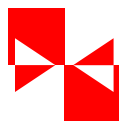


*Program*



Tridesetpeti skup o prometnim  
sustavima s međunarodnim  
sudjelovanjem

**AUTOMATIZACIJA  
U PROMETU 2015**



35<sup>th</sup> Conference on  
Transportation Systems with  
International Participation

**AUTOMATION IN  
TRANSPORTATION 2015**

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3.-8.11.2015.

Zagreb – Croatia / London – England

*www.korema.hr*

## Organizator / Organized by

KoREMA

Hrvatsko društvo za komunikacije, računarstvo,  
elektroniku, mjerenja i automatiku  
Croatian Society for Communications, Computing, Electronics,  
Measurements and Control

Član Međunarodne konfederacije za automatsko upravljanje IFAC  
Member of the International Federation of Automatic Control  
IFAC

Tajništvo / Secretariat:

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Phone: (+385 1) 612 98 69  
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- ◆ Ministarstvo pomorstva, prometa i infrastrukture RH / Ministry of Maritime Affairs, Transport and Infrastructure RH
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- ◆ Ministarstvo znanosti, obrazovanja i sporta RH / Ministry of Science, Education and Sports RH
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- ◆ Zagrebačka županija / Zagreb County
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- ◆ Elektrotehnički fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku / Faculty of Electrical Engineering University Josip Juraj Strossmayer of Osijek
- ◆ Fakultet elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu / Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture University of Split
- ◆ Fakultet prometnih znanosti Sveučilišta u Zagrebu / Faculty of Transport and Traffic Engineering University of Zagreb
- ◆ Pomorski fakultet Sveučilišta u Rijeci / Faculty of Maritime Studies University of Rijeka
- ◆ Pomorski fakultet Sveučilišta u Splitu / Faculty of Maritime Studies University of Split
- ◆ Zajednica saveza osoba s invaliditetom Hrvatske – SOIH / Croatian Union of Associations of Persons with Disabilities
- ◆ Hrvatska akademija znanosti i umjetnosti - Znanstveno vijeće za promet / Croatian Academy of Sciences and Arts - The Scientific Council for Traffic

- ◆ Hrvatska komora inženjera tehnologije prometa i transporta Zagreb / Croatian Chamber of Transport Engineers Zagreb
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- |                                     |  |
|-------------------------------------|--|
| ◆ Hrvatska gospodarska komora       | ◆ Thales GmbH, Wien, Austria             |
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| ◆ Končar - Električna vozila d.d.   | ◆ Zračna luka Dubrovnik d.o.o.           |
| ◆ Končar - Generatori i motori d.d. | ◆ Zračna luka Split d.o.o.               |
| ◆ Promel Projekt d.o.o.             | ◆ Međunarodna zračna luka Zagreb d.d.    |

### Izložbe / Exhibitions

- ◆ KONČAR – Elektroindustrija d.d. Zagreb  
Transportni sustavi / Transportation Systems
- ◆ KoREMA  
Zbornici – Tridesetpet skupova o prometnim sustavima /  
Proceedings-Thirty five Conferences on Transportation  
Systems

### Međunarodni programski odbor / International Programme Committee

- |   |   |
|---|---|
| <span style="border: 1px solid black; padding: 2px;">K. Bombol (Macedonia)</span> | M. Marchis (Italy)                      |
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## Organizacijski odbor / Organizing Committee

Predsjednik/Chair: Željko Šakić, KoREMA – Sekcija za prometne sustave, Unska 3, Zagreb, Hrvatska  
tel: (+385 1) 612 98 69 fax: (+385 1) 612 98 70  
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M. Anžek, Zagreb	B. Mikinac, Zagreb
H. Baričević, Rijeka	M. Mirić, Zagreb
M. Brkić, Zagreb	S. Pavlin, Zagreb
Ž. Hocenski, Osijek	D. Perović, Pula
D. Kezić, Split	D. Starčević, Zagreb
T. Macan, Dubrovnik	

## Službeni jezici skupa / Official Languages

Službeni jezici skupa su hrvatski i engleski / Official languages of the Conference are Croatian and English.

