

**11<sup>th</sup> International Conference on Advances in Modal Logic**  
**Budapest, 30 August – 2 September 2016**



**PROGRAM BOOK**

# Conference Information

## Local Organizing Committee Chair

- András Máté (Eötvös University, Budapest, Hungary)

## Local Organizing Committee

- Tamás Bitai (Eötvös University, Budapest, Hungary)
- Réka Markovich (Eötvös University, Budapest, Hungary)
- András Máté (Eötvös University, Budapest, Hungary)
- Péter Mekis (Eötvös University, Budapest, Hungary)
- Attila Molnár (Eötvös University, Budapest, Hungary)
- Edi Pavlovic (Central European University, Budapest, Hungary)
- Gergely Székely (Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences)

## AiML Programme Committee

- Natasha Alechina (University of Nottingham)
- Carlos Areces (FaMAF, Universidad Nacional de Córdoba)
- Philippe Balbiani (IRIT, Toulouse, France)
- Alexandru Baltag (FNWI ILLC)
- Lev Beklemishev (Steklov Mathematical Institute of Russian Academy of Sciences in Moscow)
- Thomas Bolander (Technical University of Denmark)
- Torben Braüner (Roskilde University, Denmark)
- Serenella Cerrito (Laboratoire IBISC, Evry France)
- Stéphane Demri (LSV, CNRS, ENS Cachan)
- David Fernández-Duque (Instituto Tecnológico Autónomo de México)
- Melvin Fitting (Lehman College, CUNY, USA)
- David Gabelaia (The Free University of Tbilisi, Tbilisi, Georgia)
- Silvio Ghilardi (Università degli Studi di Milano, Italy)
- Valentin Goranko (Stockholm University)
- Rajeev Goré (The Australian National University)
- Andreas Herzig (IRIT, Toulouse, France)

- Rosalie Iemhoff (Utrecht University)
- Agi Kurucz (King's College London)
- Roman Kuznets (TU Wien)
- Martin Lange (University of Kassel, Germany)
- Carsten Lutz (Universität Bremen)
- András Máté (Eötvös University, Budapest, Hungary)
- Angelo Montanari (University of Udine)
- Larry Moss (Indiana University, USA)
- Sara Negri (University of Helsinki)
- Sergei Odintsov (Novosibirsk State University)
- Hiroakira Ono (Japan Advanced Institute of Science and Technology)
- Valeria de Paiva (Nuance, USA)
- Mark Reynolds (The University of Western Australia)
- Ilya Shapirovsky (Institute for the Information Transmission Problems)
- Renate Schmidt (University of Manchester)
- Valentin Shehtman (Institute for the Information Transmission Problems)
- Viorica Sofronie-Stokkermans (Universität Koblenz-Landau)
- Thomas Studer (Universität Bern)
- Rineke Verbrugge (Groningen, NL)
- Heinrich Wansing (Ruhr University Bochum)
- Michael Zakharyashev (Birkbeck College London, UK)

## Programme Committee Co-Chairs

- Lev Beklemishev (Steklov Mathematical Institute of Russian Academy of Sciences in Moscow)
- Stéphane Demri (LSV, CNRS, ENS Cachan)

## Organizing Agency

Weco Travel Ltd.

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Tel: +3612667032

E-mail: [aim12016@wecotravel.hu](mailto:aim12016@wecotravel.hu)

## Venue

Central European University (CEU)  
H-1051 Budapest, Nádor u. 9.

## Registration Desk Opening Hours

The Registration Desk – where advanced and on-site registrants may pick up their conference material – is operating in the aula of *Auditorium* (Faculty Tower – Ground floor).

The staff of the Conference Secretariat will be at your service at the Registration Desk. All inquiries about registration, hotel bookings, social events, excursion will be assisted at the desk.

30 August (Tuesday)	8:00 – 19:00
31 August (Wednesday)	8:30 – 13:30
1 September (Thursday)	8:30 – 18:00
2 September (Friday)	8:30 – 18:00

## Plenary Sessions

Plenary sessions and invited talks will take place in *Auditorium* on the Ground floor (Faculty Tower).

