EURO
The Association of European Operational Research Societies

EURO 2016

POZNAŃ 3-6 07 2016

# CONFERENCE HANDBOOK

## 28th European Conference on Operational Research

EURO 2016 POZNAŃ 3-6 07 2016

# CONFERENCE VENUE

Poznań International Fair | Railway station | Old Market | Poznan University od Technology

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| Poznan University of Technology, Poznań, Poland | |
| July 3-6, 2016 | |

## Contact information

| | | | |
|---|---|---|---|
| ► E-mail | euro2016@mtp.pl | ► Facebook | facebook.com/EURO2016Poznan |
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## Conference handbook


| | |
|---|---|
| Editor | Miłosz Kadziński (Poznan University of Technology) |
| Cover design | Karolina Makowska (Poznań Congress Center) |
| Acknowledgments | Stowarzyszenie Poznańska Lokalna Organizacja Turystyczna (PLOT) |
| | Sarah Fores (EURO Manager) |
| | Bernard Fortz (EURO Webmaster) |

## EURO-k conferences

The EURO-k Conferences are intended to be forums for communication and cooperation among European Operational Researchers. Being broadly oriented, they are intended to be international meetings of Operational Researchers who are active in all the diverse special areas of Operational Research and to the free exchange of knowledge, experience, new ideas and promising results relating to the research and practice of OR. In the 40-year history of the EURO-k series, the conferences have been held in 18 different countries. In 2016 - for this first time - it is organised in Poland.

## EURO Conference History

| k | Year | City | Country |
|---|---|---|---|
| 1 | 1975 | Brussels | Belgium |
| 2 | 1976 | Stockholm | Sweden |
| 3 | 1979 | Amsterdam | The Netherlands |
| 4 | 1980 | Cambridge | United Kingdom |
| 5 | 1982 | Lausanne | Switzerland |
| 6 | 1983 | Vienna | Austria |
| 7 | 1985 | Bologna | Italy |
| 8 | 1986 | Lisbon | Portugal |
| 9 | 1988 | Paris | France |
| 10 | 1989 | Belgrade | Yugoslavia |
| 11 | 1991 | Aachen | Germany |
| 12 | 1992 | Helsinki | Finland |
| 13 | 1994 | Glasgow | United Kingdom |
| 14 | 1995 | Jerusalem | Israel |
| 15 | 1997 | Barcelona | Spain |
| 16 | 1998 | Brussels | Belgium |
| 17 | 2000 | Budapest | Hungary |
| 18 | 2001 | Rotterdam | The Netherlands |
| 19 | 2003 | Istanbul | Turkey |
| 20 | 2004 | Rhodes | Greece |
| 21 | 2006 | Reykjavik | Iceland |
| 22 | 2007 | Prague | Czech Republic |
| 23 | 2009 | Bonn | Germany |
| 24 | 2010 | Lisbon | Portugal |
| 25 | 2012 | Vilnius | Lithuania |
| 26 | 2013 | Rome | Italy |
| 27 | 2015 | Glasgow | United Kingdom |
| **28** | **2016** | **Poznań** | **Poland** |
| 29 | 2018 | Valencia | Spain |

## EURO 2016 - 28th European Conference on Operational Research

EURO 2016 is the premier European conference for Operational Research and Management Science organized by EURO – the European Association of Operational Research Societies and the Polish Operational and Systems Research Society at Poznan University of Technology.

Poznan University of Technology - being one of the leading European centres in decision analysis, optimization, project management, and scheduling - is a perfect place to share cutting edge ideas from the OR/MS community. The main conference venue is the university campus at the riverside, located close to the historical centre of Poznań.

The Program and Organizing Committees, chaired by Daniele Vigo and Joanna Józefowska, respectively, have prepared a high quality scientific program and an exciting social program.

All conference attendees will have an excellent opportunity to explore Poznań. The city offers a wide range of historical and leisure spots to visit, including the renaissance Old Market Square, the enchantingly located Cathedral, former Imperial Castle, Malta lake, and a set of rearranged post-industrial venues.

# ► WELCOME


## Elena Fernández

**President of EURO**

Department of Statistics and Operations Research
Universitat Politecnica de Catalunya-BcnTech

e-mail: **e.fernandez@upc.edu**


### Welcome to the 28th European Conference on Operational Research!

EURO – The Association of European Operational Research Societies was created in 1975 in conjunction with the first EURO conference, which took place in Brussels.

Since its creation EURO has voyaged a long way favoring collaboration between its member societies, encouraging the activities of its working groups, supporting publications, and trying to develop appropriate instruments towards its goal of promoting Operational Research. EURO conferences are indeed among the most important such instruments. They provide opportunities for researchers and practitioners to get together, exchange ideas and discuss current developments in, and advances of, our profession. The EURO XXVIII Conference in Poznań offers an excellent setting for the above and perfectly illustrates the increasing interest that our conferences raise in our community.

All this would not have been possible without the great effort of a large team of dedicated people. The Programme Committee, chaired by Daniele Vigo, and the Organizing Committee, chaired by Joanna Józefowska, have worked hard in order to offer all of us an outstanding conference. The rich scientific programme proposed by the Programme Committee includes a wide range of areas and covers numerous topics both from the methodological and the application point of view. The exciting social programme designed by the Organizing Committee offers a great environment for discussion with old and new friends in the most pleasant atmosphere.

In the name of EURO, I would like to sincerely thank the Programme and Organizing Committee Chairs, as well as their teams for their generous efforts in making this meeting such a big success. My gratitude also goes to the numerous stream organizers who have provided their support in designing the programme. I finally want to thank you all for participating in the EURO XXVIII conference and so contributing to the progress of our wide EURO community.

I wish all of you a productive conference and a very pleasant stay in Poznań.

**Elena Fernández**
President of EURO

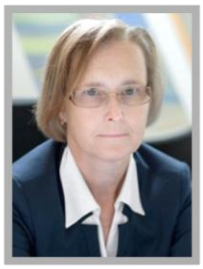
# ▶ WELCOME


## Daniele Vigo

**Chair of the EURO 2016 Programme Committee**

Department of Electrical, Electronic and Information Engineering
University of Bologna

e-mail: **daniele.vigo@unibo.it**


## Joanna Józefowska

**Chair of the EURO 2016 Organising Committee**

Institute of Computing Science, Faculty of Computing
Poznan University of Technology

e-mail: **joanna.jozefowska@cs.put.poznan.pl**


**Dear EURO Conference Participants,**

We are pleased to warmly welcome you to the XXVIII EURO Conference, which this year is held in Poznan – the cradle of Poland in the year of the 1050th anniversary of Poland's baptism.

The start of EURO conferences dates back in 1975, when the first meeting took place in Brussels. Since then, 27 conferences were organized in many of the largest European towns and cities and attracted researchers not only from Europe but in large numbers from all continents, making it one of the most important and largest scientific events for the OR community.

This year, for the first time the EURO Conference has come to Poland and it is organized at the Poznan University of Technology, thanks to the reputation of its large OR group successfully led for more than 40 years by Jan Węglarz.

During the years the EURO conference has become a complex and rich scientific event with a large participation and the Poznan conference is not an exception. Thanks to the enthusiastic and competent work of a large number of persons who served as Stream and Session organizers, we received more than 2000 abstracts, more than one third of which are from outside Europe.

We are grateful to the prestigious plenary speakers and, in particular, to Robert Aumann, the 2005 Nobel Memorial Prize laureate in Economic Sciences, for having accepted the invitation to stay with us over the next three days. We are also extremely happy to welcome to Poznan the 11 esteemed keynote and tutorial speakers who will illustrate the state of the art in a wide range of OR fields. Other important events are represented by the workshops, the EURO prize sessions and by the more than 450 sessions representing the scientific presentations of the delegates.

Also this year the *Making an Impact* (MAI) initiative, launched last year in Glasgow, will be present at the EURO conference with several dedicated activities and workshops as well as links to practice-based activities in other streams. Visit the MAI stand in Building CW, or the relevant section of the EURO2016 website, or look at the special *MAI timetable* in your conference pack, to find out more about the activities aimed at supporting OR practice and bringing academics and practitioners together to find mutual inspiration and start fruitful collaborations.

We wish for you to spend the next days attending inspiring presentations, engaging in fruitful discussions, refreshing old and establishing new contacts with colleagues and friends, and discovering the beautiful town of Poznan.

**Daniele Vigo**
EURO 2016 PC Chair

**Joanna Józefowska**
EURO 2016 OC Chair

## Programme Committee

**Daniele Vigo**
*Chair of the EURO 2016 Programme Committee*
University of Bologna, Italy

**Ivana Ljubic**
ESSEC Business School, France

**Tolga Bektas**
University of Southampton, United Kingdom

**Marco Lübbecke**
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**Sally Brailsford**
*EURO Vice President I (2015)*
University of Southampton, United Kingdom

**Inês Marques**
University of Lisbon, Portugal

**Erik Demeulemeester**
KU Leuven, Belgium

**Mustafa Pinar**
Bilkent University, Turkey

**Wout Dullaert**
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Technical University of Denmark, Denmark

**Salvatore Greco**
University of Catania, Italy

**Dolores Romero Morales**
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**Joanna Józefowska**
*Chair of the EURO 2016 Organising Committee*
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**Albert Wagelmans**
*EURO Vice President I (2016)*
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**Ruth Kaufman**
London School of Economics, United Kingdom

**Gerhard-Wilhelm Weber**
Middle East Technical University, Turkey

**Ekaterina Kostina**
University of Heidelberg, Germany

## Organising Committee

**Joanna Józefowska**
*Chair of the EURO 2016 Organising Committee*
Poznan University of Technology, Poland

**Jan Owsiński**
*General Secretary of the Polish Operational and Systems Research Society*

**Jacek Błażewicz**
Poznan University of Technology, Poland

**Grzegorz Pawlak**
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**Sally Brailsford**
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**Rafał Różycki**
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**Mateusz Cicheński**
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**Roman Słowiński**
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**Sarah Fores**
*EURO Manager*

**Maciej Stroiński**
Poznan Supercomputing and Networking Center, Poland

**Janusz Kacprzyk**
*President of the Polish Operational and Systems Research Society*

**Jan Węglarz**
Poznan University of Technology, Poland

**Miłosz Kadziński**
Poznan University of Technology, Poland

**Daniele Vigo**
*Chair of the EURO 2016 Programme Committee*
University of Bologna, Italy

# ► ORGANISATION SUPPORT

## Poznan University of Technology
Politechnika Poznańska

pl. Marii Skłodowskiej-Curie 5
60-965 Poznań, Poland

*established*: 1919

*website*: www.put.poznan.pl/

*rector*: Prof. Tomasz Łodygowski

**Poznan University of Technology (PUT)** is one of the leading technical universities in Poland. With its **21 thousand students** and **12 hundred academic staff** it has become one of the most recognized landmarks of Western Poland, where education is perfectly combined with industry.

PUT grew out of the Higher State School of Mechanical Engineering which **was established in 1919**. In the first few decades, it was oriented toward mechanical, electrical, and civil engineering. Currently, ten PUT's faculties offer **study programs** conducted both in Polish and English in **27 fields** ranging from architectural design through computer science, telecommunications, and transportation to technical physics and chemical technology.

PUT has been given a very high position in the national university rankings. Over the years, the university has successfully developed **relationships with all aspects of business**, management, and new technology communities. Their encouragement supported by the advice of more than a thousand SMEs help us to adjust our educational programs. In this way, PUT's graduates can meet the high requirements of the international markets.

Although PUT has world-class achievements in chemical technologies, mechatronics, engineering, and production systems, it is very well known for its **Operations Research and Management Science group**. The group was set up around 40 years ago, and is currently established within the Faculty of Computing. It consists of about 60 researchers with its three pillars - EURO Gold Medal winners: Jacek Błażewicz**,** Roman Słowiński**,** and Jan Węglarz. The main interests of the group members is best shown by the focus of the EURO Working Groups (EWGs) they are most actively involved. These include EWGs on Multiple Criteria Decision Aiding, Combinatorial Optimization, Transportation and Project Management and Scheduling.

## EURO - The Association of European Operational Research Societies

*member societies:* 31

*established*: 1975

*website*: www.euro-online.org

*president*: Prof. Elena Fernández

**EURO** is the **Association of European Operational Research Societies**. It is a non-profit organisation, **founded in 1975** and domiciled in Switzerland. Its objective is to **promote Operational Research throughout Europe**. EURO is a regional grouping within the International Federation of Operational Research Societies (IFORS) and full membership is restricted to national societies that are members of IFORS.

EURO is regulated by a Council consisting of representatives/alternates of all its members and an Executive Committee, which constitutes its board of directors. In addition the Executive Committee and Council select an IFORS Vice-President to liaise with IFORS. EURO is supported by additional officers who have specific responsibilities and administrative roles.

The aims of EURO are the advancement of knowledge, interest and education in operational research by the exchange of information, the holding of meetings and conferences, the publication of books, papers, and journals, the awarding of prizes, and the promotion of early stage talents. Full details of EURO activities can be found at https://www.euro-online.org/.

## Polish Operational and Systems Research Society

Polskie Towarzystwo Badań Operacyjnych i Systemowych

Newelska 6
01-447 Warszawa, Poland

*website*: www.ptbois.org.pl

*established*: 1986

*president*: Prof. Janusz Kacprzyk

**Polish Operational and System Research Society** (POSRR) was **established in 1986** as an initiative of the research community active in the two closely related domains, aiming at a more effective promotion of the two domains and activation of a broader circle of specialists, especially those involved in practical work. The Society functions on the basis of a legal registration, through its statutory bodies.

The Society conducts the following kinds of activities:

- **Organisation of cyclical national conferences (BOS)** of the research and application communities from operational and system research as well as co-organisation of international and specialist conference in the subject.
- **Publications**, containing materials originating either from the BOS conferences or from other forms of activity.
- Own research, including that conducted in collaboration with other institutions. Research is usually done through **project teams** established by the Society for particular purposes. Through its broad contacts POSRR is capable of carrying out valuable work, of both fundamental and of applied nature in a variety of specific domains.
- Demonstrating to the wider community the benefits that Operational Research can bring to the society.

More details about the activities of POSRR can be found at http://www.ptbois.org.pl/.

## Poznań Supercomputing and Networking Center (PSNC)

Poznańskie Centrum Superkomputerowo-Sieciowe (PCSS)

ul. Jana Pawła II 10
61-139 Poznań
tel: (+48 61) 858-20-01
fax: (+48 61) 852-59-54

e-mail: office@man.poznan.pl
*websites*:
pcss.pl
conference4me.psnc.pl/en/

Poznań Supercomputing and Networking Center (PSNC), affiliated to the Institute of Bioorganic Chemistry of the Polish Academy of Sciences, was founded in 1993 to build and develop computer infrastructure for science and education in Poznań and in Poland. This infrastructure includes metropolitan network POZMAN, High Performance Computing (HPC) Center, as well as the national broadband network PIONIER, providing the Internet and network services on international, domestic and local levels. With the development of the computer infrastructure, PSNC has been managing research and development within the field of new generation computer networks, high performance – parallel and distributed – computations and archive systems, cloud computing and grid technologies. PSNC is working also on the themes of green ICT, future Internet technologies & ideas, network safety, innovative applications, web portals, as well as creating, storing and managing digital content. Since PSNC is a public entity, within its sphere of interests is the development of solutions for e-government, education, medicine, new media & communications.

At EURO 2016, PSNC supports the Organizing Committee in conducting online transmission of some special sessions during the conference as well as preparation of the Conference App.

## Poznań International Fair Ltd.

Międzynarodowe Targi Poznańskie (MTP)

Głogowska 14
60-734 Poznań, Poland
*website*: www.mtp.pl
www.pcc.mtp.pl

*founded*: 1921
*president*: Przemysław Trawa
*representatives*: Sabrina Żymierska
Anna Paczos

Poznań International Fair (MTP) is a **leader of the Polish exhibition industry** and the first organizer of exhibition events and fair in Central and Eastern Europe. MTP, consisting of over 70 meeting rooms, Congress Hall for up to 2000 participants and 16 exhibition halls, offers modern and versatile interiors, open space and plenty of natural light. The breakout rooms, equipped with the latest technologies and a modular system of sliding walls, allow for the organization of diverse range of events - from small business meetings for twelve people to congresses for more than twelve thousands participants.

Professional and experienced MTP team offers comprehensive organization of every event, incl. rental of the conference rooms, lighting design and sound system, catering, running the congress office, transport and accommodation. Also organizing the press conferences or the press centre, preparing all promotional materials or artistic setting are in wide range of MTP ability.

At EURO 2016, MTP are the Professional Conference Organising Company chosen by the conference Organising Committee to support the organisation and the successful running of the conference.

## Conference Sponsors

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# ► MAP OF CAMPUS

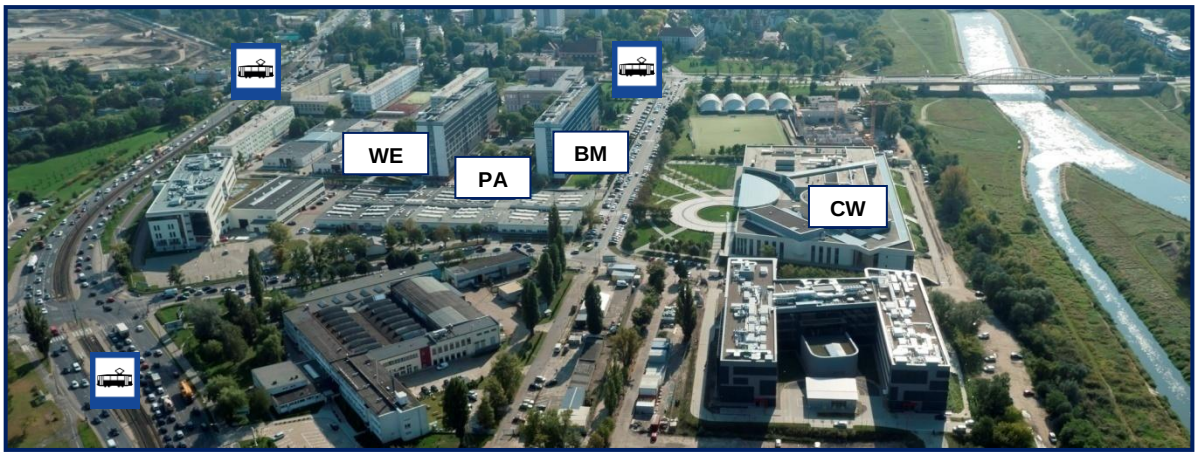
## Conference Venue

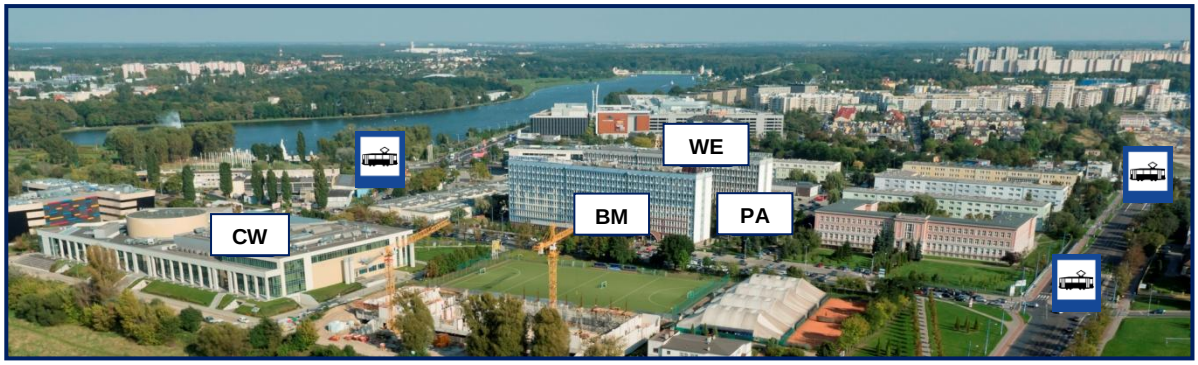
The conference will be organized at **Poznan University of Technology, Warta (Piotrowo) Campus** which is beautifully located on the riverside**,** next to a recreational area of Malta lake**,** and within a close and easy reach of the city centre**.**

The main EURO 2016 conference venue is a modern **Lecture Centre** (Centrum Wykładowe; **CW**). It has been constructed in the last 10 years in such a way that from its three passages you can see the historical symbols of Poznań: City Hall, Cathedral, and Bernardine Church.

Another three modernist buildings from the 70s (**BM, PA, and WE**) are the symbols of the campus. These have been recently renovated, normally accommodating the Faculties of Mechanical and Electrical Engineering. BM and WE are the tall buildings (BM has a characteristic large timer on its top), whereas PA is a passage between BM and WE.