## Teme / Topics

- ◆ Cestovni promet / Road Transportation
- ◆ Pomorski promet / Maritime Transportation
- ◆ Zračni promet / Air Transportation
- ◆ Željeznički promet / Railway Transportation

## Okrugli stolovi / Round tables

- Javni gradski promet grada Zagreba i okruženja (4. Okrugli stol) / Zagreb Public Transport (4<sup>th</sup> Round table)
- Osobe s invaliditetom u prometu / Persons with Disabilities in Transport

## Stručne ekskurzije / Field Trips

Zagreb, Hrvatska / Croatia – 04.11.2015.

- Međunarodna zračna luka Zagreb / Zagreb International Airport

London, Engleska / England – 05.11.2015. – 08.11.2015.

- Zračna luka Heathrow/Luton / Heathrow/Luton Airport
- Sveučilište u Londonu / City University London
- Prijevoz London / Transport of London
- Centar za upravljenje prometom London / London Traffic Control Center
- Britanske željeznice / British Railways
- Luka London Gateway / The Port London Gateway
- Nacionalni pomorski muzej Greenwich / National Maritime Museum Greenwich

- Greenwich / Greenwich
- Znanstveno-tehnički muzej / Science Museum

### Program / Timetable

**Fakultet elektrotehnike i računarstva / Faculty of  
Electrical Engineering and Computing  
Unska 3, Zagreb, Croatia**



08:00-09:00 Utorak / Tuesday 03.11.2015.  
Kongresni centar / Congress Center

### REGISTRACIJA / REGISTRATION

09:00-09:30 Utorak / Tuesday 03.11.2015.  
Siva vijećnica / Grey hall

### OTVORENJE SKUPA / CONFERENCE OPENING

Predsjedatelji / Chairs: Ž. Šakić (Croatia), L. Kos (Slovenia),  
Dž. Čelić (Bosnia end Hercegovina), M. Mirić (Croatia),  
Ž. Hocenski(Croatia)

*Počasni predsjedatelji / Honored chairs: S. Janjanin (Croatia), J.  
Božičević (Croatia), J. Starešinić (Croatia), M. Davidović  
(Croatia)*

Prigodan nastup HKUD "Željezničar" / Performance of HKUD  
"Željezničar"

09:30-09:50

Utorak / Tuesday 03.11.2015.

Siva vijećnica / Grey hall

**Tridesetpet skupova o prometnim sustavima /  
Thirty five Conferences on Transportation  
Systems**

Predsjedatelj / Chair: S. Janjanin,  
Moderatori / Moderators: J. Božičević, J. Starešinić, M.  
Davidović, Ž. Šakić (Croatia)

09:50-10:10

Utorak / Tuesday 03.11.2015.

Pauza za kavu – Razgledavanje izložbi / Coffee break – Exhibition  
viewing

10:10 - 10:40

Četvrtak / Thursday 03.11.2015.

**Pozvano predavanje / Invited paper**

Sven Lončarić, Siniša Šegvić, Faculty of Electrical Engineering  
Zagreb, Croatia: „**Računalni vid za inteligentne transportne  
sustave / Computer vision for intelligent transport systems**“

10:40-10:55

Utorak / Tuesday 03.11.2015.

Pauza – Razgledavanje izložbi / Break – Exhibition viewing

10:55-12:05

Utorak / Tuesday 03.11.2015.

Siva vijećnica / Grey hall

**Cestovni promet / Road Transportation**

Predsjedatelji / Chairs: B. Mikinac (Croatia), M. Anžek (Croatia)

Nenad Sikirica, Krapina, Renato Filjar, Serdjo Kos, Rijeka,  
Croatia: „**A novel approach in GNSS positioning error  
interpretation for Intelligent Transport Systems**“

Irena Ištoka Otković, Siniša Maričić, Osijek, Croatia:  
„**Comparison of simulation results obtained by calibrated and  
non-calibrated microsimulation traffic model**“

Krešimir Grgić, Milan Ivošević, Višnja Križanović Čik, Osijek,  
Croatia: „**Routing Challenges in Vehicular Ad Hoc Networks –  
Current Solutions and Future Trends**“

