



**3<sup>rd</sup> Annual European MicroCal User  
Meeting  
London, September 13-14, 2018**

## Introduction

### Welcome to the 3<sup>rd</sup> Annual European MicroCal User Meeting

On behalf of Malvern Panalytical and the Scientific Committee of expert users from academia and industry with the support of ARBRE MOBIEU network, it is our pleasure to welcome you to MicroCal European Users' Meeting 2018 in London.

We would like to thank all our attendees and speakers. The organization of this meeting would not have been possible without their support.

We do hope that you will enjoy intense and stimulating discussions as well as an unforgettable stay in London...

### Presentation

The third Annual European MicroCal Meeting, co-organized by Malvern Panalytical and ARBRE MOBIEU network, will focus on broad applications, best practices, advanced data analysis and latest developments in isothermal titration and differential scanning calorimetry (ITC and DSC) as well as complementary biophysical techniques such as dynamic light scattering (DLS), multi-detection SEC and Taylor dispersion analysis.

Four scientific sessions will cover large diversity of topics from development of therapeutic proteins and profiling protein stability and volumetric properties with DSC, to monitoring enzyme kinetics under conditions mimicking cellular environment and interaction analyses with ITC involving ribosome binding to antibiotics and crude reaction screening.

Much focus will be given to assurance of data and sample quality and reliable interpretation of the results with the talks on *"How to Get Binding Parameters and Know Whether They Are Meaningful"* by Niek Buurma, Cardiff University, UK and on *"Quality Control of Purified Proteins, One of the Keys to Success"* by Bertrand Raynal, Institut Pasteur, Paris, France. We will also be presented with the results of a case study within COST action ARBRE-MOBIEU on ITC test reactions and data analysis.

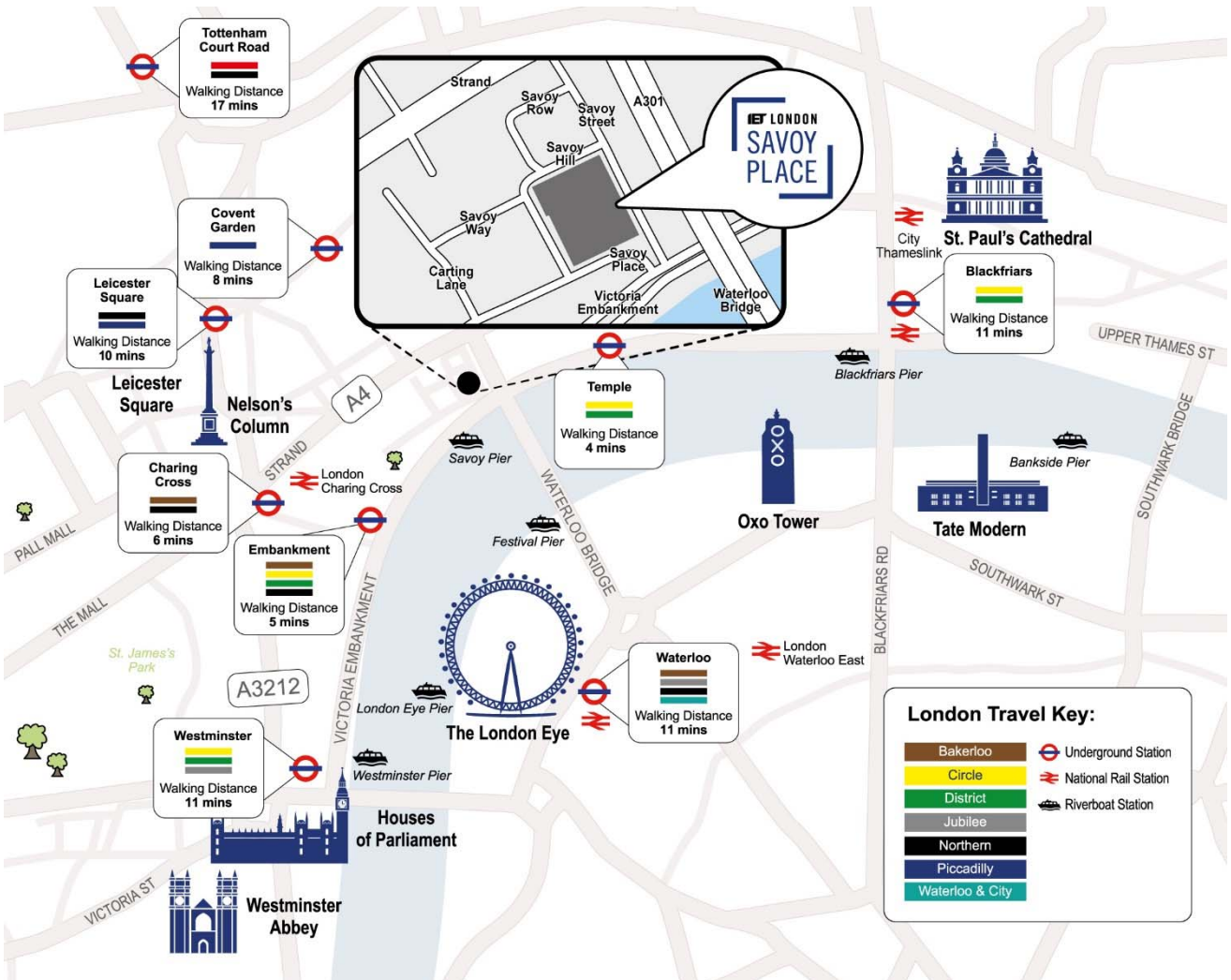
Five interactive workshops on Day 1 of the meeting will offer opportunity for learning and interaction with advanced users of biophysical techniques and Malvern Panalytical experts.