## Bird's Eye-View on the Conference Venue



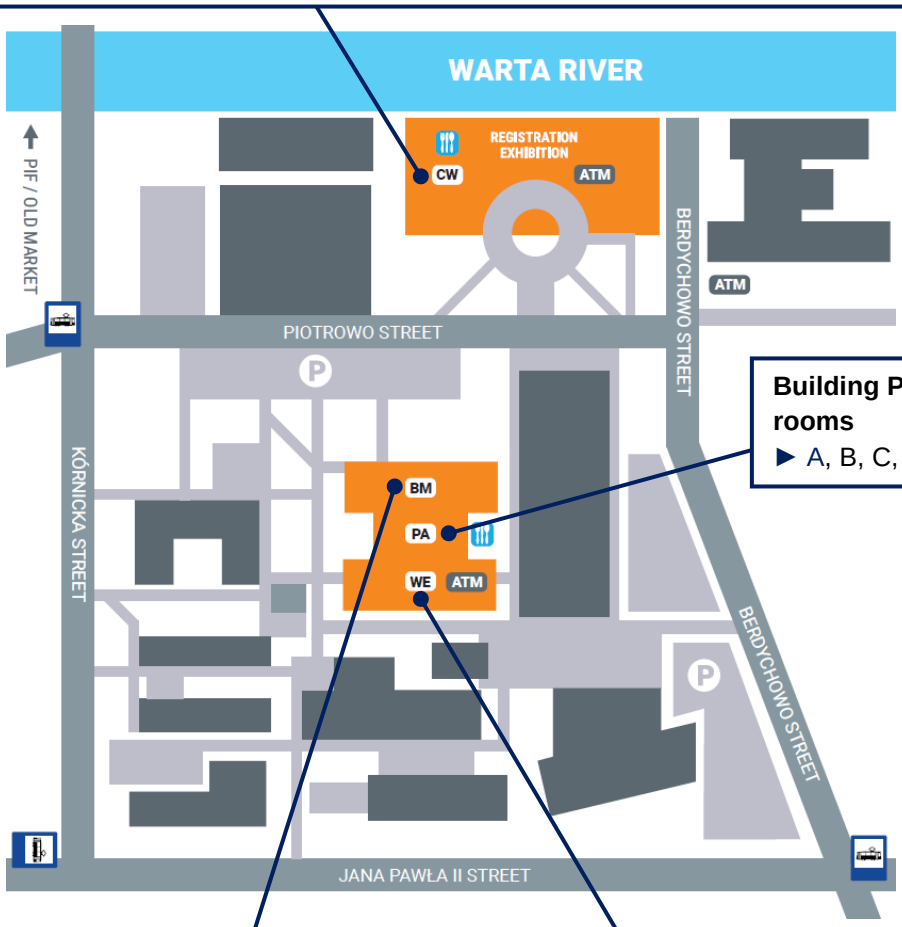
## Lecture Rooms

Technical sessions will be held in four building on campus:

- ► **CW**: **C**entrum **W**ykładowe / Lecture Centre
- ► **BM**: **B**udowa **M**aszyn / Mechanical Engineering
- ► **WE**: **W**ydział **E**lektryczny / Faculty of Electrical Engineering
- ► **PA**: **Pa**saż (Łącznik) / Passage

The room numbers indicate the building, floor and room number.

**Building CW: rooms**
- ► **ground floor**: AULA, 1, 2, 3, 4, 6, 021, 022, 023, 024, 025, 027, 028, 029, 0210
- ► **1st floor**: 7, 8, 9, 12, 13, 121, 122, 123, 124, 125, 126, 127, 128, Lobby




**Building PA, rooms**
- ► A, B, C, D

**Building BM: rooms**
- ► **ground floor**: 7, 17, 18, 19, 20
- ► **1st floor**: 109D, 109M, 110, 111, 112, 113, 116, 119
- ► **2nd floor**: 212

**Building WE: rooms**
- ► **ground floor**: 18
- ► **1st floor**: 107, 108, 115, 116, 119, 120
- ► **2nd floor**: 209

## Floor Plans for Building CW

### Building CW, ground floor


| Room | Seats |
|---|---|
| 021 | 76 |
| 022 | 54 |
| 023 | 48 |

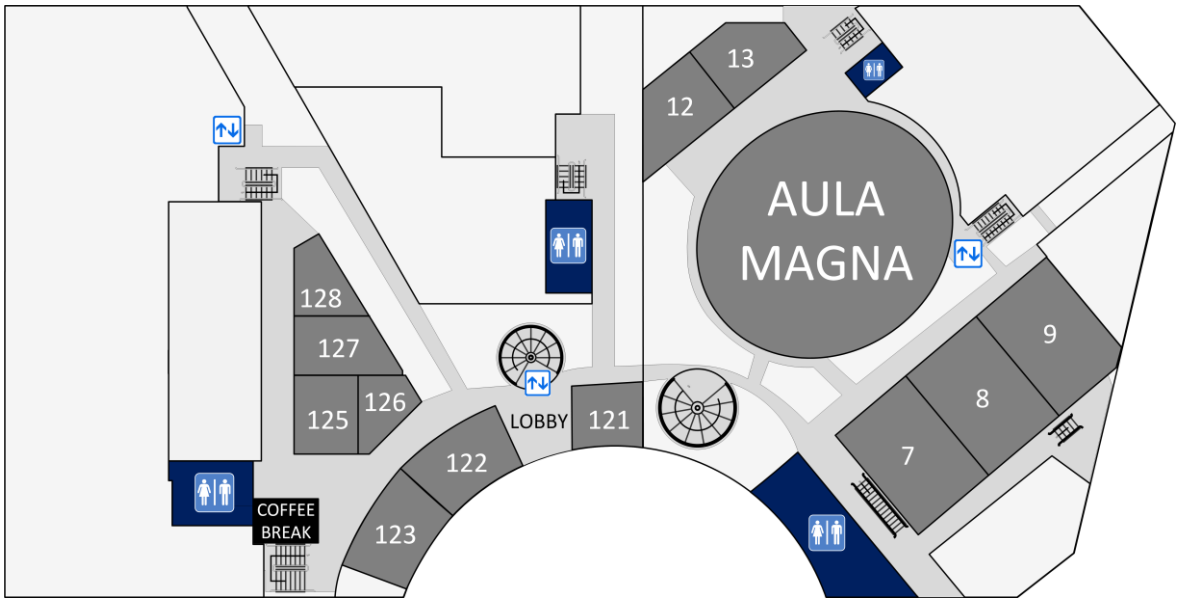
| Room | Seats |
|---|---|
| 025 | 55 |
| 027 | 64 |
| 028 | 33 |

| Room | Seats |
|---|---|
| 029 | 81 |
| 0210 | 46 |

| Room | Seats |
|---|---|
| AULA | 665 |
| 1 | 200 |
| 2 | 200 |

| Room | Seats |
|---|---|
| 3 | 200 |
| 6 | 59 |

### Building CW, 1st floor




| Room | Seats |
|---|---|
| 121 | 40 |
| 122 | 96 |
| 123 | 80 |

| Room | Seats |
|---|---|
| 125 | 60 |
| 126 | 30 |

| Room | Seats |
|---|---|
| 127 | 60 |
| 128 | 40 |

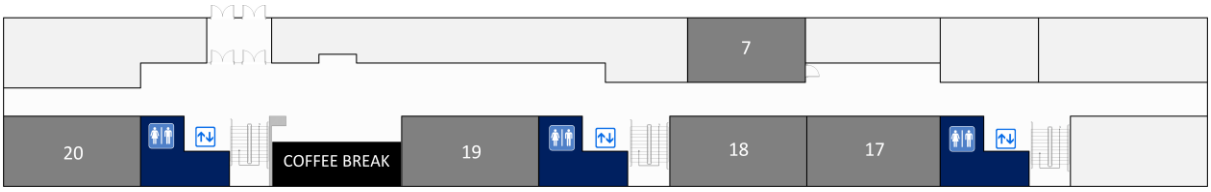
| Room | Seats |
|---|---|
| 7 | 146 |
| 8 | 146 |
| 9 | 146 |

| Room | Seats |
|---|---|
| 12 | 72 |
| 13 | 84 |

# ► MAPS OF MEETING ROOMS

## Floor Plans for Buildings BM and PA

### Building BM, ground floor




| Room | Seats |
|---|---|
| 7 | 40 |

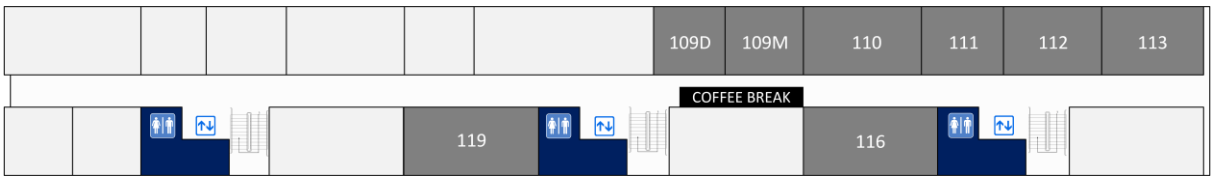
| Room | Seats |
|---|---|
| 17 | 60 |

| Room | Seats |
|---|---|
| 18 | 60 |

| Room | Seats |
|---|---|
| 19 | 60 |

| Room | Seats |
|---|---|
| 20 | 60 |

### Building BM, 1st floor




| Room | Seats |
|---|---|
| 109D | 30 |
| 113 | 40 |

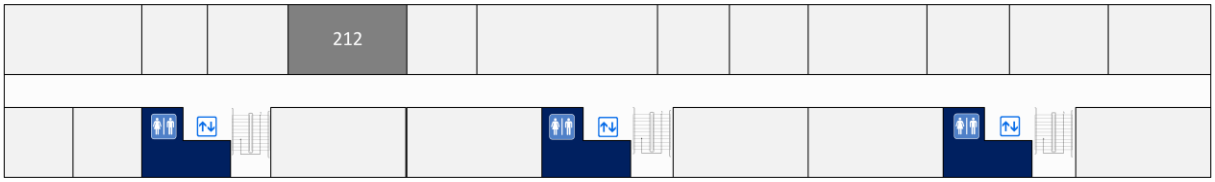
| Room | Seats |
|---|---|
| 109M | 24 |
| 116 | 60 |

| Room | Seats |
|---|---|
| 110 | 66 |
| 119 | 60 |

| Room | Seats |
|---|---|
| 111 | 35 |

| Room | Seats |
|---|---|
| 112 | 16 |

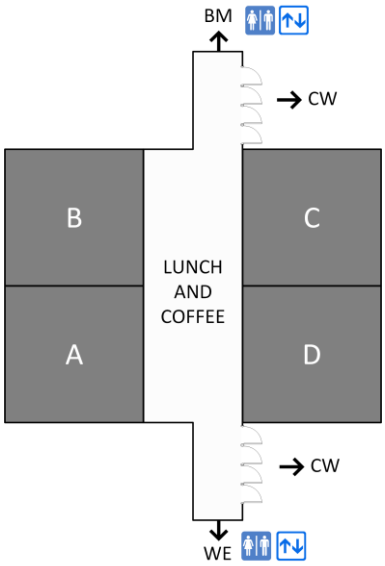
### Building BM, 2nd floor




| Room | Seats |
|---|---|
| 212 | 40 |

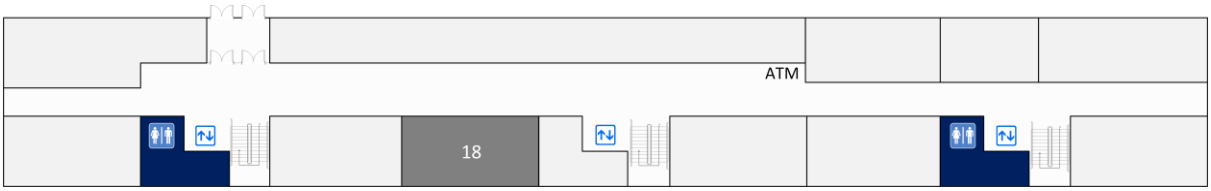
### Building PA

| Room | Seats |
|---|---|
| A | 155 |
| B | 222 |
| C | 120 |
| D | 126 |



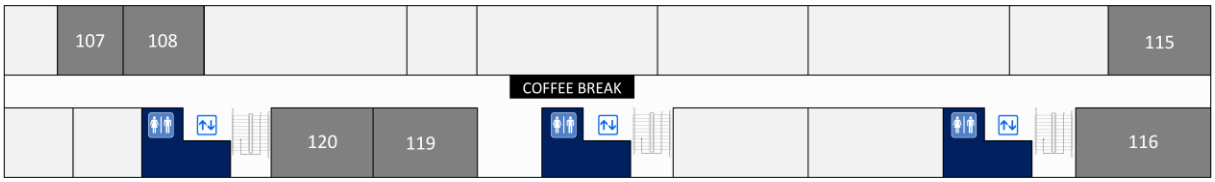
## Floor Plans for Building WE

### Building WE, ground floor




| Room | Seats |
|---|---|
| 18 | 30 |

### Building WE, 1st floor




| Room | Seats |
|---|---|
| 107 | 42 |
| 120 | 60 |

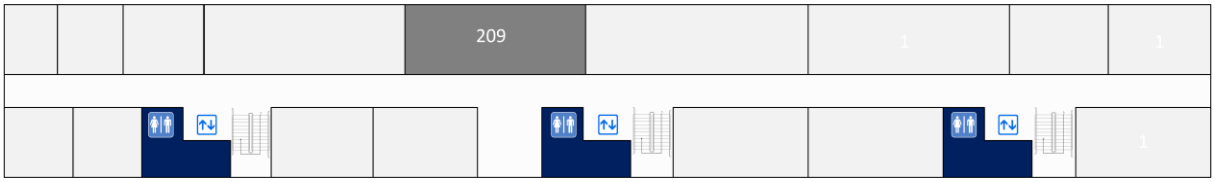
| Room | Seats |
|---|---|
| 108 | 42 |

| Room | Seats |
|---|---|
| 115 | 36 |

| Room | Seats |
|---|---|
| 116 | 60 |

| Room | Seats |
|---|---|
| 119 | 60 |

### Building WE, 2nd floor




| Room | Seats |
|---|---|
| 209 | 90 |

# ► REGISTRATION

## REGISTRATION DESKS

The registration desks will be located on the ground floor of Building CW. We recommend picking up your registration material as soon as you arrive on Sunday to avoid queues on Monday morning.

**Opening Hours of the Registration desk:**

► **Sunday 12:00 - 20:00** **Monday 07:30 - 18:00** **Tuesday 07:30 - 16:00** **Wednesday 07:30 - 15:00**

## REGISTRATION

Registration is required for all participants and exhibitors. Registered participants and exhibitors will receive a badge giving them access to the conference venue as well as participant's materials. Participants and exhibitors are requested to wear their badge visibly at all times.

**The registration fee for a full delegate covers the following:**

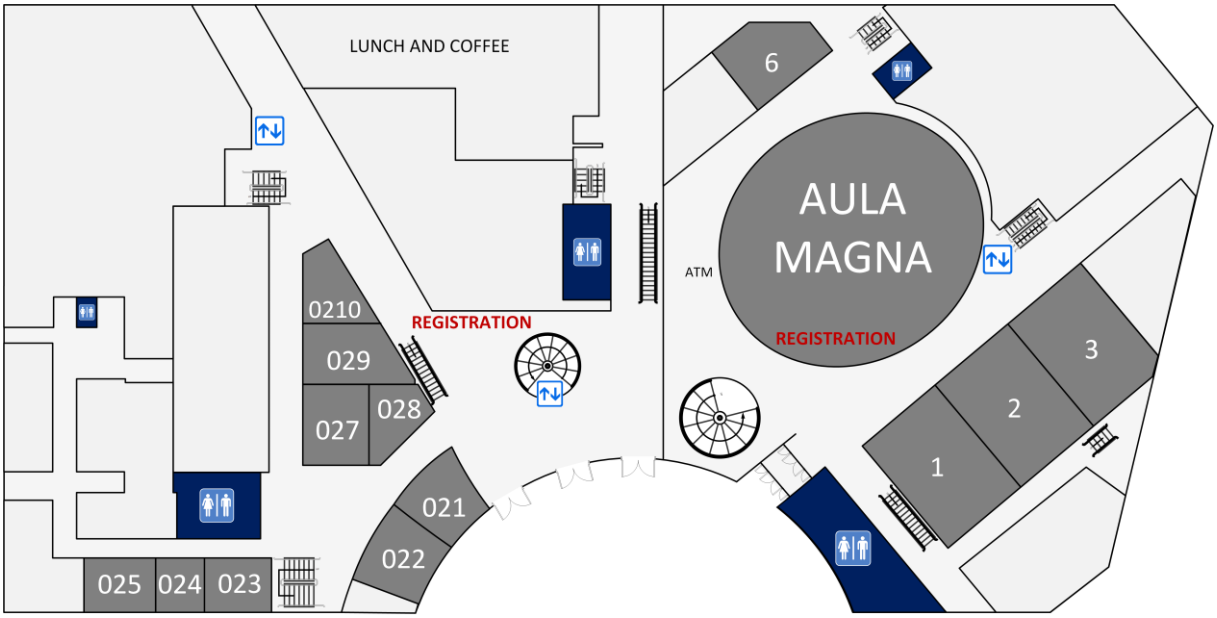
- Admission to all sessions and the exhibition
- Conference materials (in appropriate format)
- Tea, coffee and lunches throughout the conference
- Admission to the Welcome Reception on July 3, 2016 at Poznan University of Technology
- Voucher for Snack & Beer at Old Market Square on July 4, 2016
- Admission to the Farewell Party on July 6, 2016 at Poznan University of Technology
- Badge serving as a 4-day ticket (valid from Sunday to Wednesday) for public transport (tram, bus) in Poznań

The registration fee for an accompanying person covers the same except the admission to sessions and conference materials.

**Please note that the conference gala dinner is not included in the registration fee.**

## LOCATION OF THE REGISTRATION DESKS

**Building CW, ground floor** Address: Piotrowo 2, 60-965 Poznań



# ► LUNCHES AND COFFEE BREAKS

## LUNCHES

Lunch will be distributed in the conference buildings:

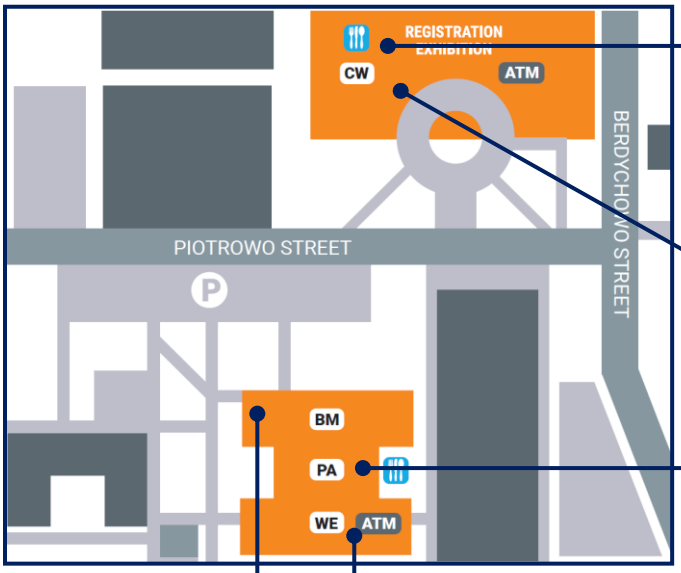
► **from Monday (July 4) to Wednesday (July 6), from 12:00 to 14:15**

You will get the lunch coupons (one per each day) with your badge.