## Parallel Sessions

Parallel sessions will take place in *Gellner room* and *Popper room* on the 1<sup>st</sup> Floor (Monument Building), unless stated otherwise in the daily program.

## Badge

Participants will receive a badge upon registration. Since your personal badge entitles you to enter the sessions, please make sure that you wear your badge at all times during all conference activities and social events.

## Certificate of Attendance

A Certificate of Attendance can be obtained upon request at the Registration Desk. Please submit your request before Thursday, 2 September 2016.

## Registration Fees

From 1 July 2016

Delegate 250 EUR  
Student 150 EUR

Students are kindly requested to prove their student status by showing their student's card or a letter signed officially by the Dean's Office upon registration or send a copy of them to the Conference Secretariat at: [aim12016@wecotravel.hu](mailto:aim12016@wecotravel.hu)

Registration fee includes:

- Admission to the Conference
- Conference material including the Program book and Proceedings of Full Papers and Short Presentations
- Coffee breaks and lunches on Tuesday, Wednesday, Thursday and Friday
- Excursion to Szentendre on 31 August

## Social Events

### Conference Dinner

We invite you to join a splendid buffet dinner on the board of a Columbus Restaurant and Pub Boat between 19:00 and 22:00 on Friday, 1 September. The boat is anchored between the Chain Bridge ("Lánchíd") and the Erzsébet Bridge on the Vigadó Square at the Pier Nr. 4.

Price: 30 EUR/person

### Coffee Breaks, Lunches

Refreshments and lunch will be served during coffee and lunch breaks in the aula of *Auditorium* on the Ground Floor (Faculty Tower).

### Excursion

The excursion to Szentendre will take place on 31 August from 14.00 until approximately 18.00.

Transportation to and from Szentendre is arranged for the participants.

The excursion is included in the registration fee for conference participants and available for accompanying persons for 15 EUR.

*Participants are kindly requested to gather at the main entrance of the university at 13:45. Departure from the university to the buses at 13:55.*

# Local Information

## Currency, Exchange, Credit Cards

The official currency in Hungary is Hungarian Forint (HUF). Exchange facilities are offered to participants at the airport, in hotels, at the exchange desk of the banks at around the daily rate indicated by the Hungarian National Bank. American Express, Visa, and Eurocard/Master Card are accepted at the registration desk, in hotels, restaurants and city stores, but you should ask or look for the logo before ordering a service.

## Insurance

The Organizing Committee cannot take responsibility for injuries or losses occurring to persons or personal belongings during the Conference.

## Parking

Parking in the central districts of Budapest is available upon payment only. You need to purchase a parking ticket from the vending machines on the streets. Only HUF coins are accepted.

## Local Transportation in Budapest

Public transport in the city is well organized. Trams, buses and metro trains operate without conductors. Tickets must be purchased in advance at metro stations or at vendor machines at some tram and bus stops. Weekly and Tourist (valid for 3 days) passes allowing free travel on all means of transportation within the city limits can be bought at each metro station.

A Budapest public transport route planner and live (GPS-based) timetable is available for smartphones and tablets (Android/Apple/Windows Phone). The name of the app is “BKK FUTÁR”.

## Taxis

Taxis are yellow in Budapest. We suggest that you use only taxis equipped with a taximeter, such as Fótaxi, City Taxi, TaxiPlus or Budapest Taxi. Beware of private cabs, especially those without a taximeter.

## Tipping

It is customary to give a tip of 10% over the amount of the bill at restaurants (unless service charge is already included) and in taxis.

## **Electricity Supply**

In Hungary, electricity is supplied at 230 V, 50 Hz. The 2-pin connecting plug is different from that used in some other countries, e.g. the USA, the UK and Japan.

## **Notice for Drivers (Zero Alcohol)**

Drivers should be aware that there is a zero tolerance of blood alcohol level while driving in Hungary.

## **Shopping Hours**

The usual shopping hours in Budapest are from 10:00 to 18:00, in big shopping centers around the city up to 21:00. Shops are open on Sundays. For further information please contact the Registration Desk.