# Location

## IET LONDON : SAVOY PLACE

2 Savoy Place  
London  
WC2R 0BL  
+44 (0)20 3813 3482

# Map



<https://savoyplace.theiet.org/about/travel-and-accommodation/>

## By London Underground

### Covent Garden | Piccadilly Line

- ✓ Leave Covent Garden underground station and head south towards Covent Garden Piazza.
- ✓ Go through the Piazza and head down to The Strand via Southampton Street.
- ✓ On reaching The Strand turn left and head eastwards, turning right into Savoy Street.
- ✓ Head down to the bottom of Savoy Street and turn right at bottom, directly into Savoy Place.
- ✓ First venue on your right on the corner of the street.

### Embankment | Northern, Bakerloo, Circle and District lines

- ✓ Leave Embankment underground station via Embankment exit to the right.
- ✓ Turn immediately left onto Victoria Embankment and follow the road along to the first left turn, before Waterloo Bridge
- ✓ IET London: Savoy Place will be on the corner.

### London Charing Cross | Northern and Bakerloo lines

- ✓ Leave Charing Cross station via the main exit into The Strand, turning right outside the station and heading in an easterly direction until you reach Savoy Street on the right. If you reach Somerset House, you have gone too far.
- ✓ Head down to the bottom of Savoy Street and turn right at bottom, directly into Savoy Place.
- ✓ First venue on your right on the corner of the street.

### Temple | Circle and District lines

- ✓ Leave Temple underground station, turning right and right again onto Victoria Embankment.
- ✓ Head westwards, passing underneath Waterloo Bridge and crossing the road,
- ✓ IET London: Savoy Place will immediately be on your right as the first building in Savoy Place.

### Westminster station | Jubilee, Circle and District lines

- ✓ Walk along the Embankment, past Embankment Station and follow directions from there (above).

### Waterloo Station | Jubilee and Northern lines

- ✓ Walking across Waterloo Bridge and down the left hand side steps down to street level. Cross the street and follow the directions above from Temple Station.

## By national Rail

### Liverpool Street station

- ✓ Seven stops on the Circle Line to Embankment station, walk two minutes from the station to the venue through the Embankment Gardens.

### Euston Station

- ✓ Five stops on the Northern Line to Embankment station, walk two minutes from the station to the venue through the Embankment Gardens.

### King's Cross station

- ✓ Three stops on the Piccadilly line to Covent Garden and follow the instructions above from Covent Garden to IET London: Savoy Place.
- ✓ Alternatively, take the Piccadilly line for four stops, changing at Leicester Square to the Northern line for two stops to Embankment station, walk two minutes from the station to the venue through the Embankment Gardens.

### Victoria station

- ✓ Three stops on the Circle and District Lines to Embankment station.

### Waterloo station

- ✓ One stop on Northern or Bakerloo Line to Embankment station, or walk across Waterloo Bridge to IET London: Savoy Place.

### Walking from The Strand

- ✓ From The Savoy Hotel, head in an easterly direction until you reach Savoy Street on the right. Head down to the bottom of Savoy Street and turn right at bottom, directly into Savoy Place.
- ✓ IET London: Savoy Place is the first venue on your right on the corner of the street.

## By bike

- ✓ There is a docking station for Santander Cycles hire right outside IET London: Savoy Place on the Embankment for added convenience when cycling to or from an event with us.

