

INTERNATIONAL SEMINAR ON HIGH-SPEED TECHNOLOGIES ON RAILWAY SYSTEMS

WHY?

The purpose of this seminar is to promote, a high level knowledge of high-speed railway technologies, for a selection of graduate engineers and specialized professionals, in order to provide and expand a resource base for the development of high-speed rail in California, as well as, bring students into contact with multinational leaders in these technologies

HOW?

engineers interested in this seminar, please check the recording mode on the additional information page at the end of this catalog

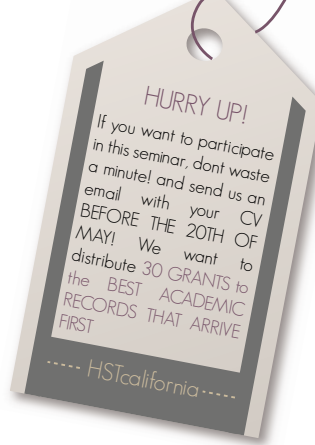
WHERE? The seminar will take place at Mineta Transportation Institute, SILICON VALLEY, San Jose State university

WHEN? during the days 1, 2 3 & 4 OF JUNE



 REGISTRATION DEADLINE

May, 20th
2015



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SUMMARY OF THE SEMINAR

Building and making use of lines on which you are driving 350 km/h (under very high security conditions) is truly an exciting challenge.

Withstand the stresses of the vehicles that are being transmitted to the tracks, be able to capture the current electricity with a pantograph and a catenary, in an optimal way or run in the most comfortable manner ensuring passenger safety, are just a few examples of technical problems that should be solved.

Also is important to know, that high speed lines, have a very positive environmental impact because of the reduction of intercity traffic that they produce, and also, the reduction of the electric power in compare with other types of transportation.

Numerous employments are going to be created in this sector. The aim of this course is to prepare engineers to achieve the best possible Knowledge, by the hand of international experts in railway technology. And, in this way, to put in practice their profession in these employments under the direction of Antonio Arribas and Eduardo Romo, engineers with over 25 years of experience in designing systems for high-speed railways.

JUNE 2015

EVENT OVERVIEW

1 railway introduction and first track & installation concepts



2 Master-class: catenary, signaling, TPS and track



3 Master-class: catenary, TPS, signaling



4 Example of success cases. summary & closing ceremony





HIGH-SPEED INTRODUCTION

Monday, June 1, 2015

Day Director: Rod Diridon

SUMMIT DAY ONE

In the first

masterclasses, an

introduction to high-speed

rail will be given, these are

some topics that will be discussed:

-The Story of high speed in the world

-High speed sketch

-Track Mechanics

-Types Of high-speed trains

-Brake equipments and braking characteristics

-Wheel-rail interaction

After the introduction of the high speed, in the second

Masterclass, track technics will be given. These will be the topics:

-basic concepts of track characteristics

-Types of track devices and their characteristics

In the third masterclass, general knowledges for the use of BIM program for

HSR technologies will be given

the fourth masterclass, Introduction to the railway systems, will include the

following topic:

-Brief introduction to signaling, telecommunications, catenary and TPS

08:30 Registration

09:30 Welcoming address

given by: ROD DIRIDON (Mineta Transportation Institute Emeritus Executive Director)

10:00

Opening: Introduction of characteristics and targets for the high-speed in San Francisco

given by: JEFF MORALES (California High-Speed Rail Authority CEO)

10:30

Coffee break

11:00

1st Masterclass: HIGH-SPEED RAILWAY INTRODUCTION

given by: MICHEL LEOUEUF (UIC intercity & high-speed Director)

13:00

Lunch time

14:00

2nd Masterclass: HIGH SPEED RAIL TRACK TECHNIQS, INTRODUCTION

given by: EDUARDO ROMO URROZ (FCH President)

14:45

3rd Masterclass: A NEW ERA: BIM FOR HSR

given by: PETER GERTLER (APTA Intercity and HSR Committee Chairman)

15:15

Coffee Break

15:30

4th Masterclass: INTRODUCTION TO THE RAILWAY SYSTEMS

given by: ANTONIO ARRIBAS (Eurif President)