### LOCATION OF LUNCH HUBS

**Building CW, ground floor** - for conference participants in Building CW

**Building PA** (accessible from outside as well as from the basements of Buildings BM and WE) - for conference participants in Buildings BM, WE, and PA




**LUNCH HUB** AND COFFEE BREAK **IN BUILDING CW**
ROOMS 051 and 053 (ground floor)
*lunch for conference participants in Building CW*

COFFEE BREAK IN BUILDING CW NEXT TO ROOM 123 (1st floor)
*for conference participants in Building CW*

**LUNCH HUB** AND COFFEE BREAK **IN BUILDING PA**
*lunch for conference participants in Buildings BM, PA, and WE*
If your session in scheduled in Building BM or WE, go to the central part of its basement (level -1) which links to Building PA

COFFEE BREAK IN BUILDING BM ground floor and 1st floor
*for conference participants in Building BM*

COFFEE BREAK IN BUILDING WE NEXT TO ROOM 119 (1st floor)
*for conference participants in Building WE*

## COFFEE BREAK

Coffee, tea, and cake will be distributed in the conference buildings:

► **from Monday (July 4) to Wednesday (July 6), from 10:00 to 10:30**

► **on Monday (July 4), from 16:00 to 16:30,** and **on Wednesday (July 6), from 15:30 to 16:00**

### LOCATION OF COFFEE BREAKS

**Main lunch hubs: Building CW**, ground floor (rooms 051 and 053) and **Building PA**

**Building CW**, 1st floor, next to room 123

**Building BM**, ground floor, opposite the main entrance (next to room 19), and 1st floor

**Building WE**, 1st floor, next to room 119

## EURO 2016 Schedule at a Glance

| Sunday, July 3 | Monday - Wednesday | | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|---|
| | Morning A | | MA 08:30-10:00 Parallel Sessions | TA 08:30-10:00 Parallel Sessions | WA 08:30-10:00 Parallel Sessions |
| | Refreshment Break | | 10:00-10:30 | 10:00-10:30 | 10:00-10:30 |
| **Registration Open 12:00 - 20:00** | Morning B | | MB 10:30-12:00 Parallel Sessions | TB 10:30-12:00 Parallel Sessions | WB 10:30-12:00 Parallel Sessions |
| | Lunch 12:00 -14:15 | | 12:00-12:30 | 12:00-12:30 | 12:00-12:30 |
| | | Midday C | MC 12:30-14:00 Parallel Sessions | TC 12:30-14:00 Parallel Sessions | WC 12:30-14:00 Parallel Sessions |
| **Exhibition Open 12:00 - 20:00** | | | 14:00-14:30 | 14:00-14:30 | 14:00-14:30 |
| | Afternoon D | | MD 14:30-16:00 Parallel Sessions | TD 14:30-16:00 Parallel Sessions | WD 14:30-15:30 **Plenary** |
| | Refreshment Break | | 16:00-16:30 | - | 15:30-16:00 |
| SE 16:30-18:00 **Opening Session** | Afternoon E | | ME 16:30-17:30 **Plenary** | TE 17:30-18:30 **Plenary** | WE 16:00-17:45 **Closing Session** |
| Welcome Reception | Evening | | Snack & Beer Old Market Square | Conference Dinner | Farewell Party |

## Awards and Special Presentations Schedule

| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| Morning A | | MA 08:30-10:00 **ROADEF/EURO** (CW, 123) | TA 08:30-10:00 **ROADEF/EURO** (CW, 123) | WA 08:30-10:00 |
| Morning B | | MB 10:30-12:00 **EJOR** (CW, 1) **Memorial session** (CW, 123) | TB 10:30-12:00 **EDDA** (CW, 123) | WB 10:30-12:00 |
| Midday C | | MC 12:30-14:00 **EEPA 1** (CW, 123) **EthOR** (CW, 1) | TC 12:30-14:00 | WC 12:30-14:00 |
| Afternoon D | | MD 14:30-16:00 **EEPA 2** (CW, 123) | TD 14:30-16:00 **MAI Roundtable** (CW, 123) | WD 14:30-15:30 |
| Afternoon E | SE 16:30-18:00 **Opening Session EGM, EDSM** | ME 16:30-17:30 | TE 17:30-18:30 | WE 16:00-17:45 **Closing Session** |

## Invited Speakers Schedule (Building CW, Aula)

| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| Morning A | | MA 08:30-10:00 **Marielle Christiansen** | TA 08:30-10:00 **José Fernando Oliveira** | WA 08:30-10:00 **Marc Pirlot** |
| Morning B | | MB 10:30-12:00 **Mauricio Resende** | MB 10:30-12:00 **Gerrit Timmer** | WB 10:30-12:00 **Stephen J. Wright** |
| Midday C | | MC 12:30-14:00 **Alexander Shapiro** | TB 12:30-14:00 **Emma Hart** | WB 12:30-14:00 **Giovanni Rinaldi** |
| Afternoon D | | MD 14:30-16:00 **Hans Georg Bock** | TD 14:30-16:00 **Pablo Moscato** | WD 14:30-15:30 plenary **Rolf Möhring** |
| Afternoon E | SE 16:30-18:00 **Opening Session** | ME 16:30-17:30 plenary **Dimitris Bertsimas** | TE 17:30-18:30, plenary **Robert Aumann** Poznań International Fair Earth Hall (Sala Ziemi) | WE 16:00-17:45 **Closing Session** |

# ► OPENING AND CLOSING

## Opening Session

► **Sunday, July 3, 2016: 16:30 - 18:00** **Building CW, Aula**

Chair: **Daniele Vigo,** Chair of the EURO 2016 Programme Committee

► Welcome addresses

Daniele Vigo, Chair of the EURO 2016 Programme Committee
Elena Fernández, President of EURO
Tomasz Łodygowski, Rector of Poznan University of Technology
Representative of Poznań's government

► EURO Gold Medal

Announcement of the EURO Gold Medal 2016 Laureate(s)
Presentation(s) by the EURO Gold Medal Laureate(s)

► EURO Distinguished Service Medal

Announcement of the EURO Distinguished Service Medal Award
Acceptance by the EURO Distinguished Service Medal Laureate

► Latest information and special remarks

Daniele Vigo, Chair of the EURO 2016 Programme Committee
Joanna Józefowska, Chair of the EURO 2016 Organising Committee

► Opening session will be followed by the Welcome Reception

## Closing Session

► **Wednesday, July 6, 2016: 16:00 - 17:45** **Building CW, Aula**

Chair: **Joanna Józefowska,** Chair of the EURO 2016 Organising Committee

► Welcome addresses

Joanna Józefowska, Chair of the EURO 2016 Organising Committee

► Announcement of EURO Awards

EURO Award for the Best EJOR Papers (EABEP 2016)
EURO Doctoral Dissertation Award (EDDA 2016)
EURO Excellence in Practice Award (EEPA 2016)
ROADEF/EURO Challenge 2016

► Calls for Participation in Future Activities

IFORS 2017 - Québec, Canada
EURO 2018 - Valencia, Spain

► Special Issues after EURO 2016

Daniele Vigo, Chair of the EURO 2016 Programme Committee

► Farewell addresses

Daniele Vigo, Chair of the EURO 2016 Programme Committee
Albert Wagelmans, EURO Vice-President 1
Joanna Józefowska, Chair of the EURO 2016 Organising Committee

► Closing session will be followed by the Farewell Party

# ► SESSION GUIDELINES

## Guidelines for Speakers

The location of your session is shown in the **Technical Programme** section of the Conference Handbook. You can also find it in the online programme at the **conference website**.

There are typically 4 talks in each session of 90 minutes. This gives **20 minutes for each speaker** including questions, and 2-3 minutes for switching speaker.

Time your presentation to fit within 15-18 minutes, leaving time for audience questions. Limit your presentation to key issues with a brief summary. Clearly state which problem you are solving, and why it is relevant.

**Arrive** at your session **at least 10 minutes before its scheduled start** to check in with the session chair, and to set up your presentation and test connection with the projector.

Bring **a copy** of your presentation on a **USB stick** to enable easy transfer to the computer being used for the presentation. All presentations in a session should be loaded on one computer/laptop to make handovers smoother.

If sessions do not have 4 talks the schedules talks should stick to the 20 minutes slots to allow delegates to transfer from other session if they wish. The unused slots can be used for general discussion.

If a speaker does not show up, the original time schedule should be adhered to rather than sliding every talk forward. This allows for effective session jumping.

If the scheduled chairman does not show up, the first speaker should take over the responsibility of chairing the session.

## Guidelines for Session Chairs

The role of the chair is to **ensure the smooth execution** of the session.

Ensure that the session begins and ends on time. Each session lasts 90 minutes with equal time allotted for each presentation in the session. Typically, the time per presentation should be 20 minutes, except where there are 5 talks in a session. This allows for 2-3 minutes for the changeover of the speaker.

Contact the speakers before the session, to verify who will present and to pre-empt any technical problems. **Ensure that all presentation in a session are loaded on one computer**/laptop.

Introduce each presentation (just the title of the paper and the name of the presenting author).

Ensure that **presentations are made in the order shown in the programme**. This allows for session jumping. If a speaker cancels or does not attend, the original time schedule should be adhered to rather than sliding every talk forward.

**Express visually to the speaker how many minutes (5, 1) are left**, using either your hands or prepared cards.

At the end of each presentation ask for questions and thank the speaker.

## Audio/Visual Equipment

All lecture rooms in EURO 2016 are equipped with a computer projector having a VGA connection.

**All lecture rooms in Buildings CW and PA are equipped with a computer.** The computers contain up-to-date software for the main presentation formats (PowerPoint, PDF) and have USB connections for memory cards.

**If your talk is scheduled in Building BM or WE, bring your own laptop**, or pre-arrange with other speakers in your session that at least one you brings a laptop from which you can project the talks.

Bring a power adaptor with you. We recommend that you do not attempt to run your presentation off the laptop battery. If your laptop is not compatible with EU-standard plug, please bring an electrical adaptor.

If you use an Apple product, you will probably need the appropriate adaptor for the external video output (VGA standard).

# ► PROGRAMME OVERVIEW

► **Programme overview as for June 28, 2016.**

Please consult the conference website www.euro2016.poznan.pl/schedule/ or the Conference App whether some changes have been made after this date.

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| Opening session | CW AUL | | | | | | | | | | | | | | | |
| Closing session | | | | | | | | | | | | | | | | CW AUL |
| Plenary talk Robert Aumann | | | | | | | | | | | PIF EH | | | | | |
| Plenary talk Dimitris Bertsimas | | | | | | CW AUL | | | | | | | | | | |
| Plenary talk Rolf Möhring | | | | | | | | | | | | | | | CW AUL | |
| Keynote talk Marielle Christiansen | | CW AUL | | | | | | | | | | | | | | |
| Keynote talk Mauricio Resende | | | CW AUL | | | | | | | | | | | | | |
| Keynote talk Alexander Shapiro | | | | CW AUL | | | | | | | | | | | | |
| Keynote talk Hans Georg Bock | | | | | CW AUL | | | | | | | | | | | |
| Keynote talk - José Fernando Oliveira | | | | | | | CW AUL | | | | | | | | | |
| Keynote talk Gerrit Timmer | | | | | | | | CW AUL | | | | | | | | |
| Keynote talk Emma Hart | | | | | | | | | CW AUL | | | | | | | |
| Keynote talk Pablo Moscato | | | | | | | | | | CW AUL | | | | | | |
| Keynote talk Marc Pirlot | | | | | | | | | | | | CW AUL | | | | |
| Keynote talk Stephen J. Wright | | | | | | | | | | | | | CW AUL | | | |
| Keynote talk Giovanni Rinaldi | | | | | | | | | | | | | | CW AUL | | |
| EURO Awards | | CW 123 | | CW 123 | CW 123 | | CW 123 | CW 123 | | | | | | | | |
| EURO Journals | | | CW 1 | | | | | | | | | | | | | |

# ▶ PROGRAMME OVERVIEW

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| **Area: Analytics, Data Science and Data Mining** | | | | | | | | | | | | | | | | |
| Business Analytics and Intell. Optimizat. | | | | | | | BM 109D | BM 109D | BM 109D | BM 109D | | BM 109D | BM 109D | BM 109D | | |
| Computational Statistics | | BM 113 | BM 113 | BM 113 | BM 113 | | BM 113 | BM 113 | BM 113 | | | | | | | |
| Data Science in Optimisation | | | | | | | | BM 20 | | | | | | | | |
| Information and Intelligent Systems | | | | | | | | BM 18 | BM 18 | BM 18 | | BM 18 | BM 18 | | | |
| **Area: Artificial Intelligence, Fuzzy Systems and Computing** | | | | | | | | | | | | | | | | |
| Computing | | | | | | | | | | | | CW 023 | CW 023 | CW 023 | | |
| Fuzzy Optimization - Syst., Net. and Appl. | | CW 127 | CW 127 | | | | | | | | | | | | | |
| Probabilistic Models | | | | | | | | | | | | CW 127 | CW 127 | | | |
| **Area: Continuous Optimization** | | | | | | | | | | | | | | | | |
| Convex Optimization | | PA B | PA B | PA B | PA B | | PA B | PA B | PA B | PA B | | PA B | PA B | | | |
| Convex Optimization | | | | | | | | | | | | | | PA D | | |
| Convex, Semi-Infin. and Semidef. Optim. | | | PA C | PA C | | | | | | | | | | | | |
| Global Optimization | | | | | PA C | | PA C | | | | | | | | | |
| Mathematical Programming | | PA D | PA D | PA D | PA D | | | | | | | | | | | |
| Nonsmooth Optimization | | | | | | | | | PA D | PA D | | PA D | | | | |
| Vector and Set-Valued Optimization | | | | | | | | PA C | PA C | PA C | | PA C | | | | |
| **Area: Control Theory and System Dynamics** | | | | | | | | | | | | | | | | |
| Dynamic Programming | | | | | BM 20 | | BM 20 | | | | | | | | | |
| Dynamical Models in Sustainable Devel. | | BM 109D | BM 109D | BM 109D | BM 109D | | | | | | | | | | | |
| Dynamical Syst. and Mat. Model. in OR | | BM 20 | BM 20 | BM 20 | | | | | | | | | | | | |
| Optimal Control Applications | | | | | | | | | | | | | BM 110 | BM 110 | | |
| Rec. Adv. in Dynam. of Variat. Inequal ... | | | | | | | BM 110 | BM 110 | | | | | | | | |
| Syst. Dynam. Model. and Simulation | | BM 110 | BM 110 | BM 110 | BM 110 | | | | | | | | | | | |
| **Area: Decision Analysis, Decision Support Systems, DEA and Performance Measurement** | | | | | | | | | | | | | | | | |
| DEA and Perf. Measurement | | | | | | | | | WE 18 | WE 18 | | WE 18 | WE 18 | WE 18 | | |
| Decision Support Systems | | | | | | | | WE 107 | WE 107 | WE 107 | | | | | | |
| OR in Clinical Decision Support | | | | | | | | | | | | | WE 209 | WE 209 | | |
| Spatial Risk Analysis | | | | | | | | | CW 123 | | | | | | | |

# ▶ PROGRAMME OVERVIEW

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| **Area: Discrete Optimization, Mixed Integer Linear and Nonlinear Programming** | | | | | | | | | | | | | | | | |
| Combinatorial Optimization 1 | | CW 027 | CW 027 | CW 027 | CW 027 | | CW 027 | CW 027 | CW 027 | CW 027 | | CW 027 | CW 027 | CW 027 | | |
| Combinatorial Optimization 2 | | | | | | | | | | CW 029 | | CW 029 | CW 029 | CW 029 | | |
| Discrete and Global Optimization | | | | CW 127 | CW 127 | | CW 127 | CW 127 | CW 127 | | | | | | | |
| Discrete Optimization under Uncertainty | | CW 128 | CW 128 | CW 128 | | | | | | | | | | | | |
| Mixed-Integer Linear and Nonlin. Program. | | | CW 125 | CW 125 | CW 125 | | CW 125 | CW 125 | CW 125 | | | | | | | |
| **Area: Emerging Applications of OR** | | | | | | | | | | | | | | | | |
| Algorithms and Comp. Optimization | | | | | | | | | | | | CW 7 | CW 7 | CW 7 | | |
| Custom. Based Serv. and Knowledge... | | | | | | | | | | | | CW 9 | | | | |
| Emerging Appl. in Portfolio Selection... | | | | | | | | | | CW 12 | | CW 12 | | | | |
| Env. Sustainability in Supply Chains | | | | | | | | | | CW 6 | | CW 6 | CW 6 | | | |
| Op.Res. and Comb. Opt. in Web Engin. | | | | CW 6 | CW 6 | | | | | | | | | | | |
| OR and the Arts | | CW 12 | | | | | | | | | | | | | | |
| OR in Quality Management | | CW 6 | | | | | | | | | | | | | | |
| OR Methods in Cons. Behav. Research | | | | | | | | | | | | | CW 12 | | | |
| Recent Dev. on Opt. and Res. on GT | | | | | | | CW 6 | CW 6 | CW 6 | | | | | | | |
| **Area: Energy, Environment, Natural Resources and Climate** | | | | | | | | | | | | | | | | |
| Biomass-Based Supply Chains | | WE 107 | | | | | | | | | | | | | | |
| Energy/Environment and Climate | | | | | | | | | WE 116 | WE 116 | | WE 116 | WE 116 | WE 116 | | |
| Long Term Planning in Ene., Env. and Cli. | | | | | | | | WE 120 | WE 120 | WE 120 | | WE 120 | | | | |
| Optimization in Ren. Energy Systems | | | | | WE 18 | | WE 18 | WE 18 | | | | | | | | |
| OR in Agriculture, Forestry and Fish. | | | | | | | | | | WE 209 | | WE 209 | | | | |
| Stochastic Models in Ren. Gen. Electricity | | WE 18 | WE 18 | WE 18 | | | | | | | | | | | | |
| **Area: Financial Modeling, Risk Management and Managerial Accounting** | | | | | | | | | | | | | | | | |
| Computational Methods in Finance | | | | | | | | | | | | WE 108 | WE 108 | WE 108 | | |
| Dec. Mak. Modeling and Risk Ass. in Fin. | | | | | WE 116 | | WE 116 | WE 116 | | | | | | | | |
| Financial and Comm. Modeling | | | WE 107 | WE 107 | | | | | | | | | | | | |
| Financial Eng. and Optimization | | WE 108 | WE 108 | WE 108 | WE 108 | | | | | | | | | | | |
| Financial Mathematics and OR | | WE 209 | WE 209 | WE 209 | WE 209 | | WE 209 | WE 209 | WE 209 | | | | | | | |
| Long Term Financial Decisions | | | | WE 116 | | | | | | | | | | | | |
| Numerical and Sim. Methods in Finance | | | | | | | | WE 115 | | | | | | | | |
| Op. Res. in Financial and Man. Accounting | | | | | | | | | | | | | WE 120 | WE 120 | | |
| Simulation in Man. Acc. and Man. Contr. | | | WE 116 | | | | | | | | | | | | | |

# ▶ PROGRAMME OVERVIEW

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| **Area: Game Theory and Mathematical Economics** | | | | | | | | | | | | | | | | |
| Dynamic Models in Game Theory | | | | | | | WE 120 | | | | | | | | | |
| Game Theory and Operations Manag. | | | | | | | | | WE 108 | WE 108 | | | | | | |
| Game Theory, Solutions and Str. | | WE 120 | WE 120 | WE 120 | WE 120 | | | | | | | | | | | |
| Math. Models in Macro- and Microec. | | | | | | | WE 108 | WE 108 | | | | | | | | |
| Risk, Uncertainty, and Decision | | | | | | | CW 2 | | | | | | WE 107 | | | |
| **Area: Graphs and Networks** | | | | | | | | | | | | | | | | |
| Graph Searching | | | | | | | | | CW 021 | CW 021 | | CW 021 | | | | |
| Graphs and Networks | | CW 028 | CW 028 | CW 028 | CW 028 | | CW 028 | CW 028 | | | | | | | | |
| Optimization of Gas Networks | | | CW 126 | | | | CW 126 | CW 126 | CW 126 | CW 126 | | | | | | |
| Telecommunications and Network Optim. | | | | | CW 021 | | CW 021 | CW 021 | | | | | | | | |
| **Area: Metaheuristics** | | | | | | | | | | | | | | | | |
| Metaheuristics | | | | | | | | PA A | PA A | PA A | | PA A | PA A | | | |
| **Area: Multiple Criteria Decision Making and Optimization** | | | | | | | | | | | | | | | | |
| Analytic Hierarchy Process / ANP | | | | | | | CW 1 | CW 1 | CW 1 | CW 1 | | CW 1 | CW 1 | CW 1 | | |
| Evolutionary Multiobj. Optimization | | CW 7 | CW 7 | CW 7 | | | | | | | | | | | | |
| Multiobjective Optimization | | CW 8 | CW 8 | CW 8 | CW 8 | | CW 8 | CW 8 | CW 8 | CW 8 | | CW 8 | | | | |
| Multiple Criteria Decision Aiding 1 | | CW 2 | CW 2 | CW 2 | CW 2 | | | CW 2 | CW 2 | CW 2 | | CW 2 | CW 2 | CW 2 | | |
| Multiple Criteria Decision Aiding 2 | | CW 9 | CW 9 | CW 9 | CW 9 | | | | | | | | | | | |
| Multiple Criteria Decision Analysis | | CW 13 | CW 13 | CW 13 | CW 13 | | | | | | | | | | | |
| Preference Learning | | | | | | | CW 13 | CW 13 | CW 13 | CW 13 | | CW 13 | CW 13 | | | |
| Rough Sets in Decision | | | | | | | | CW 7 | CW 7 | CW 7 | | | | | | |
| **Area: OR Education** | | | | | | | | | | | | | | | | |
| Initiatives for OR Education | | PA A | PA A | PA A | PA A | | | | | | | | | | | |
| Teaching OR/MS | | | | | | | | | | CW 9 | | | | | | |
| **Area: OR for Developing Countries and Humanitarian Applications** | | | | | | | | | | | | | | | | |
| Humanitarian Operations | | | | | | | | BM 111 | BM 111 | BM 111 | | | BM 111 | BM 111 | | |
| Optimization for Sustainable Devel. | | BM 109M | BM 109M | | | | | | | | | | | | | |
| OR for Development and Dev. Countries | | | | | | | | | | | | | BM 20 | BM 20 | | |
| OR for Sustainable Development | | BM 18 | | | | | | | | | | | | | | |