Verica Danchevska, Ile Cvetanovski, Dejan Danchevski, Bitola, Macedonia: **„Pan-European transport corridors VIII and X in a function of sustainable development in the Republic of Macedonia“**

Igor Marković, Ivan Ševo, Mostar, Bosnia and Herzegovina: **„Promet u funkciji održivog razvoja / Traffic in function of sustainable development“**

Saša Muschet, Robert Maršanić, Danijel Frka, Rijeka, Croatia: **„Kvaliteta prometnice i njezin utjecaj na sigurnosti u cestovnom prometu / Quality of transportation and its impact on security in road transport“**

Andrej Štrukelj, Maribor, Slovenia, Hotimir ml. Ličen, Petrovaradin, Serbia: **„Eksperimental analysis of bridging structures“**

12:05-12:20

Utorak / Tuesday 03.11.2015.

Pauza za kavu – Razgledavanje izložbi / Coffee break – Exhibition viewing

12:20-13:30

Utorak / Tuesday 03.11.2015.

Siva vijećnica / Grey hall

### **Cestovni promet / Road Transportation**

Predsjedatelji / Chairs: M. Anžek (Croatia), B. Mikinac (Croatia)

Domen Mikuž, Miha Otrin, Ljubljana, Slovenia: **„The importance of climatic and mechanical testing in automotive industry“**

Hrvoje Glavaš, Tomislav Barić, Tomislav Keser, Osijek, Croatia: **„PEDELEC - bicikli s električkom podrškom / PEDELEC - Pedal Electric Cycle“**

Damir Vuljaj, Branko Ban, Lovro Grković, Mario Vražić, Zagreb, Croatia: **„Dimenzioniranje hibridnog pogona u MATLAB programskom paketu / Hybrid drive dimensioning using MATLAB“**

Filip Sušac, Željko Hocenski, Ivan Aleksi, Osijek, Croatia: **„Nadzor i snimanje značajki vožnje automobila radi optimiranja / Monitoring and recording features to optimize driving“**

Željko Smojver, Robert Mrvčić, Hrvoje Baričević, Rijeka, Croatia: **„Prilog zaštiti okoliša kroz osuvremenjavanje javnog prijevoza u Gradu Rijeci / Contribution to environmental protection through the modernization of public transport in the City of Rijeka“**

Saša Šolman, Zagreb, Tomislav Tepeš, Krapina, Croatia: **„Model primjene članka 39. Uredbe br. 165/2014 o tahografima u**

**cestovnom prometu u Republici Hrvatskoj / Model of application of art. 39. regulation no. 165/2014 about tachographs in road transport in Croatia“**

Drago Pupavac, Rijeka, Filip Golubović, Split, Croatia: „**Ljudski resursi u prometu / Human resource in transport“**

13:30-14:30

Utorak / Tuesday 03.11.2015.

PAUZA / BREAK

14:30-15:30

Utorak / Tuesday 03.11.2015.

Siva vijećnica / Grey hall

### **Pomorski promet / Maritime Transportation**

Predsjedatelji / Chairs: Ž. Šakić (Croatia), H. Baričević (Croatia)

Siniša Vilke, Hrvoje Baričević, Borna Debelić, Rijeka, Croatia: „**Sjevernojadranske luke Rijeka, Kopar i Trst – značajne točke Mediteranskog prometnog koridora / Northern adriatic ports Rijeka, Koper and Trieste – significant points of the Mediterranean transport corridor“**

Anita Gudelj, Maja Krčum, Mirko Čorić, Split, Croatia: „**Upravljanje i više-objektna optimizacija rasporeda poslova autonomnih vozila na kontejnerskom terminalu / Modelling and multiobjective optimization for automated guided vehicles at container terminals“**

Mario Vražić, Damir Vuljaj, Zlatko Hanić, Marinko Kovačić, Zagreb, Dario Perović, Gianfranko Jelčić, Pula, Croatia: „**Pristup optimiranju brodske elektroenergetske mreže s obzirom na više harmonike / Approach to ship power network optimization regarding to total harmonic distortion“**

Nenad Knezović, Mravince, Marin Čičerić, Maja Kaliterna-Zago, Lea Staničić, Split, Croatia: „**Dizajn brodskih sustava u odnosu na klasnu oznaku SRtP na primjeru sustava komprimiranog zraka / Ship's system design in relation to SRtP class notation shown on compressed air system“**

Maja Krčum, Anita Gudelj, Split, Darijo Šundrica, Dubrovnik, Croatia: „**Optimizacija sustava upravljanja energijom na plovilima / Optimization of the power management system on the ship“**

Danko Kezić, Aleks Šakota, Joško Šoda, Split, Croatia: „**Upravljanje generatorom inertnog plina pomoću PLC-a / Control of inert gas generator using PLC“**



15:30-16:00 Utorak / Tuesday 03.11.2015.