## **Smoking**

Smoking is not permitted inside the conference building or at the venues for the social functions. Smokers are required to smoke outdoors in the designated area.

# Program\*

Also available on the conference website!

Visit

<http://phil.elte.hu/aiml2016>

or scan



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\*Updated on 31 August 2016.



# Tuesday, 30<sup>th</sup> August 2016

8:30 – 8:55 Registration

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## 9:00 – 10:00 Session 1 (Auditorium) – Invited talk

Chair: Lev Beklemishev

9:00 – 10:00 *Modal Automata: Studying Fixpoint Logics one Step at a Time*  
Yde Venema (ILLC, Universiteit van Amsterdam)

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10:00 – 10:30 Coffee break

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## 10:30 – 12:00 Session 2 (Auditorium)

Chair: Guram Bezhanishvili

10:30 – 11:00 *The Tangled Derivative Logic of the Real Line and Zero-Dimensional Spaces*  
Robert Goldblatt and Ian Hodkinson

11:00 – 11:30 *The Succinctness of First-Order Logic over Modal Logic via a Formula Size Game*  
Lauri Hella and Miikka Vilander

11:30 – 12:00 *Axiomatizing a Real-Valued Modal Logic*  
George Metcalfe, Denisa Diaconescu and Laura Schnüriger

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12:00 – 13:30 Lunch

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## 13:30 – 14:30 Session 3

	<p><b>Session 3A (Gellner room)</b> Chair: Marcus Kracht<sup>†</sup></p>	<p><b>Session 3B (Popper room)</b> Chair: Robert Goldblatt<sup>†</sup></p>
13:30–13:42	<p><i>Distributive mereotopology</i><sup>†</sup> Tatyana Ivanova and Dimiter Vakarelov</p>	<p><i>Computability of definability in the class of all KD45 frames</i> Dimitar Georgiev</p>
13:42–13:54	<p><i>The length of distinguishing modal formulae</i> Valentin Goranko and Louwe B. Kuijer</p>	<p><i>The Kripke sheaf completion of weak constant domain principle is not finitely axiomatizable</i> Dmitriy Skvortsov</p>
13:54–14:06	<p><i>On the Completeness of EL-Equations: First Results</i> Stanislav Kikot, Agi Kurucz, Yoshihito Tanaka, Frank Wolter and Michael Zakharyashev</p>	<p><i>A survey on Kearns' modal semantics without possible worlds</i> Hitoshi Omori and Daniel Skurt</p>
14:06–14:18	<p><i>On modal logic of submodels</i> Ilya Shapirovsky and Denis Saveliev</p>	<p><i>Beyond knowledge: when an agent imagines</i> Joan Casas-Roma, Antonia Huertas and M. Elena Rodriguez</p>
14:18–14:30	<p>Questions</p>	<p>Questions</p>

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<sup>†</sup>Updated.

## 14:40 – 15:40 Session 4 (Auditorium)

Chair: Sara Negri

14:40 – 15:10 *A Paraconsistent View on B and S5*  
Arnon Avron and Anna Zamansky

15:10 – 15:40 *Synthetic Completeness Proofs for Seligman-Style  
Tableau Systems*  
Klaus Frovin Joergensen, Patrick Blackburn,  
Thomas Bolander and Torben Braüner

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15:40 – 16:00 Coffee break

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## 16:00 – 19:00 Session 5 (Auditorium)

### In Memoriam: Alexander V. Chagrov

Organizers: Valentin Shehtman and Michael Zakharyashev

16:00 – 16:30 *Alexander Chagrov and Modal Logic*  
Valentin Shehtman

16:30 – 17:30 *Modal logics of interval relations: a selective overview*  
Valentin Goranko (Stockholm University)

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17:30 – 17:40 Coffee

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17:40 – 18:00 *WS5 as a Metalogic of Superintuitionistic Multiple-  
Conclusion Consequence Relations*  
Alex Citkin