# ▶ PROGRAMME OVERVIEW

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| **Area: OR History and OR Ethics** | | | | | | | | | | | | | | | | |
| How OR found its way into Universities | | | | | | | | CW 022 | CW 022 | | | | | | | |
| Memorial Session | | | CW 123 | | | | | | | | | | | | | |
| OR and Ethics | | CW 1 | | CW 1 | CW 1 | | | | | | | | | | | |
| **Area: OR in Health, Life Sciences and Sports** | | | | | | | | | | | | | | | | |
| Comp. Biol., Bioinf. and Medicine 1 | | BM 17 | BM 17 | BM 17 | BM 17 | | BM 17 | BM 17 | BM 17 | BM 17 | | BM 17 | BM 17 | BM 17 | | |
| Comp. Biol., Bioinf. and Medicine 2 | | | | | | | | | | | | | | BM 19 | | |
| Health Care Emergency Man. | | BM 7 | BM 7 | | | | | | | | | | | | | |
| Health Care Management | | | | | BM 109M | | BM 109M | BM 109M | | | | | | | | |
| Methodology of Societal Complexity | | | | | | | | | | | | | CW 025 | CW 025 | | |
| Op. Res. for Health and Social Care | | | | | | | | | BM 110 | BM 110 | | | | | | |
| OR in Sports | | BM 111 | BM 111 | BM 111 | BM 111 | | BM 111 | | | | | | | | | |
| Scheduling in Healthcare | | | BM 18 | BM 18 | BM 18 | | BM 18 | | | | | | | | | |
| **Area: OR in Industry and Software for OR** | | | | | | | | | | | | | | | | |
| Engineering Optimization | | | | CW 126 | CW 126 | | | | | | | | | | | |
| IBM Research Applications | | | | | | | | CW 9 | CW 9 | | | | | | | |
| Mathematical Program. Software | | | | | CW 12 | | CW 12 | CW 12 | CW 12 | | | | | | | |
| Operations/Marketing Interface | | | | | | | | | | | | | | CW 13 | | |
| OR and Real Implementation | | | | | | | | | | | | | CW 9 | CW 9 | | |
| OR Applications in Industry | | | CW 12 | CW 12 | | | | | | | | | | | | |
| **Area: Practice of OR (Making an Impact)** (see also **www.euro2016.poznan.pl/making-an-impact/** for additional activities) | | | | | | | | | | | | | | | | |
| Case Studies in OR | | | | | | | | | BM 20 | BM 20 | | BM 20 | | | | |
| Defence and Security | | BM 119 | BM 119 | BM 119 | BM 119 | | | | | | | | | | | |
| Workshops and roundtable | | CW 122 | | | CW 122 | | CW 9 | | CW 122 | CW 123 | | WE 107 | CW 122 | CW 122 | | |
| Mentoring | | | | | CW 024 | | | | CW 024 | | | | CW 024 | | | |
| **Area: Production Management and Supply Chain Management** | | | | | | | | | | | | | | | | |
| Cutting and Packing | | | | | | | | | | CW 022 | | CW 022 | CW 022 | CW 022 | | |
| Demand and Supply Man. in Retail ... | | | | | | | CW 0210 | CW 0210 | CW 0210 | CW 0210 | | CW 0210 | CW 0210 | | | |
| Lot Sizing, Lot Sch. and Prod. Planning | | CW 021 | CW 021 | CW 021 | | | | | | | | | | | | |
| Production and Oper. Management | | CW 023 | CW 023 | CW 023 | CW 023 | | CW 023 | CW 023 | CW 023 | CW 023 | | | | | | |
| Supply Chain Management | | | | | | | | | | | | CW 126 | CW 126 | CW 126 | | |
| Sustainable Supply Chains | | CW 029 | CW 029 | | | | | | | | | | | | | |

# ▶ PROGRAMME OVERVIEW

| | July 3 | Monday, July 4, 2016 | | | | | Tuesday, July 5, 2016 | | | | | Wednesday, July 6, 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16:30-18:00 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 16:30-17:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-16:00 | 17:30-18:30 | 8:30-10:00 | 10:30-12:00 | 12:30-14:00 | 14:30-15:30 | 16:00-17:45 |
| **Stream** | **SA** | **MA** | **MB** | **MC** | **MD** | **ME** | **TA** | **TB** | **TC** | **TD** | **TE** | **WA** | **WB** | **WC** | **WD** | **WE** |
| **Area: Revenue Management** | | | | | | | | | | | | | | | | |
| Advances in Revenue Managem. | | | | | WE 107 | | WE 107 | | | | | | | | | |
| **Area: Routing, Location, Logistics and Transportation** | | | | | | | | | | | | | | | | |
| Green Logistics | | | | | | | | | CW 028 | CW 028 | | CW 028 | CW 028 | CW 028 | | |
| Healthcare Logistics | | | | | CW 128 | | CW 128 | CW 128 | CW 128 | CW 128 | | CW 128 | CW 128 | CW 128 | | |
| Location | | CW 022 | CW 022 | CW 022 | CW 022 | | CW 022 | | | | | | | | | |
| Maritime Transportation | | | | | | | | | | CW 125 | | CW 125 | CW 125 | CW 125 | | |
| Public Transportation | | CW 025 | CW 025 | CW 025 | CW 025 | | CW 025 | CW 025 | CW 025 | CW 025 | | CW 025 | | | | |
| Transportation | | CW 0210 | CW 0210 | CW 0210 | | | | | | | | | | | | |
| Transportation and Logistics | | | | | | | | | | | | | CW 021 | CW 021 | | |
| Vehicle Routing and Logistics Optim. 1 | | CW 3 | CW 3 | CW 3 | CW 3 | | CW 3 | CW 3 | CW 3 | CW 3 | | CW 3 | CW 3 | CW 3 | | |
| Vehicle Routing and Logistics Optim. 2 | | | | CW 029 | CW 029 | | CW 029 | CW 029 | CW 029 | | | | | | | |
| **Area: Scheduling, Timetabling and Project Management** | | | | | | | | | | | | | | | | |
| Project Management and Scheduling | | | | | | | BM 119 | BM 119 | BM 119 | BM 119 | | BM 119 | BM 119 | BM 119 | | |
| Scheduling Theory and Applications | | | | | | | | | | | | BM 116 | BM 116 | BM 116 | | |
| Scheduling with Resource Constr. | | | | | | | | | | BM 109M | | BM 109M | BM 109M | BM 109M | | |
| Scheduling, Sequen., and Applications | | | | | | | | | | BM 113 | | BM 113 | BM 113 | BM 113 | | |
| Supply Chain Sched. and Logistics | | BM 116 | BM 116 | BM 116 | BM 116 | | BM 116 | BM 116 | BM 116 | BM 116 | | | | | | |
| Timetabling | | | | | | | | | | | | BM 7 | BM 7 | BM 7 | | |
| **Area: Simulation, Stochastic and Robust Optimization** | | | | | | | | | | | | | | | | |
| Robust Optimization | | | | | | | | | WE 115 | WE 115 | | WE 115 | WE 115 | WE 115 | | |
| Stoch. Modeling and Simulation in Eng... | | WE 115 | WE 115 | WE 115 | WE 115 | | WE 115 | | | | | | | | | |
| **Area: Soft OR, Problem Structuring Methods and Behavioural OR** | | | | | | | | | | | | | | | | |
| Behavioural Oper. Research | | BM 19 | BM 19 | BM 19 | BM 19 | | BM 19 | BM 19 | BM 19 | BM 19 | | BM 19 | BM 19 | | | |
| Soft OR and Problem Structuring Methods | | | | | | | | BM 7 | BM 7 | BM 7 | | | | | | |

# ► CONFERENCE APP & WiFI

## Conference App

The Conference4me smartphone app provides you with the most comfortable tool for planning your participation in EURO 2016. Browse the complete programme directly from your phone or tablet and create your very own agenda on the fly. The app is available for Android, iOS, Windows Phone and Kindle Fire devices. To download mobile app, please visit

http://conference4me.eu/download

or type 'conference4me' in Google Play, iTunes App Store, Windows Phone Store or Amazon Appstore, or scan the below image with your mobile phone (QR-Code reader required). More information can be found here http://conference4me.eu/download

## My Program in the EURO online system

In addition to the conference app, the full programme and specific time slots in the schedule are browse-able online at:

https://www.euro-online.org/conf/euro28/program

On different places on the site, you have the possibility to add sessions to your own personalised programme. You can always access it through the **My Program** link in the left menu. Note that this feature is only available if you are logged in to EURO. You can also export your personal programme as a calendar.

## WiFi

**WiFi access is available across the campus free of charge.**

The following networks are available:

### ► eduroam

An international WiFi confederation - if you are visiting from an institution that participates in the eduroam scheme, you can connect to the "eduroam" SSID to gain basic Internet connectivity.

Your device will require to be configured in advance before you arrive. To log in you should use the credentials supplied by your home institution.

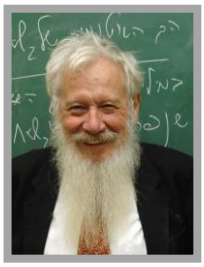
### ► PUT-events-WiFi

**To log in use a unique user account and password provided with your badge.**

# ► INVITED SPEAKERS SCHEDULE

| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| **Morning A** | | ► MA 08:30-10:00<br>**Marielle Christiansen**<br>NTNU, Norway<br>*Optimization of Maritime Transportation*<br>► Building CW, Aula | ► TA 08:30-10:00<br>**José Fernando Oliveira**<br>FEUP, Portugal<br>*Waste Minimization: the Contribution of Cutting and Packing Problems for a More Competitive and Environmentally Friendly Industry*<br>► Building CW, Aula | ► WA 08:30-10:00<br>**Marc Pirlot**<br>Un. Mons, Belgium<br>*Preference Elicitation and Learning in a Multiple Criteria Decision Analysis Perspective: Specificities and Fertilization through Inter-disciplinary Dialogue*<br>► Building CW, Aula |
| **Morning B** | | ► MB 10:30-12:00<br>**Mauricio Resende**<br>Amazon Inc, USA<br>*Logistics Optimization at Amazon: Big data & Operational Research in Action*<br>► Building CW, Aula | ► TB 10:30-12:00<br>**Gerrit Timmer**<br>ORTEC and Free University Amsterdam<br>*Making an Impact with OR; Lessons Learned from 35 Years of Experience in Applying OR*<br>► Building CW, Aula | ► WB 10:30-12:00<br>**Stephen J. Wright**<br>University of Wisconsin-Madison, USA<br>*Optimization in Data Analysis*<br>► Building CW, Aula |
| **Midday C** | | ► MC 12:30-14:00<br>**Alexander Shapiro**<br>Georgia Tech, USA<br>Risk Averse and Distributionally Robust Multistage Stochastic Optimization<br>► Building CW, Aula | ► TC 12:30-14:00<br>**Emma Hart**<br>Edinburgh Napier Un., UK<br>Lifelong Learning in Optimization<br>► Building CW, Aula | ► WC 12:30-14:00<br>**Giovanni Rinaldi**<br>IASI, Italy<br>Maximum Weight Cuts in Graphs and Extensions<br>► Building CW, Aula |
| **Afternoon D** | | ► MD 14:30-16:00<br>**Hans Georg Bock**<br>Un. Heidelberg, Germany<br>*Mixed-Integer Optimal Control - Theory, Numerical Solution and Nonlinear Model Predictive Control*<br>► Building CW, Aula | ► TD 14:30-16:00<br>**Pablo Moscato**<br>Un. Newcastle, Australia<br>*Information-based Medicine and Combinatorial Optimization: Opportunities and Challenges*<br>► Building CW, Aula | ► WD 14:30-15:30, plenary<br>**Rolf Möhring**<br>Beijing Institute for Scientific and Engineering Computing<br>*Optimizing the Kiel Canal - Integrating Dynamic Network Flows and Scheduling*<br>► Building CW, Aula |
| **Afternoon E** | ► SE 16:30-18:00<br>**Opening Session**<br>► Building CW, Aula | ► ME 16:30-17:30, plenary<br>**Dimitris Bertsimas**<br>Massachusetts Institute of Technology<br>*Machine Learning and Statistics via a Modern Optimization Lens*<br>► Building CW, Aula | ► TE 17:30-18:30, plenary<br>**Robert Aumann**<br>Hebrew University of Jerusalem<br>*Why Optimize? An Evolutionary Perspective*<br>► **Poznań International Fair, Earth Hall** | ► WE 16:00-17:45<br>**Closing Session**<br>► Building CW, Aula |

# ▶ CENTRAL PLENARY LECTURE



## Robert Aumann

Hebrew University of Jerusalem, Israel

*2005 Nobel Memorial Prize in Economic Sciences*

**Why Optimize? An Evolutionary Perspective**

▶ Tuesday, July 5, 2016, 17:30 - 18:30 *Poznań International Fair, Earth Hall*

### Biography

Robert Aumann was born in Frankfurt am Main, Germany, in 1930, to a well-to-do orthodox Jewish family. He emigrated to the United States with his family in 1938, settling in New York. In the process, his parents lost everything, but nevertheless gave their two children an excellent Jewish and general education. Aumann attended Yeshiva elementary and high schools, got a bachelor's degree from the City College of New York in 1950, and a Ph.D. in mathematics from MIT in 1955.

He joined the mathematics department at the Hebrew University of Jerusalem in 1956, and has been there ever since. In 1990, he was among the founders of the **Center for Rationality at the Hebrew University**, an interdisciplinary research center, centered on Game Theory, with members from over a dozen different departments, including Business, Economics, Psychology, Computer Science, Law, Mathematics, Ecology, Philosophy, and others.

Robert Aumann is the author of over ninety scientific papers and six books, and has held visiting positions at Princeton, Yale, Berkeley, Louvain, Stanford, Stony Brook, and NYU. He is a member of the American Academy of Arts and Sciences, the National Academy of Sciences (USA), the British Academy, and the Israel Academy of Sciences; holds honorary doctorates from the Universities of Chicago, Bonn, Louvain, City University of New York, and Bar Ilan University; and has received numerous prizes, including the **Nobel Memorial Prize in Economic Sciences for 2005**.

### Why Optimize? An Evolutionary Perspective

By the doctrine of "Survival of the Fittest", evolutionary pressures indirectly lead to optimal functioning of vital processes like nourishment and reproduction. Conscious, purposeful optimization does so directly, indeed more efficiently. The lecture conveyed during EURO 2016 will suggest that the poorly understood phenomenon of consciousness has evolved for precisely that reason - to enable efficient optimization of life processes.

### Reminder

The central plenary lecture by Robert Aumann takes place **outside the main conference venue,** in the beautiful **Earth Hall at Poznań International Fair** (Głogowska 10).

### How to reach Poznań International Fair from EURO 2016 venue?

**Take a tram!** There are two routes you may follow.

Go to **Politechnika stop**, take a tram (**line 5 or 13**), **heading to Bałtyk**. The tram will pass close to the Old Market Square, a symbol of Poznań's modernim - Okrąglak (The Round House), Kaiser's Castle, and June 1956 Events Monument. After about 12 minutes in a tram you will be there at Bałtyk, next to Poznań International Fair (Międzynarodowe Targi Poznańskie). Just take a short walk to the main entrance of PIF.

**Remark:** Please consult this option with the *JakDojade* application as this route is frequently changed, being under renovation.

Alternatively, have a short walk to **Serafitek stop**, take a tram (**line 6 or 18**), **heading to Most Dworcowy**. After about 9 minutes in a tram you will be at the entrance of Poznań International Fair.


## Dimitris Bertsimas

Sloan School of Management; Operations Research Center
Massachusetts Institute of Technology, Cambridge, USA


**Machine Learning and Statistics via a Modern Optimization Lens**

▶ **Monday, July 4, 2016, 16:30 - 17:30** *Building CW, Aula*

### Biography

Dimitris Bertsimas is currently the **Boeing Professor of Operations Research** and the co-director of the Operations Research Center at the Massachusetts Institute of Technology. He has received a BS in Electrical Engineering and Computer Science at the National Technical University of Athens, Greece in 1985, a MS in Operations Research at MIT in 1987, and a Ph.D in Applied Mathematics and Operations Research at MIT in 1988. Since 1988, he has been with the MIT faculty. Since the 1990s he has started several successful companies in the areas of financial services, asset management, health care, publishing, analytics and aviation.

His research interests include analytics, optimization and their applications in a variety of industries. He has co-authored more than 170 scientific papers and four textbooks, including the book "The Analytics Edge" published in 2016. He is former area editor in Operations Research in Financial Engineering and in Management Science in Optimization. He has supervised 57 doctoral students and he is currently supervising 16 others.

He is a member of the US National Academy of Engineering, and an INFORMS fellow. He has received **several research awards** including the Philip Morse lectureship award (2013), the William Peirskalla award for best paper in health care (2013), the best paper award in Transportation Science (2013), the Farkas prize (2008), the Erlang prize (1996), the SIAM prize in optimization (1996), the Bodossaki prize (1998), and the Presidential Young Investigator award (1991-1996).

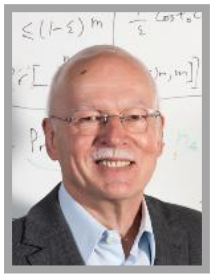
### Machine Learning and Statistics via a Modern Optimization Lens

The field of Statistics has historically been linked with Probability Theory. However, some of the central problems of classification, regression and estimation can naturally be written as optimization problems. While continuous optimization approaches has had a significant impact in Statistics, mixed integer optimization (MIO) has played a very limited role, primarily based on the belief that MIO models are computationally intractable. The period 1991-2015 has witnessed a) algorithmic advances in mixed integer optimization (MIO), which coupled with hardware improvements have resulted in an astonishing 450 billion factor speedup in solving MIO problems, b) significant advances in our ability to model and solve very high dimensional robust and convex optimization models.

We demonstrate that modern convex, robust and especially mixed integer optimization methods, when applied to a variety of classical Machine Learning (ML)/Statistics (S) problems can lead to certifiable optimal solutions for large scale instances that have often significantly improved out of sample accuracy compared to heuristic methods used in ML/S. Specifically, we report results on:

1. The classical variable selection problem in regression currently solved by Lasso heuristically.
2. We show that robustness and not sparsity is the major reason of the success of Lasso in contrast to widely held beliefs in ML/S.
3. A systematic approach to design linear and logistic regression models based on MIO.
4. Optimal trees for classification solved by CART heuristically.
5. Robust classification including robust Logistic regression, robust optimal trees and robust support vector machines.
6. Sparse matrix estimation problems: Principal Component Analysis, Factor Analysis and Covariance matrix estimation.

In all cases we demonstrate that optimal solutions to large scale instances a) can be found in seconds, b) can be certified to be optimal in minutes and c) outperform classical approaches. Most importantly, this body of work suggests that linking ML/S to modern optimization will lead to significant advantages.




## Rolf Möhring

Beijing Institute for Scientific and Engineering Computing, Beijing, China
Berlin University of Technology, Berlin, Germany


**Optimizing the Kiel Canal**
**Integrating Dynamic Network Flows and Scheduling**

▶ **Wednesday, July 6, 2016, 14:30 - 15:3** *Building CW, Aula*

### Biography

Rolf Möhring obtained his M.S. (1973) and P.h.D (1975) in Mathematics at the RWTH Aachen and is since 1987 **Professor for Applied Mathematics and Computer Science** at Berlin University of Technology, where he heads the research group "Combinatorial Optimization and Graph Algorithms" (COGA). He has held earlier positions as associate and assistant professor at the University of Bonn, the University of Hildesheim, and the RWTH Aachen. His research interests center around graph algorithms, combinatorial optimization, scheduling, logistics, and industrial applications. Part of his research has been done in DFG Research Center Matheon, where he was Scientist in Charge of Application Area "Logistics, traffic, and telecommunication networks".

He has been chair of the German Operations Research Society and the Mathematical Programming Society and has been awarded the **Scientific Award of the German Operations Research Society** and the **EURO Gold Medal of the European Association of Operational Research Societies**. Since 2014 he is a honorary professor at the Beijing University of Technology.

### Optimizing the Kiel Canal - Integrating Dynamic Network Flows and Scheduling

We introduce, discuss, and solve a hard practical optimization problem that deals with routing bidirectional traffic on the Kiel Canal, which is the world's busiest artificial waterway with more passages than the Panama and Suez Canal together. The problem arises from scarce resources (locations) at which large ships can only pass each other in opposing directions.

The lecture will illustrate recent developments in this direction on the example of the Kiel Canal problem, which was a project with the German Federal Waterways and Shipping Administration. Here certain ships must wait in sidings to let opposing traffic pass. This requires to decide on who should wait for whom (scheduling), in which siding to wait (packing) and when and how far to steer a ship between sidings (routing), and all this for online arriving ships at both sides of the canal.

This is a prototype problem for traffic management and routing in logistic systems. One wants to utilize the available street or logistic network in such a way that the network "load" is minimized or the "throughput" is maximized. The aspects of "time" and "congestion" play a crucial role in these problems and require new techniques that need to integrate dynamic network flows and scheduling.

The combination of routing and scheduling (without the packing) leads to a new class of scheduling problems dealing with scheduling bidirected traffic on a path, and we will address recent complexity and approximation results for this class.

For the full problem, we need a feasible assignment of parking slots within sidings over time that is consistent with the scheduling decisions between the sidings and the routing. To that end, we used a routing algorithm that we had developed earlier for routing automated guided vehicles in a container terminals (cooperation with HHLA). We will explain details of this algorithm and show how to combine it with a rolling horizon technique for the scheduling and packing decisions in the canal. This provides a unified view of routing and scheduling that blends simultaneous (global) and sequential (local) solution approaches to allocate scarce network resources to a stream of online arriving vehicles in a collision-free manner.

Computational experiments on real traffic data with results obtained by human expert planners show that our combinatorial algorithm improves upon manual planning by 25%. It was subsequently used to identify bottlenecks in the canal and to make suggestions for enlarging the capacity of critical sections of the canal to make it suitable for future traffic demands.

## Marielle Christiansen

Department of Industrial Economics and Technology Management
Norwegian University of Science and Technology (NTNU), Trondheim, Norway

**Optimization of Maritime Transportation**

► **Monday, July 4, 2016, 08:30 - 10:00** *Building CW, Aula*

**Abstract:** In this tutorial, we will give a short introduction to the shipping industry and an overview of some OR-focused planning problems within maritime transportation. Examples from several real ship routing and scheduling cases, elements of models and solution methods will be given. Finally, we present some trends regarding future developments and use of OR-based decision support systems for ship routing and scheduling.