Pauza za kavu – Razgledavanje izložbi / Coffee break – Exhibition viewing

16:00-19:30 Utorak / Tuesday 03.11.2015.

Siva vijećnica / Grey hall

### Okrugli stol / Round Table

*Javni gradski promet grada Zagreba i okruženja (4. Okrugli stol) / Zagreb Public Transport (4<sup>th</sup> Round table)*

*Voditelj Okruglog stola / Chair Round table:*

*Ž. Šakić (Croatia)*

*Moderatori / Moderators: S. Kelčec-Suhovec (Croatia), M. Ključarić (Croatia), B. Mikinac (Croatia), T. Šabić (Croatia), D. Vučić (Croatia), D. Kapuđija (Croatia), P. Grgasović (Croatia)*

19:30-21:00 Utorak / Tuesday 03.11.2015.

Aula uz dvoranu D2 / Entrance-hall next to D2 hall

### Coctail

08:00 – 09:00 Srijeda / Wednesday 04.11.2015

Kongresni centar / Congress Center

### REGISTRACIJA / REGISTRATION

09:00 – 10:20 Srijeda / Wednesday 04.11.2015

Siva vijećnica / Grey hall

### Zračni promet / Air Transportation

Predsjedatelji / Chairs: R. Rauch (Slovenia), D. Starčević (Croatia)

Ivan Sikora, London, United Kingdom: **„Risk assessment, modelling and proactive safety management system in aviation: a literature review“**

Robert Rauch, Ljubljana, Slovenia: **„Implementing IR390 (performance scheme for ANS and network functions): A practical experience“**

Ilir Mehmedi, Skopje, Jovan Lupeski, Ohrid, Macedonia: **„Determinants of competitiveness in the international air transport“**

Saso Steriev, Ilir Mehmedi, Skopje, Macedonia: **„Influence of performance of usability coefficient of the navigation units at Airport Skopje“**

Marjan Prpovski, Ilir Mehmedi, Skopje, Macedonia: **„Preventive measures for planes that slide off the runway in Skopje Airport“**

Željko Marušić, Dajana Bartulović, Branko Maković, Zagreb, Croatia: **„Metode hladne ekspanzije u svrhu prevencije zamora materijala u zrakoplovnoj strukturi / Cold expansion methods in order to prevent fatigue in ageing aircraft structures“**

Arijan Hucaljuk, Željko Hocenski, Tomislav Matić, Osijek, Croatia: **„Optimiranje dostave paketa u zračnom prometu / Air-mail packages delivery optimisation“**

Igor Erceg, Miomir Kliman, Dubravko Starčević, Damir Haraminčić, Vujo Medoš, Anja Katalinić, Zagreb, Croatia: **„Rekonstrukcija daljinskog upravljanja i nadzora rada rasvjete kolničkih površina na stajankama Međunarodne zračne luke Zagreb / Reconstruction of Remote Control and Monitoring System for operation of Apron's lighting pavement surfaces at International Zagreb Airport“**

10:20 – 10:30

Srijeda / Wednesday 04.11.2015

Pauza za kavu – Razgledavanje izložbi / Coffee break – Exhibition viewing

10:30 – 12:50

Srijeda / Wednesday 04.11.2015.

### Stručna ekskurzija / Field Trip

10:30

Polazak posebnog autobusa ispred Fakulteta elektrotehnike i računarstva Zagreb / Special bus departure from Faculty of Electrical Engineering Zagreb

11:00 – 12:30

Međunarodna zračna luka Zagreb / Zagreb International Airport

13:00

Dolazak posebnog autobusa ispred Fakulteta elektrotehnike i računarstva Zagreb / Special bus arrival to Faculty of Electrical Engineering Zagreb

13:00-14:00

Srijeda / Wednesday 04.11.2015.