18:00 – 18:30 *Logics of Infinite Depth*  
Marcus Kracht

18:30 – 19:00 *Unification in Modal Logic ALT1*  
Philippe Balbiani and Tinko Tinchev

# Wednesday, 31<sup>st</sup> August 2016

## 9:00 – 10:00 Session 6 (Auditorium) – Invited talk

Chair: Valentin Shehtman

9:00 – 10:00 *The Modal Logic of Topology: New Directions*  
Guram Bezhanishvili (New Mexico State University)

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10:00 – 10:30 Coffee break

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## 10:30 – 12:30 Session 7 (Auditorium)

Chair: Stéphane Demri

10:30 – 11:00 *It ain't necessarily so: Basic sequent systems for negative modalities*<sup>‡</sup>  
Ori Lahav, João Marcos and Yoni Zohar

11:00 – 11:30 *Axiomatizing the Lexicographic Products of Modal Logics with LTL*  
Philippe Balbiani and David Fernández Duque

11:30 – 12:00 *Propositional Dynamic Logic with Belnapian Truth Values*  
Igor Sedlar

12:00 – 12:30 *Decidable First-Order Modal Logics with Counting Quantifiers*  
Christopher Hampson

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12:30 – 14:00 Lunch

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14:00 – 18:00 Excursion to Szentendre

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<sup>‡</sup>Updated.

# Thursday, 1<sup>st</sup> September 2016

## 9:00 – 10:30 Session 8 (Auditorium)

Chair: András Máté

09:00 – 09:30 CEU Talk: *Modal Logic in the Quantified Argument Calculus*  
Hanoch Ben-Yami (Central European University, Budapest)

09:30 – 10:00 *Local Tabularity without Transitivity*  
Ilya Shapirovsky and Valentin Shehtman

10:00 – 10:30 *The Logic of Conditional Beliefs: Neighbourhood Semantics and Sequent Calculus*  
Marianna Girlando, Sara Negri, Nicola Olivetti and Vincent Risch

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10:30 – 11:00 Coffee break

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## 11:00 – 12:30 Session 9 (Auditorium)

Chair: Philippe Balbiani

11:00 – 11:30 *“Knowing Value” Logic as a Normal Modal Logic*  
Tao Gu and Yanjing Wang

11:30 – 12:00 *To Know is to Know the Value of a Variable*  
Alexandru Baltag

12:00 – 12:30 *The Logic of Where and While in the 13<sup>th</sup> and 14<sup>th</sup> Centuries*<sup>§</sup>  
Sara L. Uckelman

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12:30 – 14:00 Lunch

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<sup>§</sup>Changed.

## 14:00 – 16:00 Session 10 (Auditorium)

Chair: Alexandru Baltag

14:00 – 14:30 *About Intuitionistic Public Announcement Logic*  
Philippe Balbiani and Didier Galmiche

14:30 – 15:00 *Fully Arbitrary Public Announcements*  
Hans van Ditmarsch, Wiebe Van Der Hoek and  
Louwe B. Kuijjer

15:00 – 15:30 *Locales, Nuclei, and Dragalin Frames*  
Guram Bezhanishvili and Wesley Holliday

15:30 – 16:00 *Before Announcement*  
Philippe Balbiani, Hans van Ditmarsch and  
Andreas Herzig

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16:00 – 16:30 Coffee break

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**16:30 – 18:00 Session 11**

	<b>Session 11A (Gellner room)</b> Chair: Didier Galmiche <sup>¶</sup>	<b>Session 11B (Popper room)</b> Chair: George Metcalfe <sup>¶</sup>
16:30 – 16:42	<i>Gödel's incompleteness properties and the expressive quality of some modal-behaving logics</i> Hajnal Andreka, Mohamed Khaled and Istvan Nemeti	<i>Normal default rules as epistemic actions</i> Michal Dancak and Michal Pelis
16:42 – 16:54	<i>Algebraic semantics for logics with necessity and sufficiency</i> Ivo Düntsch, Ewa Orłowska and Tinko Tinchev	<i>Axiomatizing Modal Dependence Logics</i> Fan Yang
16:54 – 17:06	<i>Semi-Provability Predicates and Extensions of GL</i> Fedor Pakhomov	<i>Expressivity of Many-Valued Modal Logics, Coalgebraically</i> Marta Bilkova and Matej Dostal
17:06 – 17:18	<i>Big and small steps for fast and slow provability</i> Paula Henk	<i>The logic of Resources and Capabilities</i> Giuseppe Greco, Marta Bilkova, Alessandra Palmigiano, Nachoem Wijenberg and Apostolos Tzimoulis