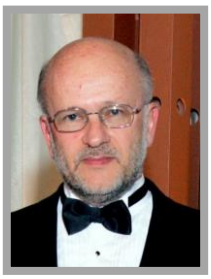
## Mauricio Resende

Mathematical Optimization and Planning
Amazon Inc, USA

**Logistics Optimization at Amazon**
**Big Data & Operational Research in Action**

► **Monday, July 4, 2016, 10:30 - 12:00** *Building CW, Aula*

**Abstract:** We consider optimization problems at Amazon Logistics. Amazon.com is the world's largest e-commerce company, selling millions of units of merchandise worldwide on a typical day. To achieve this complex operation requires the solution of many classical operational research problems. Furthermore, many of these problems are NP-hard, stochastic, and inter-related, contributing to make Amazon Logistics a stimulating environment for research in optimization and algorithms.



## Alexander Shapiro

Stewart School of Industrial & Systems Engineering
Georgia Tech, USA

**Risk Averse and Distributionally Robust Multistage Stochastic Optimization**

► **Monday, July 4, 2016, 12:30 - 14:00** *Building CW, Aula*

**Abstract:** In many practical situations one has to make decisions sequentially based on data available at the time of the decision and facing uncertainty of the future. This leads to optimization problems which can be formulated in a framework of multistage stochastic optimization. In this talk we consider risk averse and distributionally robust approaches to multistage stochastic programming. We discuss conceptual and computational issues involved in formulation and solving such problems. As an example we give numerical results based on the Stochastic Dual Dynamic Programming method applied to planning of the Brazilian interconnected power system.

## Hans Georg Bock

Interdisciplinary Center for Scientific Computing (IWR)
Heidelberg University, Germany

**Mixed-Integer Optimal Control**
**Theory, Numerical Solution and Nonlinear Model Predictive Control**

► **Monday, July 4, 2016, 14:30 - 16:00** *Building CW, Aula*

**Abstract:** The presentation discusses theoretical and numerical aspects of optimal control problems with integer-valued control variables. Despite the practical relevance and ubiquity of integer or logical decision variables such as valves, gears or the start-up of sub-units in chemical plants, optimization methods capable of solving such nonlinear mixed-integer optimal control problems (MIOCP) for large-scale systems and in real-time have only recently come within reach.

Nonlinear MIOCP such as the minimum energy operation of subway trains equipped with discrete acceleration modes were solved as early as the late seventies for the city of New York. Indeed one can prove that the Pontryagin Maximum Principle holds which makes an indirect solution approach feasible. Based on the “Competing Hamiltonians Algorithm” (Bock, Longman ’81), open loop and feedback solutions for problems with discontinuous dynamics were computed that allowed a tested reduction of 18 per cent in traction energy. However, such "indirect" methods are relatively complex to apply and numerically less suitable for large-scale real-time optimization problems.

We present a new "direct" approach based on a functional analytic approach leading to a relaxed problem without integer gap, the so-called “outer convexification” which is then solved by a modification of the direct multiple shooting method as an "all-at-once" approach. Moreover, it can be arbitrarily closely approximated by an integer solution with finitely many switches. The gain in performance is enormous, orders of magnitude of speed-up over a state-of-the-art MINLP approach to the discretized problem, where the NP hardness of the problem is computationally prohibitive. Real-time applications by a “multi-level real-time iteration” NMPC method for on-board energy optimal cruise control of heavy duty trucks and minimum time control of a race car around the Hockenheim race track are presented.

## José Fernando Oliveira

Faculty of Engineering
University of Porto, Portugal

**Waste Minimization: the Contribution of Cutting and Packing Problems for a More Competitive and Environmentally Friendly Industry**

► **Tuesday, July 5, 2016, 08:30 - 10:00** *Building CW, Aula*

**Abstract:** Cutting and Packing problems are hard combinatorial optimization problems that arise in the context of several manufacturing and process industries or in their supply chains. These problems occur whenever a bigger object or space has to be divided into smaller objects or spaces, so that waste is minimized. This is the case when cutting paper rolls in the paper industry, large wood boards into smaller rectangular panels in the furniture industry, irregularly shaped garment parts from fabric rolls in the apparel industry, but also the case when packing boxes on pallets and these inside trucks or containers, in logistics applications. All these problems have in common the existence of a geometric sub-problem, which deals with the small object non-overlap constraints.

The resolution of these problems is not only a scientific challenge, given its intrinsic difficulty, but has also a great economic impact as it contributes to the decrease of one of the major cost factors for many production sectors: the raw-materials. In some industries raw-material may represent up to 40% of the total production costs. It has also a significant environmental repercussion as it leads to a less intense exploration of the natural resources from where the raw-materials are extracted, and decreases the quantity of garbage generated, which frequently has also important environmental impacts. In logistics applications, minimizing container and truck loading space waste directly leads to less transportation needs and therefore to smaller logistics costs and less pollution.

In this talk the several Cutting and Packing problems will be characterized and exemplified, based on Gerhard Wäscher's typology (2007), allowing non-specialists to have a broad view over the area. Afterwards, as geometry plays a critical role in these problems, the geometric manipulation techniques more relevant for Cutting and Packing problems resolution will be presented. Finally, aiming to illustrate some of the most recent developments in the area, some approaches based on heuristics and metaheuristics, for the container loading problem, and based on mathematical programming models, for the irregular packing problem, will be described.

## Gerrit Timmer

ORTEC
Free University of Amsterdam, The Netherlands

**Making an Impact with OR:**
**Lessons Learned from 35 years of Experience in Applying OR**

► **Tuesday, July 5, 2016, 10:30 - 12:00** *Building CW, Aula*

**Abstract:** Improving business processes using optimization techniques can lead to huge benefits. Yet it is far from trivial how to apply mathematical modelling and optimization to realize those benefits. Moreover, the incredible advances in computer power; the explosion of data being available and the impressive advances in algorithmic ingenuity, make that models that are suitable today will not capture what is possible in the future.

In the past 35 years, I have been in the position to observe hundreds of projects in various industries and application areas, where subtle differences in circumstances and approach led to the impact varying from huge to none at all. I will summarize this experience in a number of lessons learned. Moreover, the lessons learned will be translated into directions for further research and may stimulate to see and grasp the endless opportunities for our field to have a huge impact in the future.

## Emma Hart

Institute for Informatics and Digital Innovation
Edinburgh Napier University, United Kingdom

**Lifelong Learning in Optimization**

► **Tuesday, July 5, 2016, 12:30 - 14:00** *Building CW, Aula*

**Abstract:** The previous two decades have seen significant advances in optimisation techniques that are able to quickly find optimal or near-optimal solutions to problem instances in many combinatorial optimisation domains. Despite many successful applications of both these approaches, some common weaknesses exist in that if the nature of the problems to be solved changes over time, then algorithms needs to be periodically re-tuned. Furthermore, many approaches are inefficient, starting from a clean slate every time a problem is solved, therefore failing to exploit previously learned knowledge.

In contrast, in the field of machine-learning, a number of recent proposals suggest that learning algorithms should exhibit life-long learning, retaining knowledge and using it to improve learning in the future. I propose that optimisation algorithms should follow the same approach - looking to nature, we observe that the natural immune system exhibits many properties of a life-long learning system that could be exploited computationally in an optimisation framework. I will give a brief overview of the immune system, focusing on highlighting its relevant computational properties and then show how it can be used to construct a lifelong learning optimisation system. The system is shown to adapt to new problems, exhibit memory, and produce efficient and effective solutions when tested in both the bin-packing and scheduling domains.

The proposed system is an example of an ensemble method, in which multiple heuristics collaborate. The final part of the talk will focus on why ensemble approaches to optimisation represent a promising way forward for optimisation in the future.

## Pablo Moscato

School of Elect Engineering and Computer Science
University of Newcastle, Australia

**Information-based Medicine and Combinatorial Optimization: Opportunities and Challenges**

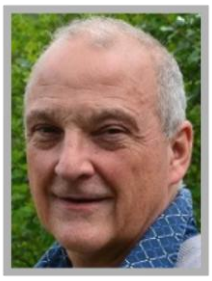
► **Tuesday, July 5, 2016, 14:30 - 16:00** *Building CW, Aula*

**Abstract:** Operations Research (OR) methodologies, as well as their practitioners, are in high demand. They can address new problems that arise from the disruptive technologies that will have the highest economic impact in the future. Disruption comes hand-in-hand with new technologies for Next-Gen Genomics, mobile internet, automation of knowledge work, the Internet of Things, the Cloud, Advanced robotics and Autonomous and near-autonomous vehicles. These areas bring great challenges but also great opportunities.

One spin-off that will change the world is that these new technologies will generate large-scale datasets allowing an unprecedented ability for OR practitioners to “personalise” solutions. One clear example comes from the field of Personalised Medicine which seeks to consider the best interests of the patient/individual at the centre of all decisions. Personalization will disrupt institutional practices, and drugs and treatments will necessarily be "tailored" to the individual profile. Obviously, one of these disruptive technologies (Next-gen Genomics) is a keystone for the changes ahead, but the automation of knowledge work will also prove vital for cost-effective decisions. The future of OR will be shaped by its new role as a nexus between disciplines.

The interdisciplinary nature of this new area of large-scale data-driven decisions has led to the emergence of a new name for a field of research: Data Science. There are many challenges in this field and they generally involve large scale optimization. However, personalization brings a particular challenge: the development of new mathematical models and powerful algorithmic approaches for large scale instances.

Based on the lessons we learned when introducing these new mathematical models, which were developed to provide new diagnostic and treatment methods, I will discuss our personal journey in Information-based Medicine, with examples of the application of techniques of Combinatorial Optimization, Artificial Intelligence, Machine Learning and Machine Teaching to the area of Data Science and Large-scale Data Analytics.



## Marc Pirlot

Computer Science and Management Group
University of Mons, Belgium

**Preference Elicitation and Learning in MCDA Perspective: Specificities and Fertilization through Inter-disciplinary Dialogue**

► **Wednesday, July 6, 2016, 08:30 - 10:00** *Building CW, Aula*

**Abstract:** Capturing, modeling and predicting preferences has become an important issue in many different disciplines, among which we may cite psychology, decision analysis, machine learning, artificial intelligence, information retrieval, social choice theory. Preferences also play a major role in applications such as marketing and electronic commerce.

Although they work with the same notion, the different communities have specific issues to deal with and they use their own methods and standards. In recent years, several workshops were organized with the aim of bringing together people working in preference related domains, yet coming from various research horizons. Let us mention for instance, the Dagstuhl Seminar 14101 on Preference Learning and the DA2PL (From Decision Analysis To Preference Learning) Workshops, the next one scheduled November 2016 in Paderborn, Germany.

In this talk, we shall first sketch the way different communities look at preference learning and contrast them with the peculiarities of Multiple Criteria Decision Analysis. We then mainly focus on the inter-relations with the Machine Learning community, aiming to identify what are the issues we have in common and what can be learned from them in a Decision Analysis perspective. We illustrate the commonalities and discrepancies between both approaches by presenting some recent research works. The last part of the talk will propose and describe four research avenues which we see as structuring the recent and forthcoming efforts regarding preference elicitation and learning in the field of multiple criteria decision analysis. In these four trends, the interactions with disciplines such as Optimization, Artificial Intelligence and Machine Learning are likely to become increasingly important.


## Stephen J. Wright

Computer Sciences Department
University of Wisconsin-Madison, USA


**Optimization in Data Analysis**

► **Wednesday, July 6, 2016, 10:30 - 12:00** *Building CW, Aula*

**Abstract:** Optimization formulations and algorithms are central to modern data analysis and machine learning. Optimization provides a collection of tools and techniques that can be assembled in different ways to solve problems in these areas. In this tutorial, we survey important problem classes in data analysis and identify common structures in their formulations as optimization problems and common requirements for their solution methodologies. We then discuss key optimization algorithms for tackling these problems, including first-order methods and their accelerated variants, stochastic gradient methods, and coordinate descent methods. We also discuss nonconvex formulations of matrix problems, which has become a popular way to improve tractability of large-scale problems.


## Giovanni Rinaldi

Institute for Systems Analysis and Computer Science (IASI)
Italian National Research Council (CNR), Rome, Italy


**Maximum Weight Cuts in Graphs and Extensions**

► **Wednesday, July 6, 2016, 12:30 - 14:00** *Building CW, Aula*

**Abstract:** Max-Cut, i.e., the problem of finding a cut of maximum weight in a weighted graph, is one on the most studied and best known hard optimization problems on graphs. Max-Cut is also known to be equivalent to Unconstrained Quadratic Binary Optimization, i.e., to the problem of minimizing a quadratic form in binary variables. Because of its great interest among the optimizers, several approaches, also of a quite diverse nature, have been proposed to find good or provably good solutions, which makes it also very interesting as a benchmark problem for new algorithmic ideas. We review some of the most successful solution methods proposed for this problem and for some extensions where, instead of a quadratic form, we consider a polynomial of degree higher than two.

## EURO Gold Medal (EGM 2016)

The EURO Gold Medal is the **highest distinction within OR in Europe**. It is conferred on a prominent person or institution, for an outstanding contribution to Operational Research. Although recent work should not be excluded, care should be taken to allow the contribution to stand the test of time. The potential prize recipient should have a recognized stature in the European OR community. Significance, innovation, depth, and scientific excellence should be stressed. The award is not only a significant honour for the laureate personally, but also important for the general promotion of OR as leading scholars and their contributions are made better known via the Medal.

### Jury of the EURO Gold Medal 2016

| | |
|---|---|
| Berç Rustem (United Kingdom) - Chair | Kaisa Miettinen (Finland) |
| Luk Van Wassenhove (France) | Eugene Levner (Israel) |
| M. Grazia Speranza (Italy) | |

### When and Where?

► The EURO Gold Medal 2016 will be awarded at the opening session (Sunday, July 3, 2016: 16:30-18:00; Building CW, Aula) and the laureate(s) will give a speech.

### Most Recent Laureates

| | |
|---|---|
| 2015: Alexander Schrijver (The Netherlands) | 2012: Boris Polyak (Russia) |
| 2013: Panos M. Pardols (Greece) | 2010: Rolf Möhring (Germany) |

## EURO Distinguished Service Medal Award (EDSM 2016)

The EURO Distinguished Service Medal is awarded for **recognition of distinguished service to the Association of European OR Societies (EURO) and to the profession of OR**.

### Jury of the EURO Distinguished Service Medal 2016

| | |
|---|---|
| Valerie Belton (United Kingdom) - Chair | Luka Neralic (Croatia) |
| Ulrike Leopold-Wildburger (Austria) | Jacques Teghem (Belgium) |
| Roman Słowiński (Poland) | |

### When and Where?

► The EURO Distinguished Service Medal 2016 will be officially delivered at the opening session (Sunday, July 3, 2016: 16:30-18:00, Building CW, ground floor, Aula).

### Most Recent Laureates

| | |
|---|---|
| 2015: Bernard Roy (France) | 2012: Dominique de Werra (Switzerland) |
| 2013: Theodor Stewart (South Africa) | 2010: Maurice Shutler (UK) |

## EURO Award for the Best EJOR Paper (EABEP 2016)

EURO has three annual awards available for papers published by European Journal of Operational Research (EJOR): **best survey paper**, **best application paper**, and **best theory/methodology paper**.

### Jury of the EURO Award for the Best EJOR Paper 2016

| | |
|---|---|
| Horst Hamacher (Germany) - Chair | José Fernando Oliveira (Portugal) |
| Sebastian Lozano (Spain) | Julius Žilinskas (Lithuania) |
| Stein Wallace (Norway) | |

### When and Where?

► Winners for each category will be announced at the closing session (Wednesday, July 6, 2016: 16:00-17:45; Building CW, ground floor, Aula).

## EURO Doctoral Dissertation Award (EDDA 2016)

The purpose of the EURO Doctoral Dissertation Award is to distinguish **an outstanding PhD thesis in Operational Research** defended in the countries having an OR society that is member of EURO.

### Jury of the EURO Doctoral Dissertation Award 2016

| | |
|---|---|
| Ahti Salo (Finland) - Chair | Karl Schmedders (Switzerland) |
| Richard Hartl (Austria) | Emilio Carrizosa (Spain) |
| Bernardo Almada-Lobo (Portugal) | |

### When and Where?

► Three finalists will present their work at a special session during the conference (**Tuesday, July 5, 2016: 10:30-12:00; Building CW, 1st floor, Room 123**).

The EURO Doctoral Dissertation Award 2016 will be awarded at the closing session (Wednesday, July 6, 2016: 16:00-17:45; Building CW, ground floor, Aula).

### Finalists of the EURO Doctoral Dissertation Award 2016

**Ruth Domínquez Martin**: Planning and Operations in Fully Renewable Electric Energy Systems

**Raca Todosijević**: Theoretical and Practical Contributions on Scatter Search, Variable Neighbourhood Search and Matheuristics for 0-1 Mixed Integer Programs

**Jørgen Thorlund Haahr**: Reactive Robustness and Integrated Approaches for Railway Optimization Problems

### Most Recent Laureates

| | |
|---|---|
| 2015: Joachim Arts (The Netherlands) | 2012: Carolina Osorio (Switzerland) |
| 2013: Christian Raack (Germany) | 2010: Claudia D'Ambrosio (Italy) |

## EURO Excellence in Practice Award (EEPA 2016)

The EURO Excellence in Practice Award, sponsored by IBM, is for the submission and presentation describing **an application of Operational Research in practice**. The criteria for the evaluation of the papers are: scientific quality, relevance to Operational Research, originality in methodology, implementations and/or field of application, a real impact on practice, and appreciation by the organisation involved with the application.

### Jury of the EURO Excellence in Practice Award 2016

| | |
|---|---|
| Ton G. de Kok (The Netherlands) - Chair | Marco Laumanns (Switzerland) |
| Ulrich Dorndorf (Germany) | Markus Bohlin (Sweden) |
| Erik Demeulemeester (Belgium) | |

### When and Where?

- Six finalists will present their work at special sessions during the conference (**Monday, July 4, 2016: 12:30-14:00** and **14:30-16:00; Building CW, 1st floor, Room 123**).

  The EURO Excellence in Practice Award 2016 will be awarded at the closing session (Wednesday, July 6, 2016: 16:00-17:45; Building CW, ground floor, Aula).

### Finalists of the EURO Excellence in Practice Award 2016

**Kerem Akartunali, Euan Barlow, Matthew Revie, Diclehan Tezcaner-Öztürk, Evangelos Boulougouris, Sandy Day**: A Novel Framework of Simulation and Optimisation for Offshore Wind Farm Installation Logistics at SSE and SPR

**Christian Artigues, Emmanuel Hébrard, Pierre Lopez, Gilles Simonin**: Scheduling Scientific Experiments for Comet Exploration on the Rosetta/Philae Mission

**Andreas Fügener, Jens O. Brunner, Armin Podtschaske**: Duty and Workstation Rostering Considering Preferences and Fairness: A Case Study at a Department of Anaesthesiology

**Thorsten Koch, Benjamin Hiller, Marc E. Pfetsch, Lars Schewe**: Evaluating Gas Network Capacities

**Tobias Harks, Felix G. König, Jannik Matuschke, Alexander T. Richter, Jens Schulz**: An Integrated Approach to Tactical Transportation Planning

**Karin Thörnblad**: Using Mathematical Optimization for Scheduling Heat Treatment Production

### Most Recent Laureates

2015: Jesse O'Hanley

2013: Andreas Brieden, Steffen Borgwardt, Peter Gritzmann

2012: Mikael Rönnqvist, Patrik Flisberg, Mikael Frisk

2010: Pinar Keskinocak, Faramroze Engineer, Larry Pickering

## ROADEF/EURO Challenge 2016

The French Operational Research and Decision Support Society (ROADEF) has organized jointly with the European Operational Research Society (EURO) the ROADEF/EURO challenge 2016 dedicated to inventory routing problem in collaboration with Air Liquide. It started last year in 2015 during the EURO conference in Glasgow.

The goal of this challenge has multiple aspects. First, it allows some of our industrial partners to follow recent developments in the fields of Operations Research and Decision Analysis. Second, through the **junior category** young researchers have the opportunity to face up to a complex industrial optimization problem. Third, through the **senior category**, this challenge allows qualified researchers to demonstrate their knowledge and share their know-how and expertise on the practical problems. Moreover, a scientific prize dedicated to qualitative submissions is proposed.

### When and Where?

► The finalists will present their work at special sessions during the conference (**Monday, July 4, 2016 and Tuesday, July 5, 2016: 08:30-10:00; Building CW, 1st floor, Room 123**).

AIR LIQUIDE Creative Oxygen

EURO The Association of European Operational Research Societies

## Awards related conference sessions at a glance

| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| **Morning A** | | MA 08:30-10:00 **ROADEF/EURO** (CW, 123) | TA 08:30-10:00 **ROADEF/EURO** (CW, 123) | WA 08:30-10:00 |
| **Morning B** | | MB 10:30-12:00 **EJOR** (CW, 1) **Memorial session** (CW, 123) | TB 10:30-12:00 **EDDA** (CW, 123) | WB 10:30-12:00 |
| **Midday C** | | MC 12:30-14:00 **EEPA 1** (CW, 123) **EthOR** (CW, 1) | TC 12:30-14:00 | WC 12:30-14:00 |
| **Afternoon D** | | MD 14:30-16:00 **EEPA 2** (CW, 123) | TD 14:30-16:00 **MAI Roundtable** (CW, 123) | WD 14:30-15:30 |
| **Afternoon E** | SE 16:30-18:00 **Opening Session EGM, EDSM** (CW, Aula) | ME 16:30-17:30 | TE 17:30-18:30 | WE 16:00-17:45 **Closing Session EDDA, EEPA, EABEP, ROADEF** (CW, Aula) |

### EURO Awards

EGM: EURO Gold Medal

EEPA: EURO Excellence in Practice Award

EDSM: EURO Distinguished Service Medal

EABEP: EURO Award for the Best EJOR Paper

EDDA: EURO Doctoral Dissertation Award

### Other Prizes

ROADEF/EURO Challenge Prizes

EthOR: Ethics in OR Award

# ► MAP OF EXHIBITION AREA

## Exhibition Area

Publishers and Operational Research related software companies will be exhibiting in the exhibition area. It is situated within the ground floor of Building CW, which is the central venue of the EURO 2016 conference. The area will be open throughout the duration of conference.