PAUZA / BREAK

14:00-16:00

Srijeda / Wednesday 04.11.2015.

### Okrugli stol / Round Table

#### *Osobe s invaliditetom u prometu / Persons with Disabilities in Transport*

**U suradnji sa SOIH** (Zajednica saveza osoba s invaliditetom Hrvatske) / In cooperation with Croatian Union of Association of Persons with Disabilities (SOIH):

*Voditeljica Okruglog stola / Chair Round table:*

*M. Mirić (Croatia)*

*Moderatori / Moderators: R. Džanić (Croatia), M. Knežević (Croatia), A. Halec (Croatia), V. Perić (Croatia), M. Katalenić (Croatia), M. Jakovčev (Croatia)*

16:00 – 17:10

Srijeda / Wednesday 04.11.2015

Siva vijećnica / Grey hall

### Željeznički promet / Railway Transportaion

Predsjedatelji / Chairs: M. Brkić (Croatia), Ž. Šakić (Croatia)

Ljiljana Bosak, Zagreb, Croatia: „**Nova EU legislativa - Četvrti željeznički paket / New EU legislation - Forth railway package**“

Leon Kos, Ljubljana, Slovenia: „**Automation and safety of railway traffic in EU**“

Roland Stadlbauer, Wien, Austria: „**Improving the safety of railway traffic by interconnection of ETCS and condition monitoring**“

Dalibor Vučić, Dean Lalić, Zagreb, Croatia: „**Mjerne postaje HŽ Infrastrukture d.o.o. (sustav za automatsku kontrolu željezničkih vozila - AKZV) / Measuring stations of HŽ Infrastruktura d.o.o. (system for automatic control of railway vehicles - ACRV)**“

Hrvoje Novak, Mario Vašak, Vinko Lešić, Zagreb, Croatia: „**State of the art control methods for energy efficient train operation in railway traffic system**“

Ivo Uglešić, Bojan Franc, Miroslav Šturlan, Igor Matulić, Zagreb, Croatia: „**Analiza izloženosti željezničke mreže kvarovima uzrokovanim atmosferskim pražnjenjima / Analysis of exposure of railway systems to failures induced by lightning strokes**“

Dženan Čelić, Sarajevo, Bosnia and Herzegovina: „**Paralelno sprezanje elektrovnčnih podstanica u cilju smanjenja vršne**“

**snage i podešavanja zaštitnih releja / Parallel connection of traction substations for peak power reduction and adjustment of protective relays“**

17:10 – 17:25 Srijeda / Wednesday 04.11.2015.

Pauza za kavu – Razgledavanje izložbi / Coffee break – Exhibition viewing

17:25 – 18:35 Srijeda / Wednesday 04.11.2015.

Siva vijećnica / Grey hall

**Željeznički promet / Railway Transportation**

Predsjedatelji / Chairs: M. Brkić (Croatia), Ž.Šakić (Croatia)

Ivica Škrtić, Zagreb, Croatia: „**Sustav koordinacije trasa (PCS) / Path coordination system (PCS)**“

Jusuf Crnalić, Josip Ninić, Mario Šimić, Zagreb, Croatia: „**Dizel električni motorni vlakovi serije 7 023 za HŽ Putnički prijevoz / Diesel electric multiple units series 7 023 for HŽ Putnički prijevoz**“

Dražen Kroflin, Stjepan Lovrek, Mladen Puškarić, Zagreb, Croatia: „**Mogućnosti povezivanja i upravljanja vlakova serije HŽ 6112 u višestrukom sastavu / Connectivity and possibility of controlling the several EMU's of HŽ 6112 series in one composition**“

Andrija Eršek, Ivica Gršković, Zvonimir Ubrenkić, Zagreb, Croatia: „**Sustav mjerenja utroška električne energije za željeznička vozila / Energy measurement system for electric traction units**“

Josip Kunac, Božica Radoš, Milan Brkić, Zagreb, Croatia: „**Uvođenje duljih vagona i vlakova za prijevoz kontejnera / Introduction longer waggons and trains for container transport**“