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<sup>¶</sup>Updated.

	<b>Session 11A (Gellner room)</b>	<b>Session 11B (Popper room)</b>
17:18 – 17:30	<i>Free Boolean extensions of Heyting algebras</i> Michał Stronkowski	<i>Neighbourhood products of pretransitive logics with S5</i> Andrey Kudinov
17:30 – 17:42	<i>Notes on the reduction property for GLP-algebras</i> Lev Beklemishev	<i>Agents, Roles and Rights. A Formal Analysis on Hoffeldian Conceptions</i> Réka Markovich
17:42 – 17:54	Questions	Questions

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19:00 Conference Dinner



# Friday, 2<sup>nd</sup> September 2016

## 9:00 – 10:00 Session 12 (Auditorium) – Invited talk

Chair: Stéphane Demri

9:00 – 10:00 *Beliefs and Evidence in Justification Models*  
Sonja Smets (ILLC, Universiteit van Amsterdam)

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10:00 – 10:30 Coffee break

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## 10:30 – 12:30 Session 13 (Auditorium)

Chair: Ilya Shapirovsky

10:30 – 11:00 *A Canonical Model Construction for Intuitionistic Distributed Knowledge*<sup>||</sup>  
Gerhard Jäger and Michel Marti

11:00 – 11:30 *Classical and Empirical Negation in Subintuitionistic Logic*  
Michael De and Hitoshi Omori

11:30 – 12:00 *The Structure of the Lattice of Normal Extensions of Modal Logics with Cyclic Axioms*  
Yutaka Miyazaki

12:00 – 12:30 *Update, Probability, Knowledge and Belief*<sup>||</sup>  
Jan Van Eijck and Bryan Renne

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12:30 – 14:00 Lunch

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<sup>||</sup>Changed.

**14:00 – 14:36 Session 14**

	<p><b>Session 14A (Auditorium)</b> Chair: Serenella Cerrito**</p>	<p><b>Session 14B (Popper room)</b> Chair: Melvin Fitting**</p>
14:00 – 14:12	<p><i>Herbrand's theorem for hybrid logic</i> Diana Costa, Manuel A. Martins and João Marcos</p>	<p><i>On the Lambek calculus of the Kleene star and the exponential</i> Stepan Kuznetsov</p>
14:12 – 14:24	<p><i>Temporal hybrid logics with the modalities "Tomorrow" and "Yesterday"</i> Polina Vakhrusheva</p>	<p><i>Constructive canonicity for non-classical modal fixed-point logics</i> Willem Conradie, Andrew Craig, Alessandra Palmigiano and Zhiguang Zhao</p>
14:24 – 14:36	<p><i>Canonical rules and formulas for PDL</i> Julia Ilin</p>	<p><i>Temporal modal logic of intervals with relation 'before'</i> Alexei Chizhov</p>
14:36 – 14:40	Questions	Questions

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\*\*Updated.