► **Opening times of exhibition area:**

- ► Sunday, July 3, 2016: 12:00 - 20:00
- ► Monday, July 4, 2016: 08:00 - 18:00
- ► Tuesday, July 5, 2016: 08:00 - 16:30
- ► Wednesday, July 6, 2016: 08:00 - 18:00

## Exhibition Plan


- INFORMATION
- REGISTRATION
- INVOICE POINT
- TOILET

1 QUEBEC
2 AMAZON
3 SPRINGER NATURE
4 PALGRAVE MACMILLAN
5 FCDS
6 AMPL
7 WILEY
8 RESEARCH IN GERMANY
9 TAYLOR&FRANCIS
10 FICO
11 ELSEVIER
12 PSNC
13 E&Y
14 MAI

| EY |
| --- |
| *website*: ey.com/pl |

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

At EY's IT Advisory Services we focus on your challenges to help deliver improved business performance by addressing the IT and business agenda together. We work directly with CIOs and others to create a more effective IT organization. This allows IT to drive process efficiencies throughout the organization and better support and deliver transformational business change. We also provide a wide range of cybersecurity services combining our experience in performance improvement with the technical and engineering skills of the best talent on the market.

For more information about our organization, please visit ey.com/pl.

► **EY** Building CW, ground floor, stand 13

| Amazon |
| --- |
| *website*: www.amazon.com, www.amazon.jobs |

**Innovating to give customers what they want, when they want it**

Fulfillment is at the heart of the Amazon experience. We deliver millions of products to hundreds of countries worldwide. Our teams possess a wide range of skills and expertise, from business analysis and inventory management to engineering. With more than 120 Fulfillment Centers worldwide and 29 in Europe, Amazon Fulfillment is growing at a pace that requires the best and brightest talent to be involved in our company, so with their help we can continue to make history.

Amazon's evolution has been driven by innovation. It's part of our DNA. We are doing things every day that have never been done before – providing a huge selection of products while continuing to fulfill orders quickly. We accomplish this by using ingenuity and simplicity to solve complex problems.

Millions of people count on Amazon to provide them with their favourite products – our Software Engineers and Research Scientists help make that possible. We use machine learning, data analytics, and complex simulations to ensure Amazon has the products customers want and that we can deliver them quickly. We employ many of the tried-and-true technologies that are taught in academia and used by other companies; however, due to the increasing scale of our business and the evolving nature of online commerce, we are constantly innovating in order to build the next generation of solutions that will define the future of our industry.

We create. We build. We take ownership of what we do – whether we're developing a new technology in-house or launching a new Fulfillment Center. Together, we're constantly creating ideas, services and products that make life easier for Amazon's millions of customers. Regardless of role, each and every Amazonian is completely focused on working hard, having fun and making history.

We strive to hire the brightest minds and to provide a range of career opportunities for professionals and academics who have diverse academic backgrounds.

► **Amazon** Building CW, ground floor, stand 2

# ► SILVER SPONSORS

## Elsevier

*website*: elsevier.com *type*: publisher

Elsevier publishes leading journals in OR/MS and Decision Sciences, including European Journal of Operational Research, Computers & Operations Research, and International Journal of Production Economics. Elsevier journals occupy 8 of the Top 10 Impact Factor positions in the Operations Research & Management Science category of Thomson Reuters' Science Citation Index.

Come to the Elsevier booth, where our representatives will be happy to discuss your personal publishing options across our range of journals. You can also sign up to receive feedback on your research from top Editors during the conference. To find out more, and get the most out of your time at EURO 2016, visit elsevier.com/exhibitions-update/EUROConf.

► **Elsevier** Building CW, ground floor, stand 11

## FICO

*website*: fico.com *type*: analytics software and tools

FICO (NYSE: FICO) is a leading analytics software company, helping businesses in 80+ countries make better decisions that drive higher levels of growth, profitability and customer satisfaction. The company's groundbreaking use of Big Data and mathematical algorithms to predict consumer behavior has transformed entire industries. FICO provides analytics software and tools used across multiple industries to manage risk, fight fraud, build more profitable customer relationships, optimize operations and meet strict government regulations. Many of our products reach industry-wide adoption — such as the FICO® Score, the standard measure of consumer credit risk in the United States. FICO solutions leverage open-source standards and cloud computing to maximize flexibility, speed deployment and reduce costs. The company also helps millions of people manage their personal credit health. FICO: Make every decision count™.

► **FICO** Building CW, ground floor, stand 10

# ► BRONZE SPONSORS

## Springer Nature

*website*: www.springernature.com *type*: publisher
tel: +49.(0)6221.487-0 fax: +49.(0)6221.487-366

Springer Nature is one of the world's leading global research, educational and professional publishers, home to an array of respected and trusted brands providing quality content through a range of innovative products and services.

Springer Nature is the world's largest academic book publisher, publisher of the world's most influential journals and a pioneer in the field of open research. The company numbers almost 13,000 staff in over 50 countries and has a turnover of approximately EUR 1.5 billion. Springer Nature was formed in 2015 through the merger of Nature Publishing Group, Palgrave Macmillan, Macmillan Education and Springer Science+Business Media.

► **Springer Nature** Building CW, ground floor, stand 3

## Palgrave Macmillan

*website*: palgrave.com *type*: publisher

Palgrave Macmillan is a global academic publisher for scholarship, research and professional learning. We publish monographs, journals, reference works and professional titles, online and in print. With a focus on humanities and social sciences, Palgrave Macmillan offers authors and readers the very best in academic content whilst also supporting the community with innovative new formats and tools.

► **Palgrave Macmillan** Building CW, ground floor, stand 4

## Taylor & Francis

*website*: taylorandfrancis.com *type*: publisher

Taylor & Francis boasts a first-class journal portfolio publishing Operational Research and Management Science articles as well as a wide range of scholarship from related disciplines. Our journals are edited by some of the most prominent academics in the world and offer a variety of accommodating options for our authors. Our high impact journals include International Journal of Production Research and International Journal of Management Science and Engineering Management, now in its tenth year.

► **Taylor & Francis** Building CW, ground floor, stand 9

## Wiley

*website*: eu.wiley.com *type*: publisher

Wiley is the leading publisher in the fields of Business and Management, providing access to quality content written by the field's foremost thinkers.

Wiley takes the lead among publishers with our unparalleled experience in meeting the many and diverse needs across the entire global Business and Management community. Students, academics, teachers and professionals are all supported across the span of their careers, and across the diversity of sub disciplines in the field. We provide this support through a variety of media, including books, textbooks, course offerings, major reference works and our unrivalled journals program with 6.3 million downloads last year alone. Our broad portfolio encompasses strategy, leadership, entrepreneurship, supply chain management, organizational behavior, ethics, human resources, and more.

► **Wiley** Building CW, ground floor, stand 7

## Research in Germany - Land of Ideas

*website*: www.research-in-germany.org/en www.daad.de/en/

"Research in Germany" is an international research marketing campaign, funded by the German Federal Ministry of Education and Research (BMBF), which seeks to strengthen and expand R&D collaboration between Germany and international partners. The organisations involved in the campaign, e.g. the Alexander von Humboldt Foundation, the German Academic Exchange Service (DAAD), the German Research Foundation (DFG), the Fraunhofer-Gesellschaft and the BMBF International Bureau, organise joint communication activities and events which present German innovation and research in key international markets.

The DAAD is the world's largest funding organisation for the international exchange of students and researchers. It grants scholarships, creates structures that promote internationalisation of higher education and offers expertise for academic international exchange. The Warsaw DAAD office has been supporting the Polish-German academic cooperation since 1997.

► **Research in Germany, DAAD** Building CW, ground floor, stand 8

## AMPL

*website*: ampl.com *type*: software

AMPL's modeling language and system give you an exceptionally powerful and natural tool for developing and deploying the complex optimization models that arise in diverse business applications. AMPL lets you formulate problems the way you think of them, while providing access to the advanced algorithmic alternatives that you need to find good solutions fast. It features an integrated scripting language for automating analyses and building iterative optimization schemes; access to spreadsheet and database files; and application programming interfaces for embedding within larger systems. AMPL works with more than 30 powerful optimization engines including all of the most widely used large-scale solvers.

► **AMPL** Building CW, ground floor, stand 6

## Poznań Supercomputing and Networking Center (PSNC)

*website*: pcss.pl *type*: supercomuting and networking center

Poznań Supercomputing and Networking Center (PSNC/PCSS), affiliated to the Institute of Bioorganic Chemistry of the Polish Academy of Sciences, was founded in 1993 to build and develop computer infrastructure for science and education in Poznań and in Poland. This infrastructure includes metropolitan network POZMAN, High Performance Computing (HPC) Center, as well as the national broadband network PIONIER, providing the Internet and network services on international, domestic and local levels. With the development of the computer infrastructure, PSNC has been managing research and development within the field of new generation computer networks, high performance – parallel and distributed – computations and archive systems, cloud computing and grid technologies. PSNC is working also on the themes of green ICT, future Internet technologies & ideas, network safety, innovative applications, web portals, as well as creating, storing and managing digital content. Since PSNC is a public entity, within its sphere of interests is the development of solutions for e-government, education, medicine, new media & communications.

**▶ PSNC** Building CW, ground floor, stand 12


## Foundations of Computing and Decision Sciences (FCDS)

*website*: fcds.cs.put.poznan.pl *type*: journal

*e-mail*: fcds@cs.put.poznan.pl *editor-in-chief*: Jerzy Stefanowski

electronic edition available at De Gruyter Online: www.degruyter.com/view/j/fcds

Foundations of Computing and Decision Sciences (until 1990 “Foundations of Control Engineering”) is a quarterly peer-reviewed international journal published by Poznań University of Technology since 1975. One of the specific features of the Journal is its focus on the links between Computing (understood in the sense defined in the report of the ACM Task Force on the Core of Computer Science chaired by Peter J. Denning: Computing as a Discipline, CACM, Vol. 32, No. 1, 1989) and broadly understood Decision Sciences.

**▶ FCDS** Building CW, ground floor, stand 5

## IFORS 2017 (Quebec, Canada)

*website*: ifors2017.ca July 17 - 21, 2017

21st Conference of the International Federation of Operational Research Societies. Quebec City, the capital of the province of Quebec, Canada, is delighted to host the IFORS 2017 conference under the theme of “OR/Analytics for a better world”. The conference will be held between 17-21 July 2017.

Quebec City is a dynamic and modern French-speaking North American city with a unique “Old France” charm. The program committee chaired by M. Grazia Speranza is committed to preparing a high quality scientific program with diverse participants sharing their vision, knowledge and experience of operational research and analytics. The venue is the Quebec International Convention Center, conveniently located in the heart of Quebec City and one of Canada’s top convention destinations with renowned hospitality and exceptional service.

We thereby invite you to participate to IFORS 2017 and be part of the great IFORS community by organizing a session, giving a talk, or meeting new and old friends and colleagues!

**▶ IFORS 2017 (Quebec, Canada)** Building CW, ground floor, stand 1

## Welcome Reception - Get Together Party

▶ **Sunday, July 3, 2016, 18:00 - late**
After Opening Session

Around **Building CW** (Lecture Centre)
**Address**: Piotrowo 2, 60-965 Poznań

Having collected your conference bag and attended the opening session, meet your friends and colleagues at the Get Together Party at Poznan University of Technology! On Sunday evening taste a typical Polish barbecue accompanied by lots of world-class Polish beer.

## Farewell Party

▶ **Wednesday, July 6, 2016, starting 18:00**
After Closing Session

Around **Building CW** (Lecture Centre)
**Address**: Piotrowo 2, 60-965 Poznań

After the Closing Session enjoy a relaxing evening with Polish food and drinks. Let us surprise you with the details...

## Snack & Beer at Old Market Square (Stary Rynek)

**► Monday, July 4, 2016, evening** **Restaurants in the proximity of Old Market Square**

Spend a nice evening at the charming Old Market Square! In the conference bag you will receive a coupon for a snack & beer that you can realize at July 4, 2016 (Monday), in one of the eight restaurants in the close proximity of the Old Market Square. The coupon lets you order a beer and an indicated snack. Note that all additional orders will be charged separately according to the price list of the given restaurant.


| | | |
|---|---|---|
| 1 | **Room**: Stary Rynek 80/82<br>(www.roompoznan.pl) | Beer: Żywiec 0.3l.<br>Snack: tartar steak on toasts. |
| 2 | **Bordo Restaurant & Cafe**: Żydowska 28<br>(www.facebook.com/CafeBordo) | Beer: Miłosław Pilzner, Fortuna Czarne, Książęce 0.5l.<br>Snack: gravlax (raw salmon, cured in salt, sugar, and dill) |
| 3 | **Pekin Chinese Restaurant**: 23 lutego 33<br>www.pekin.pl | Beer: Tyskie Gronie, Lech Pils 0.5l<br>Snack: spring rolls with meat filling (3 pieces) |
| 4 | **Bistro La Cocotte Restaurant**: Murna 3a<br>www.facebook.com/lacocotte.poznan | Beer: lwowskie.<br>Snack: carrot chips and crispy gralic-basil bread with salsa. |
| 5 | **Czerwona Papryka**: Stary Rynek 49<br>www.czerwonapapryka.com.pl | Beer: Tyskie 0.3l (or wine 125ml or juice 0.2l)<br>Snack: olives with anchovies or garlic; grilled plumbs with bacon; patatas bravas, mushrooms with garlic and parsley |
| 6 | **Bazar 1838**: Paderewskiego 8<br>www.bazar1838.pl | Beer: Żywiec 0.33l<br>Snack: focaccia with tomatoes and olive tapenade |
| 7 | **Chłopskie Jadło**: Fredry 12<br>www.chlopskiejadlo.pl/pl/poznan-fredry/ | Beer: Tyskie Gronie 0.5l<br>Snack: appetizer (360g) |
| 8 | **Sphinx**: Św. Marcin 66/72<br>www.sphinx.pl/restauracja-70/ | Beer: Tyskie Gronie 0.5l<br>Snack: onion rings (200g) |

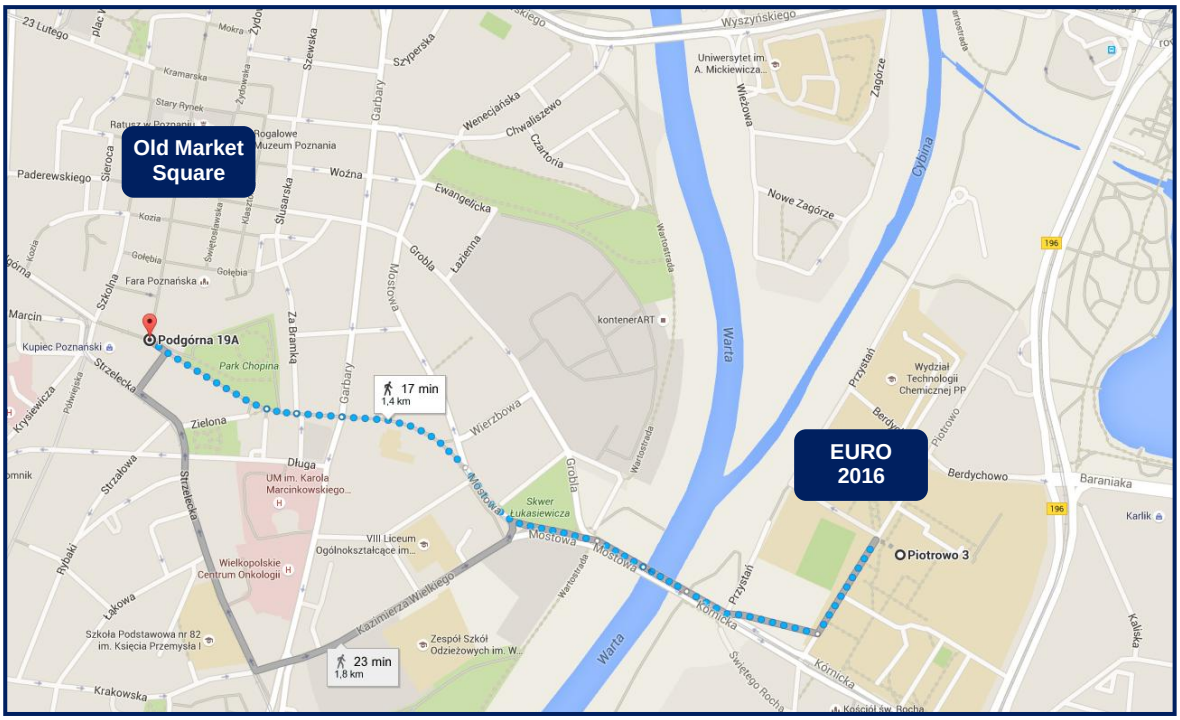
## Old Market Square (Stary Rynek)

The square was originally laid out in around 1253. The chief building of the square is the Old Town Hall (Ratusz). Other central buildings include a row of colourful merchants' houses, the old town weighing house, and the guardhouse. Other features of the square are a punishment post (pręgierz) and beautiful fountains. On each side of the square you can see rows of former tenement houses, many of which are now used as restaurants, cafés and pubs.

## How to reach Old Market Square from EURO 2016 venue?

**Have a short walk!** Poznan University of Technology is located very close to the Old Market Square and it takes just several minutes to get there on foot.

Turn right onto Kórnicka. Continue onto Świętego Rocha bridge and Mostowa. Slight left onto Dowbora-Muśnickiego. Continue onto Bernardyński Square, Zielona, and Podgórna. From there you will be already able to see the OMS. Turn right onto Wrocławska, and you are there!




**Alternatively, take a tram**. Go to Politechnika tram stop, take a tram (line 5, 13, or 16), heading to Wrocławska. It will be the third stop on your way (3 minutes in a tram).

## Conference Dinner

| | |
|---|---|
| ► **Tuesday, July 5, 2016, 19:00 - late** | Poznań International Fair<br>Międzynarodowe Targi Poznańskie<br>**Address**: Głogowska 10, 60-101 Poznań |

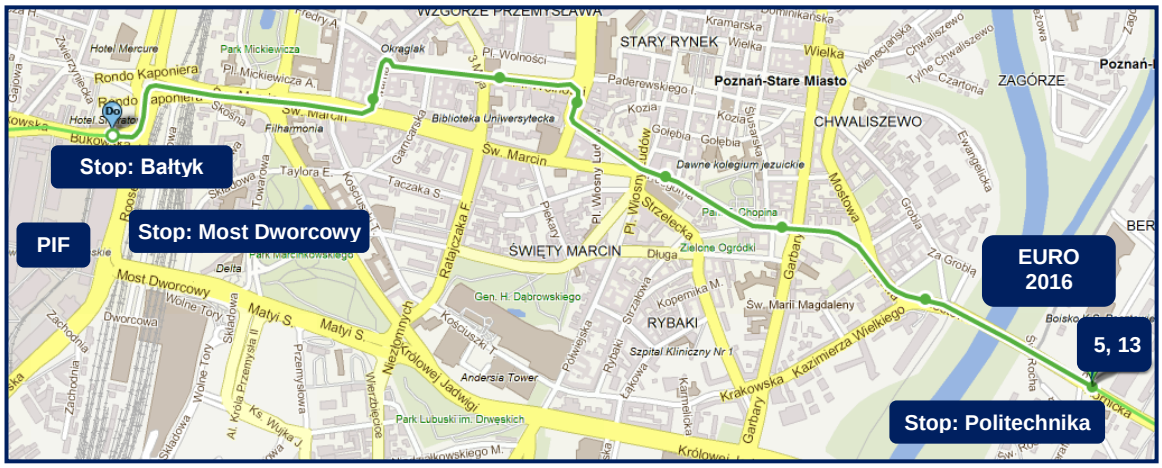
The EURO 2016 formal conference dinner takes place on the evening of Tuesday 5 July. Guests will enjoy welcome drinks on arrival (served at 19:00) followed by a short musical performance and Polish-themed locally sourced three course meal with after dinner coffee.

**Reminder:** Right before the conference dinner (17:30 - 18:30) at the same venue of Poznań International Fair, you are invited to attend the central plenary lecture of Robert Aumann (2005 Nobel Memorial Prize in Economic Sciences).

## How to reach Poznań International Fair from EURO 2016 venue?

**Take a tram!** There are two routes you may follow.

Go to Politechnika stop, take a tram (line 5 or 13), heading to Bałtyk. The tram will pass close to the Old Market Square, a symbol of Poznań's modernism - Okrąglak (The Round House), Kaiser's Castle, and June 1956 Events Monument. After about 12 minutes in a tram you will be at the Bałtyk stop. Take a short work walk to the entrance of Poznań International Fair (Międzynarodowe Targi Poznańskie). ***Consult this option with the JakDojade application as its frequently changed.***




Alternatively, have a short walk to Serafitek stop, take a tram (line 6 or 18), heading to Most Dworcowy. After about 9 minutes in a tram you will be at the entrance of Poznań International Fair!