Stjepan Lakušić, Ivo Haladin, Zagreb, Croatia: „**Zagreb 21-CTT: novi sustav pričvršćenja kolosijeka za smanjenje vibracija te povećanje otpornosti na lutajuće struje / Zagreb 21-CTT: new tram track fastening system for vibration reduction and increase the resistant on stray currents**“

Stjepan Lakušić, Tomislav J. Mlinarić, Zagreb, Croatia: „**Hrvatski nacionalni program željezničke infrastrukture za razdoblje 2015-2020 / Croatian national rail infrastructure program for the period 2015-2020**“

18:35 – 18:50 Srijeda / Wednesday 04.11.2015.

Razgovor uz kavu – Razgledavanje izložbi /  
Chat over coffee – Visit the exhibition

06:00

Četvrtak / Thursday 05.11.2015.

### Stručna ekskurzija / Field Trip

- 06:00 Polazak posebnog autobusa ispred Poglavarstva Grada Zagreba / Special bus departure from Zagreb City Government Building
- Prijevoz Zagreb–Pleso /Transfer Zagreb–Pleso
- 06:30 – 06:45 Predaja prtljage i prijava za let / Check in
- 08:30 – 10:00 Let Zagreb – London / Flight Zagreb – London



- 10:10 – 10:30 Podizanje prtljage / Luggage retrieval
- 10:30 – 11:15 Prijevoz Hitrow–Luton / Transfer Hitrow–Luton
- 11:15 – 12:45 Razgledavanje Zračne luke / Sightseeing of Airport
- 12:45 – 13:30 Transfer Zračna luka–Sveučilište u Londonu / Transfer Airport–City University London
- 13:30 – 14:00 Pauza za ručak / Lunch break
- 14:00 – 18:00 Turističko razgledavanje grada Londona uz vodiča / Sightseeing of the city of London with a guide
- 18:30 Dolazak posebnog autobusa u hotel „Thistle City Barbican” u Londonu i smještaj / Arrival of the special bus to „Thistle City Barbican” hotel in London

07:30 - 17:30

Petak / Friday 06.11.2015.

**Stručna ekskurzija / Field Trip**

07:30	Polazak posebnog autobusa ispred hotela „Thistle City Barbican” u Londonu / Special bus departure from hotel „Thistle City Barbican” in London
08:00 – 09:15	Centar za upravljanje prometom London / London Traffic Control Center
09:15 – 10:00	Prijevoz / Transfer
10:00 – 11:15	Prijevoz London / Transport of London
11:15 – 12:00	Prijevoz / Transfer
12:00 – 13:30	Sveučilište u Londonu / City University London
13:30 – 14:00	Pauza za ručak / Lunch break
14:00 – 15:30	Prijevoz / Transfer
15:30 – 17:00	Britanske željeznice / British Railways
17:00 – 17:30	Prijevoz / Transfer
17:30	Slobodno poslijepodne / Free afternoon

07:30-15:30

Subota / Saturday 07.11.2015.

**Stručna ekskurzija / Field Trip**

07:30	Polazak posebnog autobusa ispred hotela „Thistle City Barbican” u Londonu / Special bus departure from hotel „Thistle City Barbican” in London
08:30 – 10:00	Luka London Gateway / The Port London Gateway
10:00 – 10:30	Prijevoz / Transfer
10:30 – 12:30	Nacionalni pomorski muzej Greenwich / National Maritime Museum Greenwich
12:30 – 13:30	Pauza za ručak / Lunch break
13:30 – 14:30	Prijevoz / Transfer
14:30 – 16:30	Znanstveno-tehnički muzej / Science Museum
16:30	Slobodno poslijepodne / Free afternoon

20:00 Subota / Saturday 07.11.2015.

### Zajednička večera / Dinner

#### ZATVARANJE SKUPA – CONFERENCE CLOSING

07:30 - 15:15 Nedjelja / Sunday 08.11.2015.