## By river boat

- ✓ River bus services run every 20 minutes during peak hours. You can use your Oyster card and every customer is guaranteed a seat.
- ✓ Alight at Embankment Pier for a very short walk up to the venue.

## By buses

- ✓ The main bus service for the Victoria Embankment is the **388**, although there are many other available bus routes on The Strand and over Waterloo Bridge which will bring you within short walking distance of the venue.

## By road transport

- ✓ The easiest option is to type in our postcode '**WC2R 0BL**' into a route finder or satnav, which will direct you straight to IET London: Savoy Place.
- ✓ There is limited parking outside of IET London: Savoy Place, behind the Embankment Gardens on metered bays.
- ✓ Alternatively, there is an NCP car park just two minutes drive from the venue in Drury Lane, Covent Garden.
- ✓ Please note that IET London: Savoy Place is located within the congestion charge zone.

## From the airports

### Gatwick

- ✓ Gatwick express (30 min) to Victoria Station then three stops on the Circle or District line to Embankment Station.

### Heathrow

- ✓ Direct train to Covent Garden via the Piccadilly line, then follow directions from Covent Garden (above).

### Stansted

- ✓ Stansted express to Liverpool Street station then seven stops on the Circle Line to Embankment station.

### City

- ✓ DLR to Bank station then walk through to Monument Station.
- ✓ It's then five stops on the Circle or District Line to Embankment Station.

# Agenda – Morning block

Thursday, September 13<sup>th</sup>

## Morning block

08:00	Registration
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## Morning workshop

08:30	<i>Data quality assurance through sample quality control</i> Led by <b>Stephan Uebel</b> (Max Planck Institute, Munich) & <b>Natalia Markova</b> (Malvern Panalytical)
09:00	<i>Profiling and optimization of colloidal stability by measurements of molecular size, concentration and aggregation propensity by orthogonal and complementary techniques with special focus on unique capabilities of the novel Zetasizer Pro and Ultra DLS systems</i> Led by <b>Hanna Jankevics</b> (Malvern Panalytical)
09:30	<i>Stability beyond T<sub>m</sub>. DSC focus</i> Led by <b>Margarida Bastos</b> (Porto University, Portugal) & <b>Natalia Markova</b> (Malvern Panalytical)  <i>For Information on the DSC basics see webinars, videos and white papers on Malvern Panalytical website : <a href="https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-dsc-range">https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-dsc-range</a></i>
10:00	Coffee break

10:30	<i>Interaction analysis beyond K<sub>D</sub>. ITC focus</i> Led by <b>Peter Gimeson</b> (Malvern Panalytical)  <i>For information on the ITC basics see webinars, videos and white papers on Malvern Panalytical website : <a href="https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-itc-range">https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-itc-range</a></i>
11 :00	<i>Quality assurance in analysis of complex ITC data</i> Led by <b>Adrian Velazquez-Campoy</b> (Zaragoza University), <b>Niek Buurma</b> (Cardiff University) & <b>Eva Munoz</b> (Santiago de Compostela University)
11 :30	Ask an expert. Topics to be defined by users
12 :15	Lunch on your own

# Agenda – Afternoon block

Thursday, September 13<sup>th</sup>

12:30	Registration
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## Afternoon workshop

13:00	<i>Data quality assurance through sample quality control</i> Led by <b>Stephan Uebel</b> (Max Planck Institute, Munich) and Natalia Markova (Malvern Panalytical).
13:30	<i>Profiling and optimization of colloidal stability by measurements of molecular size, concentration and aggregation propensity by orthogonal and complementary techniques with special focus on unique capabilities of the novel Zetasizer Pro and Ultra DLS systems</i> Led by <b>Hanna Jankevics</b> (Malvern Panalytical)
14:00	<i>Stability beyond T<sub>m</sub>. DSC focus</i> Led by <b>Margarida Bastos</b> (Porto University, Portugal) & <b>Natalia Markova</b> (Malvern Panalytical)  <i>For Information on the DSC basics see webinars, videos and white papers on Malvern Panalytical website : <a href="https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-dsc-range">https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-dsc-range</a></i>
14:30	Coffee break

15:00	<i>Interaction analysis beyond K<sub>D</sub>. ITC focus</i> Led by <b>Peter Gimeson</b> (Malvern Panalytical)  <i>For information on the ITC basics see webinars, videos and white papers on Malvern Panalytical website : <a href="https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-itc-range">https://www.malvernpanalytical.com/en/products/product-range/microcal-range/microcal-itc-range</a></i>
15 :30	<i>Analysis of complex ITC data with quality assurance in focus</i> Led by <b>Adrian Velazquez-Campoy</b> (Zaragoza University), <b>Niek Buurma</b> (Cardiff University) & <b>Eva Munoz</b> (Santiago de Compostela University)
16 :00	Ask an expert. Topics to be defined by users