# ► GENERAL INFORMATION

## Time Zone

Polish summer time (GMT+2hrs) starts and ends on the last Sundays of March and October (1 hour ahead of British time).

## Reach Poland by Telephone

- Country code: 00 48 (+48)
- Poznań area code: 00 48 61 (+48 61)

## Electricity

Electricity in Poland is 230V, 50Hz AC. Plug sockets are round with two round-pin sockets. Therefore if you are coming from, e.g., the UK, Ireland, or USA you will be needing a plug converter.

## Language

Poland's official language is Polish. English can be spoken in most service points, hotels, restaurants and at city information desks. The official language of EURO 2016 is English. No simultaneous translation will be provided.

## Internet

Internet access is typically free and widely available in Poland, with practically every café and restaurant offering wi-fi to customers with laptops and smartphones. In the area of Old Marget Square, Kolegiacki Square and Freedom Square you can get Poznań Internet Free. At the conference venue WiFi access is provided with eduroam and PUT-events-WiFi network.

## Useful phone numbers

112 - emergency (all services)
999 - ambulance
998 - fire brigade
997 - police
986 - municipal wardens (straż miejska)

Conference participants are kindly requested to keep their mobile phones switched off in the rooms during the scientific sessions.

## Smoking

Smoking is banned in government offices, schools, museums, theatres, airports, railway and bus stations and in public transport, stadiums, hospitals and playgrounds. It is also banned in one-room restaurants and bars. Failure to comply may result in fine. Smoking is allowed in restaurants, pubs and cafes with specially designated smoking rooms

## Currency

Poland's legal tender is the Polish zloty (PLN), which is divided into 100 groszy. USD 1 = ca. 3.93 PLN; €1 = ca. 4.40 PLN (rates as of May 20, 2016) Polish zloty bank notes are issued in denominations of 10, 20, 50, 100 and 200 zlotys, while coins are for 1, 2, 5 zlotys and 1, 2, 5, 10, 20 and 50 groszy. The currency may be converted at exchange points, in banks and some hotels.

- **Currency exchange offices** (Kantor) are easy to find in Poznań, but as with any international destination, it's imperative to check the rates. The general rule is you should avoid changing all your money at city entry points, particularly at the airport where the rates are high, and at the hotels.

## ATMs

Major credits cards are accepted in most hotels, restaurants, and shops. It is common to use contactless credit cards.

- **Three ATMs** (in Polish: bankomat) **are available at the conference venue** (two inside conference buildings (Building CW, ground floor and Building WE, ground floor). More ATMs are available in the Malta Shopping Centre (Galeria Malta) which is located 500 metres away from the main conference venue in the direction of Lake Malta. ATMs can be also easily found at the airport and at the main railway station.

## Larger shopping centres

**Galeria Malta**
Address: Maltańska 1
www.galeriamalta.pl
Mon-Sat: 10-22 / Sun 10-20

**Stary Browar (Old Brewery)**
Address: Półwiejska 42
www.starybrowar5050.com
Mon-Sat: 9-21 / Sun 10-20

**Poznan City Center**
Address: Matyi 2
www.poznancitycenter.pl
Mon-Sun 9-21

## Public Transport in Poznań

Poznań is crisscrossed by several tram routes (one at night) and bus lines (twenty at night). During the day these run from around 05:00 to 23:00 with trams and buses running approximately every 10-15 minutes. With a timetable of services both day and night and divided into week day, Saturday or Sunday and Holiday services, public transport is the most efficient means of getting around the city. Timetables can be viewed by the *JakDojade* application: http://poznan.jakdojade.pl.

### JakDojade Application: http://poznan.jakdojade.pl

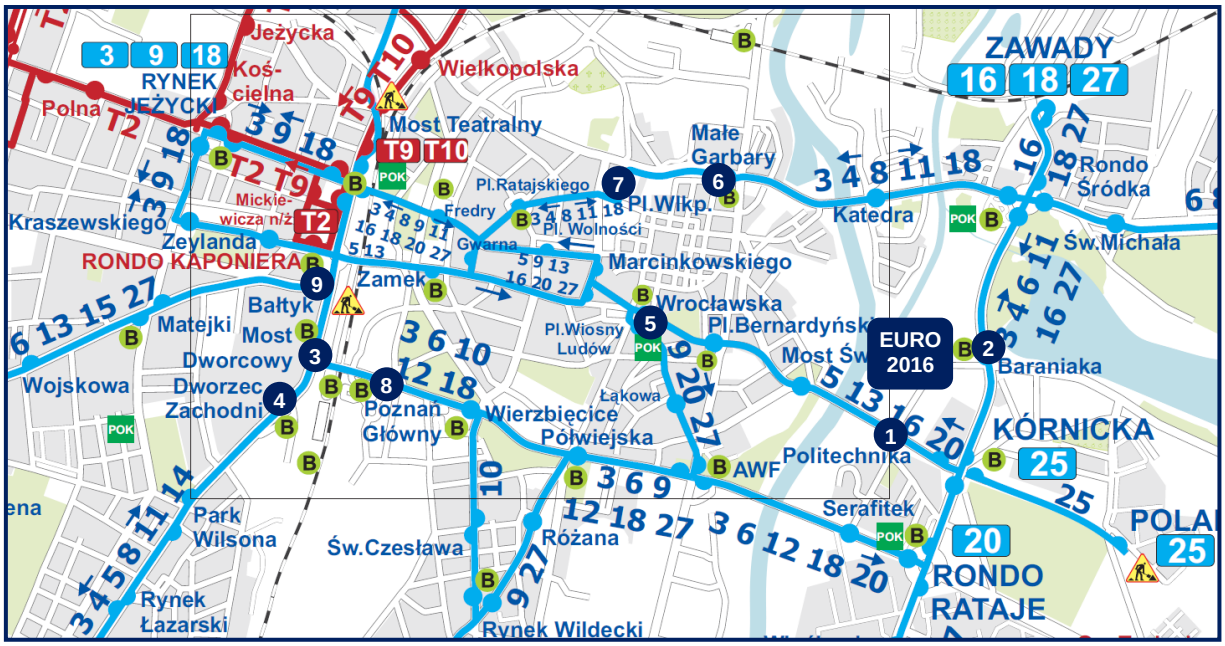
You can use *JakDojade* on both desktop computer and mobile devices. We recommend using *JakDojade* whenever planning your journey with public transportation.

jakdojade.pl
NAWIGACJA W KOMUNIKACJI MIEJSKIEJ

### Tickets

During the registration to the conference **you will receive your badge which will serve as a 4-day ticket for public transport** in Poznań. If you need to use public transport before the registration or you are planning to stay in Poznań after the conference, bear in mind that tickets are timed. The cheapest option is **3 PLN for 10 minutes** - which might get you 3 or 4 stops. A **40-min ticket for 4.60 PLN** is the safer bet. Single Proximity Cards (Papierowa Karta Jednorazowa) must be validated in the reader at the entrance to the vehicle. If you plan on travelling often, you may want to consider a 24h or 48h ticket.

Tickets are bought from **automated machines found on most (specially marked) buses and trams as well as at most transport stops** (marked with B at the map below).




### To travel around the city with public transportation, we recommend using trams

The **tram stops** which are closest to the EURO 2016 **conference venue** (Poznan University of Technology, Campus Piotrowo) are **Politechnika (1)** (trams 5, 13, 16, and 20) and **Baraniaka (2)** (trams 3, 4, 6, 11, 16, and 27).

The stops close to **Poznań International Fair**, which is the venue for the gala dinner and plenary lecture by Robert Aumann, are **Most Dworcowy (3)**, **Dworzec Zachodni (4), and Bałtyk (9).**

The stops closest to the **Old Market Square** are **Wrocławska (5)**, **Małe Garbary (6)** and **Plac Wielkopolski (7)**. For the **Railway Station**, go to **Poznań Główny (8)** or **Dworzec Zachodni (4)**.

### Getting from/to the Airport by Public Transport

There are bus stops right in front of the passenger terminal and in its close vicinity:

- Express Line L is connecting the airport with the main train station (journey time about 20 minutes; distance 6km);
- a regular bus line 59 which starts and finishes at Kaponiera Roundabout (directly in the city centre, close to the main train station; journey time around 30 minutes).

Public transport tickets are available at the newspaper stands both in the arrival hall (in T3 terminal) and in the departure hall (in T2 terminal), as well as in the ticket booth located at the bus stop in front of the departure hall. In all L busses and in some units of line 59, ticket vending machines are available. Stickers at the bus entrance inform about a possibility of an on-board ticket purchase.

## TAXI

The cheapest, safest and most comfortable way to order a taxi is to use one of taxi corporations. This guarantees honest prices and short waiting periods. All corporations offer free-of-charge arrival at the customer`s location.

### Fares

Start-up fare 6.00 - 7.00 PLN

Normal Tariff (per 1km) 2.00 - 2.50 PLN

Sunday/Night Tariff (per 1km) 3.50 - 5.00 PLN

### TAXI Corporations

| | | | |
|---|---|---|---|
| RADIO TAXI 519<br>ph. +48 61 8 519 519 | RADIO TAXI STOP<br>ph.+48 61 8 222 333 | MULTI-TAXI<br>ph. +48 61 96 66 | RADIO TAXI LUX<br>ph. +48 61 96 62 |
| RADIO TAXI<br>ph.+48 61 96 22 | EXPRESS TAXI<br>ph.+48 61 96 24 | EB TAXI<br>ph. +48 61 8 222 222 | HALLO TAXI<br>ph. +48 61 821 62 16 |

### Destinations

To get with taxi to the EURO 2016 **conference venue**, indicate "**Piotrowo 2**" Street (Politechnika Poznańska; Poznan University of Technology) as your destination.

To get with taxi to **Poznań International Fair**, which is the venue for the gala dinner and central plenary lecture by Robert Aumann, indicate "**Głogowska 10**" Street (Międzynarodowe Targi Poznańskie) as your destination.

## BIKE RENTING/SHARING SYSTEM: NextBike

Poznań offers a self-service city bikes rental system. **One of the bike rental stations is located right at the entrance to the EURO 2016 conference venue.**

### How it works?

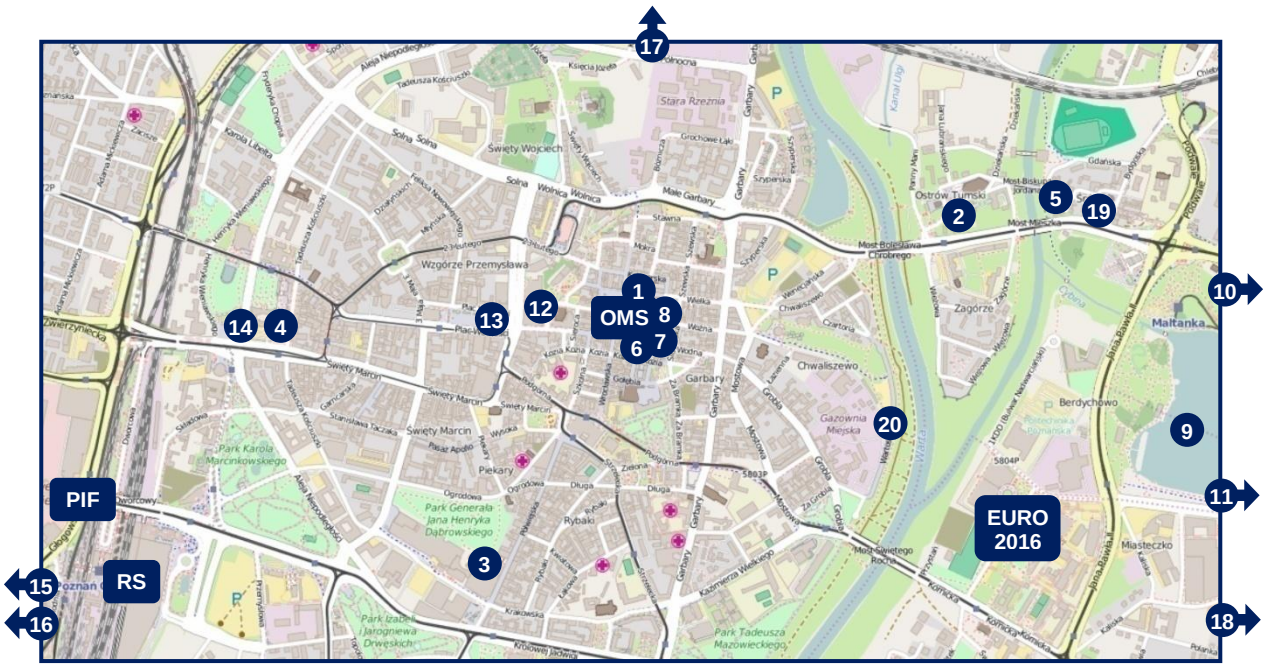
**Join in**: register at **https://nextbike.pl/en/cities/poznanski-rower-miejski/**, fill in the required data, accept the rules and pay the min.10 PLN of the initial fee. You may use the city bikes on 24/7 basis.

**Rent**: go to the terminal, press “Rent”, provide your mobile phone number and PIN and follow the instructions on the screen.

**Return the bicycle**: you do not have to go to the terminal. Simply place the bicycle in the electrical lock.

## Highlights of Poznań

Poznań is an extraordinary city - open and dynamic, filled with unique places and attractions. Here are a few tips which will allow you to enjoy your stay to the fullest - the 20 highlights of Poznań.




| | | | |
|---|---|---|---|
| PIF | Poznań International Fair Międzynarodowe Targi Poznańskie | RS | Railway Station |
| OMS | Old Market Square | EURO 2016 | Conference venue |

| | | | |
|---|---|---|---|
| 1 | **City Hall**: the pearl of the Renaissance from the 16th century. Every day at high noon two billy goats appear in the tower, butting their heads 12 times. | 11 | **Malta Ski** Sport & Recreation Centre with a year-around artifical slope and Adrenaline alpine coaster. |
| 2 | **Cathedral**: the first Polish cathedral, built in the 10th century. Golden chapel contains the sarcophagi and statues of first Polish rulers. | 12 | **National Museum**: rich collections of paintings by famous Polish artists (Malczewski, Matejko, Wyspiański) and Poland's only Claude Monet. |
| 3 | **The Old Brewery**: multiple award-winning trade, art, culture, and business center. Former Hugger's brewery. | 13 | **Freedom Square** with the classical building of Raczynski Library and a beautiful fountain in form of a sail. |
| 4 | **Kaiser's Castle**: the huge neo-Romanesque building was constructed for German Emperor William II. Now the castle serves as a cultural centre "Zamek". | 14 | **June 1956 Events Monument**: two crosses commemorating the 1956 protests and subsequent protests against the Communist political system. |
| 5 | **Porta Posnania ICHOT** attracts its visitors with a multimedia display, presenting the fascinating history of Cathedral Island. | 15 | **Poznań Palm House** in Wilson Park with 17 thousand plants of 700 species and subspecies from the warm and hot climates. |
| 6 | **Parish Church of St Stanislaus**: one of the most monumental Baroque churches in Poland. | 16 | **INEA Stadium**: venue of UEFA EURO 2012, holds up to 43,000 viewers. |
| 7 | **Górka Palace**: one of the most wonderful Renaissance baronial mansions in Poland, with a beautifal sandstone portal and an inner courtyard. | 17 | **Citadel Park**: Poznań's favourite relax location with an open-air excibition of Magdalena Abakanowicz sculptures. Have a stroll around the park! |
| 8 | **Poznan Croissant Museum**: you can see the original shows which reveal the secrets of Saint Martin Croissants and other Poznan's prides. | 18 | **LECH Visitors Centre** is a beer lovers' paradise and the only place where you can find out about the process of producing LECH beer. |
| 9 | **Lake Malta** has one of the oldest man-made rowing venues in Europe; a beautiful walking area. | 19 | **Beautiful 3D Wall Mural** painted to remember historical Środka market district (must see!). |
| 10 | **Malta Thermal Baths** Sport and Recreational Centre is a perfect place to rest and relax. Sport and recreational pools filled with thermal water. | 20 | **KontenerART** is a mobile centre of culture and art. Come and chill with friends by the Warta river and City Beach. |

# ► WHERE TO EAT?

## Poznań's Best Restaurants

Poznań, thanks to its trade fair, academic and tourist traditions has taken good care of the palates of its guests from every corner of the planet. However, in the recent years, more and more restaurants have been focused on the presentation of our culinary Polish heritage. Below are some tips on the best restaurants in the city. Before the visit, please consult their opening times as in Poland the restaurants are not open till late as, e.g., in Southern Europe.

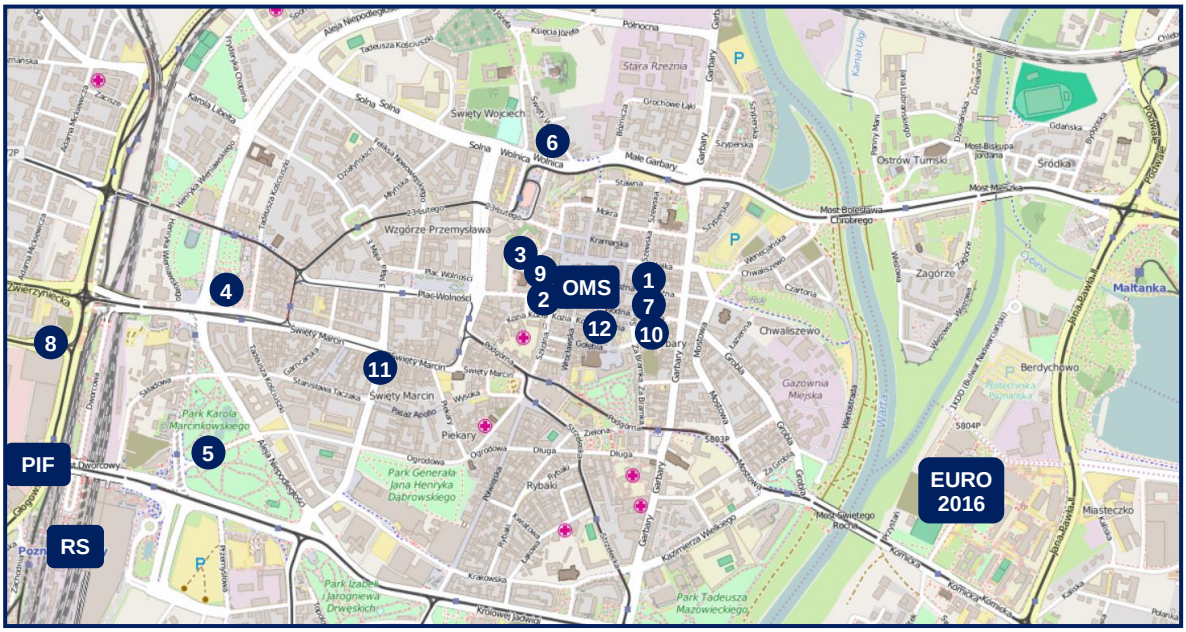

1. **Cucina** (City Park): Wyspiańskiego 26A
   Chef draws inspiration mostly from Mediterranean cuisine, Oriental flavours and traditionally Polish hints.
2. **A nóż widelec**: Czechosłowacka 133
   It offers Polish cuisine with a designer touch. Chef succeeded at implementing an extremely brave project.
3. **Oskoma**: Mickiewicza 9A
   Polish tradition, quality produce, the creative freedom, a very young team and an award-winning chef.
4. **Zagroda Bamberska**: Kościelna 43
   It serves traditional Wielkopolska (Greater Poland) cuisine with a modern twist.
5. **Vine Bridge New Polish Cuisine**: Ostrówek 6
   It is Poland's smallest restaurant! The dishes served here are based entirely on local and regional produce.
6. **Dark Restaurant**: Garbary 48
   It is the first *restaurant* in Poland where everything takes place in complete darkness.
7. **Blow Up Hall 50/50**: Kościuszki 42
   The restaurant of the 5-star Blow Up Hall 50/50 Hotel is located in the central part of Old Brewery.
8. **Ratuszowa**: Stary Rynek 55
9. **D42**: Dąbrowskiego 42
10. **Papavero**: 3 maja 46
11. **Concordia Taste**: Zwierzyniecka 3
    Located in a newly renovated 19th century former printery turned Concordia Design Center.
12. **Muga**: Krysiewicza 5
    It appreciates good and refined cuisine. The guests are offered designer creations which include both seasonality and European trends.
13. **Enjoy Restaurant**: Reymonta 19
    Innovative trend of modern Polish cuisine, which is a guarantee of unusual culinary experiences.
14. **Papierówka**: Zielona 8
    It is a green escape in the middle of the city, where you can relish a light regional cuisine.
15. **Brovaria**: Stary Rynek 73-74
    It is a unique micro-brewery, an excellent restaurant and a romantic, three-star hotel.
16. **Warto nad Wartą**: Al. Marcinkowskiego 27a
    Its menu is based in Polish cuisine with a modern twist.
17. **Manekin**: Kwiatowa 3
    It is crepe/pancake heaven and offers all the usual options plus more maverick choices.
18. **Piano Bar Restaurant & Cafe**: Półwiejska 42
19. **SPOT.**: Dolna Wilda 87
20. **Figaro**: Ogrodowa 17

# ► WHERE TO DRINK?

## Beer in Poznań

Beer – a beverage most strongly embedded into European history and culinary tradition – is invariably associated with a sense of community and spending time together. The city's social life revolves around pubs, brasseries, and clubs. A multiplicity of brands and variants, and the brewers' impressive offer enable everyone to not only find their own group of friends, but also their own beer.