07:30 Polazak posebnog autobusa ispred hotela „Thistle City Barbican” u Londonu / Special bus departure from hotel „Thistle City Barbican” in London

10:50 – 14:05 Let London - Zagreb / Flight London – Zagreb

14:05 – 14:30 Podizanje prtljage / raising luggage

14:30 – 15:15 Prijevoz Pleso – Zagreb / Transfer Pleso – Zagreb

oko 15:15 Dolazak posebnog autobusa u Zagreb ispred Poglavarstva Grada Zagreba / Special bus arrival to Zagreb City Government Building

#### Program za pratioce / Program for accompanying persons

- Zagreb – razgledavanje grada / Sightseeing of Zagreb town
- London – razgledavanje grada autobusom i pješice (uz turističkog vodiča) / Sightseeing of London town by bus and walk (with travel guide)
- Slobodno vrijeme za šetnju i šoping / Free time for walking and shopping
- Greenwich / Greenwich

#### Kotizacija i prijava sudionika / Registration fee

**Svi sudionici skupa plaćaju kotizaciju.** Kotizacija uključuje sudjelovanje na skupu, zbornik radova i ostale materijale.

Kotizacija za sudionike koji nisu članovi KoREMA iznosi 1.250 Kn + PDV, Za članove KoREMA kotizacija iznosi 1.000 Kn + PDV, Kotizacija se uplaćuje na žiro račun Privredna banka Zagreb d.d. IBAN HR5623400091110490238. **Molimo vas da pošaljete kopiju uplate kotizacije na e-mail korema@korema.hr ili na faks broj 01/ 6129 870.**

Za sudjelovanje na stručnoj ekskurziji u Londonu treba dodatno uplatiti 4.700,00 kn što podmiruje avio kartu, tri noćenja s

doručkom u hotelu (dvokrevetna soba – jednokrevetna soba uz posebnu nadoplatu od 2.500,00 kn) i stručno vođenje. Javiti se u KoREMA-u, tel: 01/ 6129 869 ili e-mail: korema@korema.hr

**All participants pay a registration fee.** The registration fee covers participation at the conference, proceedings and other materials.

For KoREMA non-members the fee is 207 EUR. For KoREMA members the fee is 166 EUR. The fee is payable to: Bank name: Privredna banka Zagreb d.d., Račkoga 6, HR-10000 Zagreb, Croatia, VAT number HR18169119057, IBAN HR5623400091110490238, SWIFT: PBZGHR2X, stating "for Automation in Transportation 2015" and your name. **Please send the copy of your payment with the registration form to e-mail korema@korema.hr or fax number +385(01) 6129 870.**

Participation in a field trip to London, England is subject to an additional 618 EUR costs include airplane ticket, three nights bed and breakfast (double rooms – single rooms are available by additional payment is 329 EUR) and experts guiding. Contact to KoREMA, phone: +385(1) 6129 869 or e-mail: korema@korema.hr

## Odredište / Venue

### GRAD ZAGREB



#### Kratka povijest Zagreba

Današnji Zagreb izrastao je iz dvaju srednjovjekovnih naselja koja su se stoljećima razvijala na dvama susjednim brežuljcima. Prvi pisani spomen Zagreba datira iz 1094. godine kada je na Kaptolu osnovana biskupija, dok susjedni Gradec 1242. godine biva proglašen slobodnim kraljevskim gradom. Oba ta naselja bila su okružena čvrstim bedemima i kulama, ostaci kojih su očuvani sve do danas.



Za turskih najezda na Europu, od XIV. do XVIII. stoljeća, Zagreb je važna pogranična utvrda. Barokna obnova grada u XVII. i XVIII. stoljeću mijenja obličje Gradeca i Kaptola. Ruše se stare drvene kuće a podižu raskošne palače, samostani i crkve. Bogatstvu grada pridonose brojni trgovački sajmovi, prihodi od posjeda i mnoštvo obrtničkih radionica. U grad doseljavaju imućne plemićke obitelji, kraljevi službenici, crkveni velikodostojnici i bogati trgovci iz cijele Europe. Otvaraju se škole i bolnice, prihvaćaju se kulturni običaji europskih prijestolnica. Grad prerasta svoje srednjovjekovne granice i širi se prostranom ravnicom. Podižu se prvi perivoji i ladanjska imanja. Zagreb se potvrđuje kao upravno, gospodarsko i kulturno središte Hrvatske.