16 :45	End of the first day
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# Agenda – Morning session

Friday, September 14<sup>th</sup>

## Meeting opens

08:00	<b>Registration.</b> Time to put up the posters from 8.00.
08 :30	Opening remarks

## Morning session 1 - Focus on ITC - Including short presentations of five selected posters

Chaired by *Mikael Akke, Lund University, Sweden*

08:40	<i>ITC in Drug Discovery</i> Geoff Holdgate, AstraZeneca, Cambridge, UK
09:00	<i>Crude reaction screening: <math>K_A</math>, <math>k_d</math> and more</i> James Murray, Vernalis, Cambridge, UK
09:10	<i>ITC studies of the ribosome binding to antibiotics and viral RNAs</i> Eric Ennifar, CNRS, Strasbourg University, France
09 :40	<b>Panel discussion 1. ITC in focus</b> Led by the speakers of the session
10 :10	<b>Five flash poster presentations</b>
10:25	Coffee break and <b>Posters session</b>

## Morning Session 2 - Focus on DSC

Chaired by *Michaela Wimmerova, CEITEC, Masaryk University, Czech Republic*

10:55	<i>DSC - a valuable tool in the development of proteins as compounds for diagnostic assays</i> Thomas Meier, Roche Diagnostics, Penzberg, Germany
11 :15	<i>Using DSC in Stabilization of the Fc Domain of IgG1 Antibody by Point Mutations</i> Marina Kasimova, Symphogen A/S, Copenhagen, Denmark
11 :35	<i>DSC under pressure, addressing protein systems volumetrically</i> Mariano Dellarole, Institut Pasteur, Paris, France
11 :55	Peng Ke. MedImmune, Cambridge, UK
12 :15	<b>Panel discussion 2. DSC beyond <math>T_m</math></b> Led by the speakers of the session and Natalia Markova
12 :45	<b>Lunch and Posters session</b>

## Agenda – Afternoon session

Friday, September 14<sup>th</sup>

### Afternoon session 1 - Data and data analysis quality in focus (13:45-15:05)

Chaired by *Stephan Uebel*, Max Planck Institute, Munich, Germany

13:45	<i>Quality Control of Purified Proteins, One of the Key to Success</i> <i>Bertrand Raynal, Institut Pasteur, Paris, France</i>
14 :05	<i>Analysis of ITC data for complex coupled equilibria – how to get binding parameters and know whether they are meaningful</i> <i>Niek Buurma, Cardiff University, UK</i>
14 :25	<i>Anders Dybdal Nielsen, Novo Nordisk, Denmark</i>
14 :45	Panel discussion 3. Data quality in focus <i>Led by speakers of the session and Stephan Uebel (Max Planck Institute, Munich, Germany).</i>
15 :05	Coffee break and Posters session

### Afternoon session 2 - Developments in the field of calorimetry (15:35-17:30)

Chaired by *Eric Ennifar*, CNRS, Strasbourg University, France

15:35	<i>ITC test reactions and data analysis - a case study within COST action ARBRE-MOBIEU</i> <i>Margarida Bastos, Porto University, Portugal</i>
15 :55	<i>Isothermal Titration Calorimetry to Determine Kinetic Parameters of Enzymatic Reactions in Solutions Mimicking Cellular Environments</i> <i>Ksenia Maximova, Warsaw University, Poland</i>
16 :15	<i>ITC Study for the Quantitative Thermodynamic and Kinetic Characterization of Synergistic Effects. The Case of Human hnRNP E1 Binding to Oligonucleotide Targets with Poly(C) Binding Motifs</i> <i>Eva Munoz, AFFINImeter, Santiago de Compostela, Spain</i>
16 :40	Panel discussion 4. Analysis of complex ITC data <i>Led by speakers of the session, Niek Buurma (Cardiff University, UK) &amp; Adrian Velazquez-Campoy (Zaragoza University, Spain)</i>
17 :10	Closing remarks
17 :20	End of the meeting