Connoisseurs in passionate pursuit of new flavours have their own meeting places. It is for them that original products from around the world is imported from around the world and served next to the local beer brands. Take a journey through Poznań's pubs, brasseries and clubs. Follow the beer trail and meet the fascinating people who create the unique atmosphere of this city.




**PIF** Poznań International Fair Międzynarodowe Targi Poznańskie

**RS** Railway Station

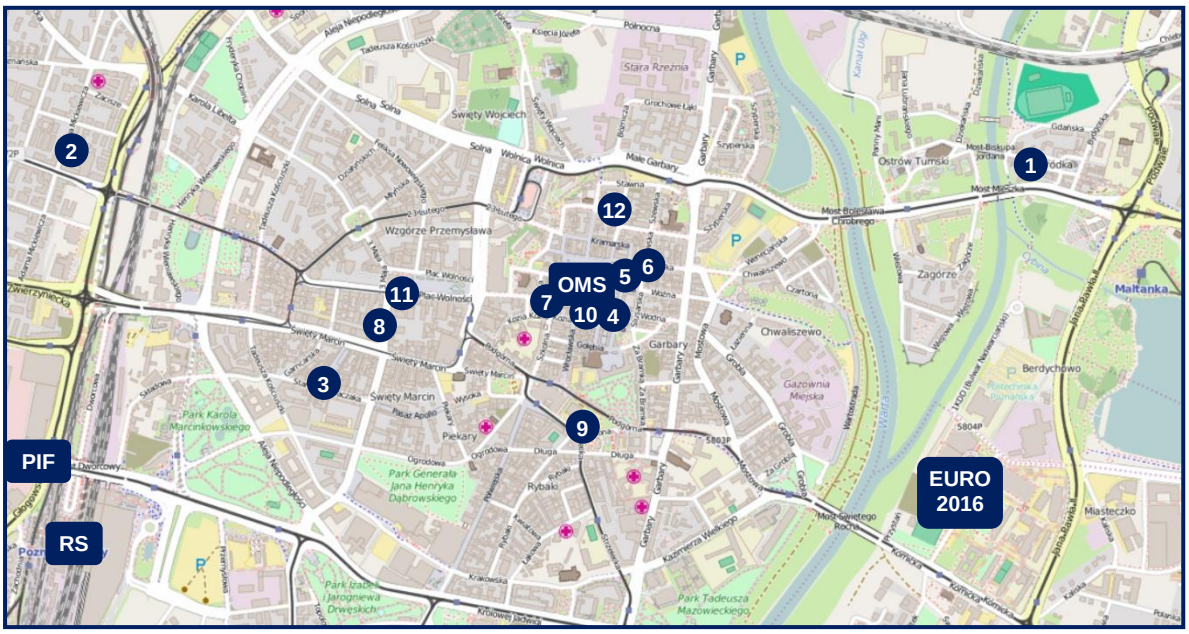
**OMS** Old Market Square

**EURO 2016** Conference venue

1. **Basilium**: Woźna 21
   Over 150 brands from small Polish breweries.
2. **Brovaria**: Stary Rynek 73-74
   The only in-restaurant brewery in Poznań.
   The amber liquid is produced in 3 variants: wheat, honey, and pils.
3. **Dragon**: Zamkowa 3
   The locale serves a few draught and bottle beer sorts. Multilevel summer outdoor place.
4. **Dubliner Irish Pub**: Święty Marcin 80/82
   One of the few places serving Guinness and the Irish cider. Famous for the live music.
5. **Fort Colomb**: Powstańców Wielkopolskich
   One of the few remains of the inner fortifications ring of a powerful stronghold erected by the Prussians.
6. **Klub u Bazyla**: Święty Wojciech 28
   A true music club which pffer a few dozen kinds of beer.
7. **Kriek Belgian Pub & Cafe**: Wodna 23
   Belgian pub with around 170 beer sorts on offer.
8. **SomePlace Else** (Sheraton): Bukowska 3/9
   On the more price end of Poznań's watering holes, but it is woth it too.
9. **Warzelnia**: Stary Rynek 71
   One of the few places where you can try the famous Polish expert beer - Tyskie - from a tank.
10. **Za kulisami**: Wodna 24
    For the beer enthusiasts, there are at least 10 regional sorts and draught beer - dry and sweet.
11. **Ministerstwo Browaru**: Ratajczaka 34
    A Small pub with a few hundred sorts of both international and local beers.
12. **Piwiarnia Warka**: Świętosławska 12
    A pub serving one of the famous Polish pale, bottom-fermented lager beers - Warka.

## "Słodkie" - coffee and cake

The tradition of “słodkie” (coffee and cake, served in the afternoon) is Poznań at its finest. “Słodkie” is a must; we have to go out for “słodkie”; “słodkie” is the appropriate suggestion to serve to unexpected afternoon visitors. What is interesting, it can sometimes be offered even prior to the main meal. Luckily, there is no need to spend hours slaving over a hot stove, preparing your own baked goods. What are the pros there for, if not to please your palates with a slice of lovely apple pie, or a mouth-watering cheesecake. Of course, “słodkie” would not be what it is without a nice cup of steaming coffee - especially one brewed professionally from carefully selected coffee beans.




**PIF** Poznań International Fair Międzynarodowe Targi Poznańskie

**RS** Railway Station

**OMS** Old Market Square

**EURO 2016** Conference venue

1. **La Ruina**: Śródka 3

   La Ruina is famous among the lovers of coffee and cheesecake. This tiny cafe is located a few meters from Porta Posnania and the Cathedral church.

2. **Brisman Kawowy Bar:** Mickiewicza 20

   This place is famous for coffee prepared in all various ways. They have true barista pros - finalists of barista championships and masters of “latte art”.

3. **Taczaka 20**: Taczaka 20

   It is the heart of the Taczaka street. We will eat here pastas, salads and sandwiches, homemade cakes and great coffee.

4. **Cafe Misja**: Gołębia 1

   Located exactly in the centre of the city of Poznań - in the historical complex of the former Jesuit college.

5. **Stacja Cafe**: Woźna 1

6. **Gołębnik**: Wielka 21

7. **Zielona Weranda**: Paderewskiego 7

   Apart from excellent homemade cakes and desserts, it offers a unique atmosphere and some time to relax in a garden at the heart of the city.

8. **Kawiarnia Stragan:** Ratajczaka 31

   The only place in Poland indicated by *BuzzFeed* as one of the "25 cafes in the world you need to visit before you die". Great salads and bagels.

9. **Caffe Bimba**: Zielona 1

   A tiny cafe is visible from afar. This is because it is an old tram, known in Poznań dialect as “bimba”, turned into a scrubbed and bright cafe.

10. **Weranda Caffe**: Świętosławska 10

    Delicious homemade cakes, pies and desserts. Quiet summer garden in the city centre.

11. **Cafe Bar Da Vinci**: Wolności Square 10

12. **Piece of cake**: Żydowska 29

# ▶ MY SCHEDULE

| Sunday, July 3 | Monday - Wednesday | | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|---|
| | **Morning A** | | MA 08:30-10:00 | TA 08:30-10:00 | WA 08:30-10:00 |
| | Refreshment Break | | 10:00-10:30 | 10:00-10:30 | 10:00-10:30 |
| **Registration Open 12:00 - 20:00**<br><br>**Exhibition Open 12:00 - 20:00** | **Morning B** | | MB 10:30-12:00 | TB 10:30-12:00 | WB 10:30-12:00 |
| | Lunch 12:00 -14:15 | | 12:00-12:30 | 12:00-12:30 | 12:00-12:30 |
| | | **Midday C** | MC 12:30-14:00 | TC 12:30-14:00 | WC 12:30-14:00 |
| | | | 14:00-14:30 | 14:00-14:30 | 14:00-14:30 |
| | **Afternoon D** | | MD 14:30-16:00 | TD 14:30-16:00 | WD 14:30-15:30 Plenary |
| | Refreshment Break | | 16:00-16:30 | - | 15:30-16:00 |
| SE 16:30-18:00 **Opening Session** | **Afternoon E** | | ME 16:30-17:30 Plenary | TE 17:30-18:30 Plenary | WE 16:00-17:45 **Closing Session** |
| Welcome Reception | Evening | | Snack & Beer Old Market Square | Conference Dinner | Farewell Party |

# ▶ POLISH YOUR POLISH

| Basic / essential phrases | |
|---|---|
| Thank you | Dziękuję |
| Please | Proszę |
| Excuse me | Przepraszam |
| Good Morning | Dzień dobry |
| Good evening | Dobry wieczór |
| Hi / Hello | Cześć |
| Good Night | Dobranoc |
| Goodbye | Do widzenia |
| See you later | Do zobaczenia |
| How are you? | Jak się masz? |
| Good | Dobrze |
| So-So | Tak sobie |
| Bad | Źle |
| Yes | Tak |
| No | Nie |
| Cheers! | Na zdrowie |
| Bon apetit | Smacznego |

| Time | |
|---|---|
| Yesterday | Wczoraj |
| Today | Dzisiaj |
| Tomorrow | Jutro |
| July | Lipiec |
| Sunday | Niedziela |
| Monday | Poniedziałek |
| Tuesday | Wtorek |
| Wednesday | Środa |

| Numbers | |
|---|---|
| One | Jeden |
| Two | Dwa |
| Three | Trzy |
| Four | Cztery |
| Five | Pięć |
| Ten | Dziesięć |
| Twenty | Dwadzieścia |
| Fifty | Pięćdziesiąt |
| One hundred | Sto |
| Thousand | Tysiąc |

| Travel | |
|---|---|
| Airport | Lotnisko |
| Flight | Lot |
| Train | Pociąg |
| Car | Samochód |
| Bus | Autobus |
| Tram | Tramwaj |
| Bicycle | Rower |
| Station | Stacja |
| Stop | Przystanek |
| Ticket | Bilet |
| Timetable | Rozkład jazdy |
| Right/left | Prawo/lewo |
| Straight | Prosto |
| Far | Daleko |
| Near | Blisko |

| Signboards/places | |
|---|---|
| Restaurant | Restauracja |
| Pharmacy | Apteka |
| Hospital | Szpital |
| Shop | Sklep |
| Post office | Poczta |
| Street | Ulica |
| Square | Plac |
| Bridge | Most |
| Room | Pokój |
| Entrance | Wejście |
| Exit | Wyjście |
| Open | Otwarte |
| Closed | Zamknięte |

| Drinks | |
|---|---|
| Water | Woda |
| Piwo | Beer |
| Wine | Wino |
| Vodka | Wódka |
| Tea | Herbata |
| Coffee | Kawa |
| Juice | Sok |

| Meals | |
|---|---|
| Breakfast | Śniadanie |
| Dinner | Obiad |
| Supper | Kolacja |

| Basic survival | | Do you speak Polish? | |
|---|---|---|---|
| One beer please | Jedno piwo proszę | Do you speak English? | Czy mówisz po angielsku? |
| Another one of this. | To samo poproszę | I don't speak Polish | Nie mówię po polsku |
| Can I have the bill, please? | Czy mogę prosić rachunek? | What's that called in Polish? | Jak to się nazywa po polsku? |
| What is your name? | Jak masz na imię? | Please write it down | Proszę to napisać |
| My name is… | Mam na imię… | Please say that again | Czy możesz to powtórzyć? |
| Nice to meet you. | Miło mi cię poznać. | I don't understand | Nie rozumiem |
| How much for this? | Ile to kosztuje? | I don't know | Nie wiem |
| How can I get to…? | Jak mogę dojść do…? | Is there a menu in English? | Czy jest menu po angielsku? |
| What time is it? | Która jest godzina? | Could you help me, please? | Czy możesz mi pomóc? |
| How far is it? | Jak daleko to jest? | I need to practise my Polish | Muszę ćwiczyć mój polski |

| EURO 2016 Survival (in Polish) | |
|---|---|
| **Planning your attendance** | |
| I think I'll skip the morning session | Chyba odpuszczę sobie poranną sesję |
| I think I'll skip the afternoon session | Chyba odpuszczę sobie popołudniową sesję |
| Let's skip this session and go for a lunch | Odpuśćmy sobie tę sesję i chodźmy na lunch |
| Which session are you going next? | Na którą sesję teraz idziesz? |
| **Meeting important people** | |
| Where is Willi? | Gdzie jest Willi? |
| Have you already seen Willi? | Czy widziałeś się już z Willim? |
| Let's ask Willi. He will know it. | Spytajmy Willego. Będzie to wiedział. |
| **Sense of orientation** | |
| Where can I register? | Gdzie mogę się zarejestrować? |
| Where are the toilets? | Gdzie jest toaleta? |
| Where is the lunch / coffee break? | Gdzie jest lunch / przerwa kawowa? |
| **Paying compliments** | |
| This was the best presentation I've ever seen | To była najlepsza prezentacja jaką widziałem |
| This was the best conference I've ever attended | To była najlepsza konferencja na której byłem |
| Thank you for the interesting question | Dziękuję za interesujące pytanie |
| **Planning the next steps** | |
| Let us discuss this over lunch | Pomówmy o tym w czasie lunchu |
| I'll look into it next week / month | Spojrzę na to w przyszłym tygodniu / miesiącu |
| Why don't we write a paper together on this? | Może napiszemy o tym razem artykuł? |
| Where will the next EURO Conference be held? | Gdzie będzie następne EURO? |
| In Valencia | W Walencji |

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# ► NOTES

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# ► NOTES

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# ► NOTES

## EURO 2016 Schedule at a Glance

| Sunday, July 3 | Monday - Wednesday | | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|---|
| | Morning A | | MA 08:30-10:00 Parallel Sessions | TA 08:30-10:00 Parallel Sessions | WA 08:30-10:00 Parallel Sessions |
| | Refreshment Break | | 10:00-10:30 | 10:00-10:30 | 10:00-10:30 |
| **Registration Open 12:00 - 20:00** | Morning B | | MB 10:30-12:00 Parallel Sessions | TB 10:30-12:00 Parallel Sessions | WB 10:30-12:00 Parallel Sessions |
| | Lunch 12:00 -14:15 | | 12:00-12:30 | 12:00-12:30 | 12:00-12:30 |
| | | Midday C | MC 12:30-14:00 Parallel Sessions | TC 12:30-14:00 Parallel Sessions | WC 12:30-14:00 Parallel Sessions |
| **Exhibition Open 12:00 - 20:00** | | | 14:00-14:30 | 14:00-14:30 | 14:00-14:30 |
| | Afternoon D | | MD 14:30-16:00 Parallel Sessions | TD 14:30-16:00 Parallel Sessions | WD 14:30-15:30 **Plenary** |
| | Refreshment Break | | 16:00-16:30 | - | 15:30-16:00 |
| SE 16:30-18:00 **Opening Session** | Afternoon E | | ME 16:30-17:30 **Plenary** | TE 17:30-18:30 **Plenary** | WE 16:00-17:45 **Closing Session** |
| Welcome Reception | Evening | | Snack & Beer Old Market Square | Conference Dinner | Farewell Party |

## Awards and Special Presentations Schedule

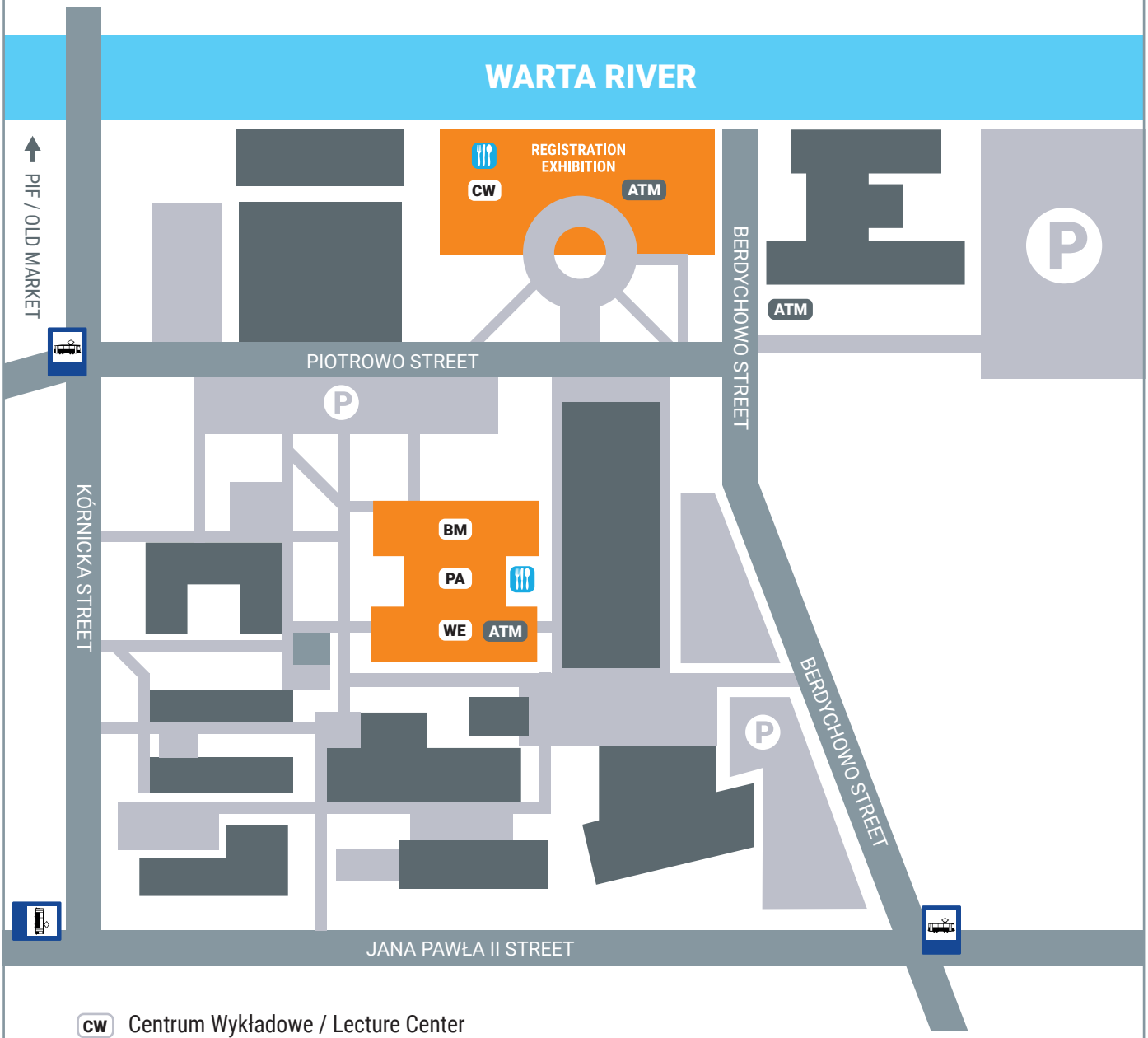
| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| Morning A | | MA 08:30-10:00 **ROADEF/EURO** (CW, 123) | TA 08:30-10:00 **ROADEF/EURO** (CW, 123) | WA 08:30-10:00 |
| Morning B | | MB 10:30-12:00 **EJOR** (CW, 1) **Memorial session** (CW, 123) | TB 10:30-12:00 **EDDA** (CW, 123) | WB 10:30-12:00 |
| Midday C | | MC 12:30-14:00 **EEPA 1** (CW, 123) **EthOR** (CW, 1) | TC 12:30-14:00 | WC 12:30-14:00 |
| Afternoon D | | MD 14:30-16:00 **EEPA 2** (CW, 123) | TD 14:30-16:00 **MAI Roundtable** (CW, 123) | WD 14:30-15:30 |
| Afternoon E | SE 16:30-18:00 **Opening Session EGM, EDSM** | ME 16:30-17:30 | TE 17:30-18:30 | WE 16:00-17:45 **Closing Session** |

## Invited Speakers Schedule (Building CW, Aula)

| | Sunday, July 3 | Monday, July 4 | Tuesday, July 5 | Wednesday, July 6 |
|---|---|---|---|---|
| Morning A | | MA 08:30-10:00 **Marielle Christiansen** | TA 08:30-10:00 **José Fernando Oliveira** | WA 08:30-10:00 **Marc Pirlot** |
| Morning B | | MB 10:30-12:00 **Mauricio Resende** | MB 10:30-12:00 **Gerrit Timmer** | WB 10:30-12:00 **Stephen J. Wright** |
| Midday C | | MC 12:30-14:00 **Alexander Shapiro** | TB 12:30-14:00 **Emma Hart** | WB 12:30-14:00 **Giovanni Rinaldi** |
| Afternoon D | | MD 14:30-16:00 **Hans Georg Bock** | TD 14:30-16:00 **Pablo Moscato** | WD 14:30-15:30 plenary **Rolf Möhring** |
| Afternoon E | SE 16:30-18:00 **Opening Session** | ME 16:30-17:30 plenary **Dimitris Bertsimas** | TE 17:30-18:30, plenary **Robert Aumann** Poznań International Fair Earth Hall (Sala Ziemi) | WE 16:00-17:45 **Closing Session** |

EURO 2016 POZNAŃ 3-6 07 2016

# CONFERENCE VENUE




- CW Centrum Wykładowe / Lecture Center
- BM Budowa Maszyn / Mechanical Engineering
- WE Wydział Elektryczny / Faculty of Electrical Engineering
- PA Pasaż / Passage
- Gastronomia / Gastronomy