Administrativnim ujedinjenjem Kaptola, Gradeca i okolnih naselja u jedinstveni grad Zagreb 1850. godine, njegov se razvoj još više ubrzava. Razorni potres iz 1880. godine pokrenuo je obnovu i modernizaciju mnogih dotrajalih četvrti i građevina. Podižu se reprezentativne javne zgrade, uređuju parkovi i fontane, organizira se javni prijevoz i komunalne usluge.

U XIX. stoljeću broj se stanovnika udeseterostručuje. Dvadeseto stoljeće donosi u Zagreb duh secesije. Grad živi u obilju građanskog društva, čvrsto povezan s tadašnjim europskim središtima kulture, umjetnosti i znanosti. S rastom bogatstva i industrije, grad se od 60-tih godina naglo širi prostranom ravnicom uz rijeku Savu gdje niče suvremeni poslovni grad, spreman za izazove trećega tisućljeća.

## CITY OF ZAGREB



### A Brief History of Zagreb

Today's Zagreb has grown out of two medieval settlements that for centuries developed on neighbouring hills. The first written mention of the city dates from 1094, when a diocese was founded on Kaptol, while in 1242, neighbouring Gradec was proclaimed a free and royal city. Both the settlements were surrounded by high walls and towers, remains of which are still preserved.

During the Turkish onslaughts on Europe, between the 14th and 18th centuries, Zagreb was an important border fortress. The Baroque reconstruction of the city in the 17th and 18th centuries changed the appearance of the city. The old wooden houses were demolished, opulent palaces, monasteries and churches were built. The many trade fairs, the revenues from landed estates and the offerings of the many craft workshops greatly contributed to the wealth of the city. Affluent aristocratic families, royal officials, church dignitaries and rich traders from the whole of Europe moved into the city. Schools and hospitals were opened, and the manners of European capitals were adopted. The city outgrew its medieval borders and spread to the lowlands. The first parks and country houses were built. Zagreb confirmed its position as the administrative, cultural and economic centre of Croatia.

When Kaptol, Gradec and the surrounding settlements were administratively combined into the integrated city of Zagreb in 1850, the development accelerated still more. The disastrous earthquake of 1880 sparked off the reconstruction and modernization of many shabby neighbourhoods and buildings. Prestigious public buildings were erected, parks and fountains were made, and transportation and other infrastructures were organized.

In the 19th century the population increased tenfold. The twentieth century brought the Secession style to Zagreb. The city lived in the plenty of a civil society, with firm links with all the central European centres. With an increase in wealth and industry from the 1960s on, the city spread out over the wide plains alongside the Sava River, where a new, contemporary business city has develop, ready for the challenges of the third millennium.

#### Adresa za kontakte / Contact Address:

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**PRIJAVNICA / REPLY FORM**

Automatizacija u prometu 2015  
Automation in Transportation 2015  
Zagreb - Croatia / London - England, 3.-8.11.2015.

Titula/Title (Dr.,Mr.,Ing.): \_\_\_\_\_ Ime/First name: \_\_\_\_\_ Prezime/Family name: \_\_\_\_\_

Broj putovnice / No of Passport \_\_\_\_\_

Ustanova/Company: \_\_\_\_\_

Adresa ustanove, Pošta i Grad / Company address, Post code and City: \_\_\_\_\_

Država/Country: \_\_\_\_\_ tel/phone: \_\_\_\_\_ fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Sudjelovat ću na Skupu/I will participate at the Conference:  s radom/with a paper  bez rada/without a paper

Ići ću na stručnu ekskurziju u London. / I will join the field trip to London.

Ukoliko idete na stručnu ekskurziju, molimo da uz prijavnicu faksirate i kopiju prve stranice putovnice gdje su svi podaci do **18.09.2015.** Hvala!  
/ If you will join the field trip, please send this reply form and copy of first page of passport where all data are to **18.09.2015.** Thank you!

Datum/Date: \_\_\_\_\_ Potpis/Signature: \_\_\_\_\_

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Croatia

**Program**

Automatizacija u prometu 2015  
Automation in Transportation 2015  
Zagreb - Croatia / London - England, 3.-8.11.2015.

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