## 14:45 – 16:15 Session 15 (Auditorium)

Chair: David Fernández-Duque

14:45 – 15:15 *A Cut-Free Sequent Calculus for the Logic of Subset Spaces*

Birgit Elbl

15:15 – 15:45 *Embedding Formalisms: Hypersequents and Two-Level Systems of Rules*

Agata Ciabattoni and Francesco A. Genco

15:45 – 16:15 *A Focused Framework for Emulating Modal Proof Systems*

Sonia Marin, Dale Miller and Marco Volpe

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16:15 – 16:40 Coffee break

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## 16:40 – 18:10 Session 16 (Popper room)

Chair: Yde Venema

16:40 – 17:10 *Algebraic Semantics of Refinement Modal Logic*

Zeinab Bakhtiari, Hans van Ditmarsch and Sabine Frittella

17:10 – 17:40 *Verification Logic: An Arithmetical Interpretation for Negative Introspection*

Juan Pablo Aguilera and David Fernández-Duque

17:40 – 18:10 *Post Completeness in Congruential Modal Logics<sup>††</sup>*

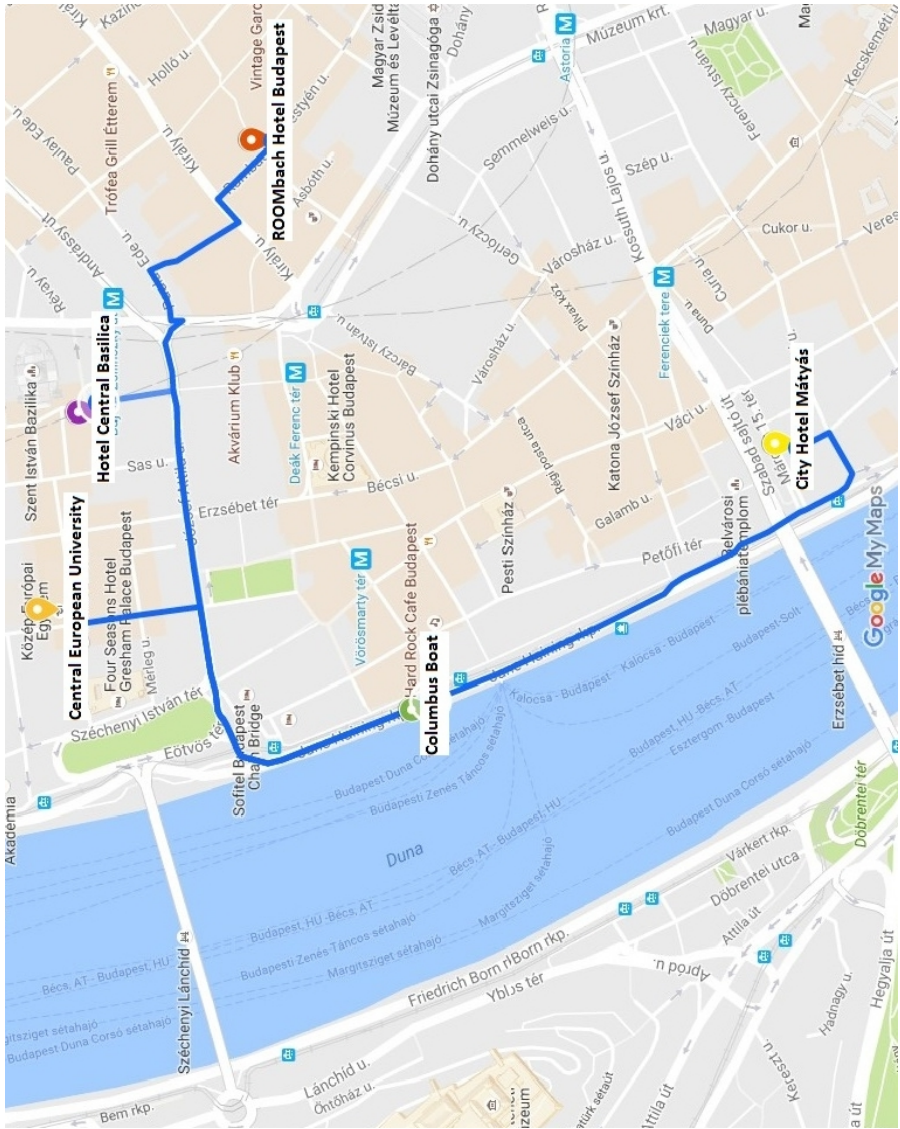
Peter Fritz

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18:10 AiML'16 closing

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<sup>††</sup>Changed.



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