offered to PhD students and companies registering for three or more persons.

For up-to-date information about the course program visit our website at [www.ti-coast.com/L3](http://www.ti-coast.com/L3).

Please contact us for more information.

**Registration**

To register fill out, sign and email the form attached to [lifelonglearning@ti-coast.com](mailto:lifelonglearning@ti-coast.com).
## Registration Form

**Multi-dimensional Chromatography Summer Course**  
13 - 17 July 2015, 5 days  
University of Amsterdam, Science Park 904, Amsterdam

| Name |  
|------------------|---|
| Organization |  
| Address |  

| Billing address  
(if different from above) |  
|------------------|---|

| Educational background |  
|------------------|---|

| Email address |  
|------------------|---|

| Phone number |  
|------------------|---|

**I will attend on the following date(s):**

- [ ] Day one: Monday 13 July, 09:30 - 17:00
- [ ] Day two: Tuesday 14 July, 09:30 - 17:00
- [ ] Day three: Wednesday 15 July, 09:30 - 17:00
- [ ] Day four: Thursday 16 July, 09:30 - 17:00
- [ ] Day five: Friday 17 July, 09:30 - 17:00

**Payment**

- [ ] I will pay the full course fee of €800 per day (ex. BTW/VAT)
- [ ] I qualify for 50% discount, because my employer is a COAST participant, and will pay €400 per day (ex. BTW/VAT)
- [ ] I am a PhD student and will pay €400 per day (ex. BTW/VAT)
- [ ] I am a PhD student from a group participating in COAST and will pay €200 (ex. BTW/VAT) per day
- [ ] I have received a wildcard from: ................................................ Therefore, I will follow this course for free (note: this person must receive a copy of your registration mail, to indicate approval)

**Date:**  
**Place:**

**Signature:**

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To register, please email the duly signed registration form to [lifelonglearning@ti-coast.com](mailto:lifelonglearning@ti-coast.com)