## Speakers – Oral Presentation

Margarida BASTOS	Porto University	Portugal	Sept. 13 <sup>th</sup> - 09:30-10:00 Sept. 13 <sup>th</sup> - 14:00-14:30 Sept. 14 <sup>th</sup> - 15:35-15:55
Niek BUURMA	Cardiff University	UK	Sept. 13 <sup>th</sup> - 11:00-11:30 Sept. 13 <sup>th</sup> - 15:30-16:00 Sept. 14 <sup>th</sup> - 14:05-14:25 Sept. 14 <sup>th</sup> - 16:40-17:10
Mariano DELLAROLE	Institut Pasteur, Paris	France	Sept. 14 <sup>th</sup> - 11:35-11:55
Anders DYBDAL NIELSEN	Novo Nordisk	Denmark	Sept. 14 <sup>th</sup> - 14:25-14:45
Eric ENNIFAR	Strasbourg University	France	Sept. 14 <sup>th</sup> - 09:20-09:40
Geoff HOLDGATE	AstraZeneca, Cambridge	UK	Sept. 14 <sup>th</sup> - 08:40-09:00
Marina KASIMOVA	Symphogen A/S, Copenhagen	Denmark	Sept. 14 <sup>th</sup> - 11:15 -11:35
Peng KE	MedImmune, Cambridge	UK	Sept. 14 <sup>th</sup> - 11:55-12:15
Ksenia MAXIMOVA	Warsaw University	Poland	Sept. 14 <sup>th</sup> - 15:55-16:15
Thomas MEIER	Roche Diagnostics, Penzberg	Germany	Sept. 14 <sup>th</sup> - 10:55-11:15
Eva MUNOZ	AFFINImeter, Santiago de Compostela	Spain	Sept. 13 <sup>th</sup> - 11:00-11:30 Sept. 13 <sup>th</sup> - 15:30-16:00 Sept. 14 <sup>th</sup> - 16:15-16:40
James MURRAY	Vernalis, Cambridge	UK	Sept. 14 <sup>th</sup> - 09:00-09:20
Bertrand RAYNAL	Institut Pasteur, Paris	France	Sept. 14 <sup>th</sup> - 13:45-14:05
Stephan UEBEL	Max Planck Institute, Munich	Germany	Sept. 13 <sup>th</sup> - 08:30-09:00 Sept. 13 <sup>th</sup> - 13:00-13:30 Sept. 14 <sup>th</sup> - 14.45-15:05
Adrian VELAZQUEZ CAMPOY	Zaragoza University	Spain	Sept. 13 <sup>th</sup> - 11:00-11:30 Sept. 13 <sup>th</sup> - 15:30-16:00 Sept. 14 <sup>th</sup> - 16:40-17:10

On behalf of Malvern Panalytical:

Peter GIMESON	Sept. 13 <sup>th</sup> - 10:30-11:00 Sept. 13 <sup>th</sup> - 15:00-15:30
Hanna JANKEVICS	Sept. 13 <sup>th</sup> - 09:00-09:30 Sept. 13 <sup>th</sup> - 13:30-14:00
Natalia MARKOVA	Sept. 13 <sup>th</sup> - 08:30-09:00 Sept. 13 <sup>th</sup> - 09:30-10:00 Sept. 13 <sup>th</sup> - 13:00-13:30 Sept. 13 <sup>th</sup> - 14:00-14:30

## Speakers – Flash Poster Presentation


## Chairs for the sessions

Mikael AKKE	Lund University	Sweden	Sept. 14 <sup>th</sup> – Morning – Session 1
Eric ENNIFAR	Strasbourg University	France	Sept. 14 <sup>th</sup> – Afternoon – Session 2
Stephan UEBEL	Max Planck Institute	Munich	Sept. 14 <sup>th</sup> – Afternoon – Session 1
Michaela WIMMEROVA	CEITEC, Masaryk University	Czech Republic	Sept. 14 <sup>th</sup> – Morning – Session 2

## Scientific Committee

Mikael AKKE	Lund University	Sweden
Margarida BASTOS	Porto University	Portugal
Niek BUURMA	Cardiff University	UK
Eric ENNIFAR	CNRS, Strasbourg University	France
Geoff HOLDGATE	AstraZeneca, Cambridge	UK
Marina KASIMOVA	Symphogen A/S, Copenhagen	Denmark
James MURRAY	Vernalis, Cambridge	UK
Shahid UDDIN	MedImmune, Cambridge	UK
Stephan UEBEL	Max Planck Institute, Munich	Germany
Adrian VELAZQUEZ CAMPOY	Zaragoza University	Spain
Michaela WIMMEROVA	CEITEC, Masaryk University	Czech Republic

On behalf of Malvern Panalytical / MicroCal:

Natalia MARKOVA	Malvern Panalytical, UK	UK
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