16:15

End 1st day



TRACK, TPS, CATENARY AND SIGNALING

Tuesday, June 2, 2015

Day Director: Eduardo Romo



SUMMIT DAY TWO

At the beginning of the second day, necessary knowledge for the development of the track, will be given in the fifth masterclass, including:

- Track system selection: Suitability analysis and selection process

In the sixth masterclass, catenary topics will be given, including:

- General Analysis of railway electrification
- Catenary-pantograph interaction
- Mechanical and electrical elements definition

In the seventh masterclass, signaling & telecommunication topics will be initiated:

- Basic railway signaling concepts: security
- Circuit track and axle counters
- Supervision and onboard equipment
- Interlocking, signal and control of turnouts

After this, in the eighth masterclass, TPS topics will be initiated, including:

- General characteristics of TPS system.

At the end of the day, in the ninth masterclass, track topics will be finalized, including:

- Track-infrastructure integrated behavior:
 - Vertical stiffness of the track, Earthworks and track integrated behavior, and
 - Track-bridge interaction

- | | |
|-------|---|
| 09:30 | 5th Masterclass: TRACK PART I
given by: MANUEL CUADRADO (Senior railway engineer FCH) |
| 10:45 | Coffee break |
| 11:00 | 6th Masterclass: CATENARY OVERVIEW PART I
given by: ANDRÉ DOELLING (Senior railway engineer) |
| 12:00 | Lunch time |
| 13:00 | 7th Masterclass: SIGNALING & TELECOMUNICATION PART I
given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director) and WOLFGANG JACOB (Senior signaling railway engineer) //confirmation pending |
| 14:15 | Coffee break |
| 14:30 | 8th Masterclass: TPS PART I
given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid) |
| 15:30 | 9th Masterclass: TRACK PART II
given by: INGO PAUKNER (Senior railway slab track expert) and MANUEL CUADRADO (Senior railway engineer FCH) |
| 16:30 | End 2nd day |

TPS, CATENARY AND SIGNALING

Wednesday, June 3, 2015

Day Director: Antonio Arribas

In the
3rd day,
two TPS

Masterclasses
will be exposed. Topics
included:

- High and medium voltage networks in the vicinity of the railroad tracks
- Substations. Sizing and on-line diagram and Substation equipment of AC
- Auxiliary systems & Unbalancing currents

SUMMIT DAY THREE

After this, the last catenary masterclass will be given. These will be the topics:

- Equipment and catenary design
- Interaction of traction power supply system & rolling stock

In the thirteenth & fourteenth masterclasses, signaling &

telecommunication topics, will be finalized, including:

- System of driving assistance depending on the speed
- European Train Control System ETCS / ERTMS
- CTC centralized traffic-control and management tools for Command post
- Wire systems and analog and digital transmission
- Information packaging. Hierarchical communication networks
- Communication Radio GSMR & Associated telecommunications services

In the next masterclass, how to identify & coordinate interfaces between systems will be exposed.

At the end of the day, a brief masterclass of electrical & electromagnetic disturbances in lines, and external systems, nearby railway line, will be exposed

09:30

10th Masterclass: TPS (ELECTRICAL SUBSTATIONS) PART II

given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)

10:15

11th Masterclass: TPS PART III

given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)

11:00

Coffee break

11:15

12th Masterclass: CATENARY ENGINEERING & DESIGN TOOLS PART II

given by: ANDRÉ DOELLING (Senior railway engineer)

12:00

Lunch time

13:00

13th Masterclass: SIGNALING & TELECOMMUNICATION PART II

given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director)

14:15

Coffee break

14:30

14th Masterclass: SIGNALING & TELECOMMUNICATION PART III

given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director)

15:45

15th Masterclass: INTERFACE DEFINITION & METHODOLOGIES

given by: ANTONIO ARRIBAS (Eurif President)

16:15

16th Masterclass: ELECTRICAL AND ELECTROMAGNETIC DISTURBANCES

given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)

16:30

End 3rd day

SUCCESS CASES, SUMMARY & CLOSING CEREMONY

Thursday, June 4, 2015

Day Director: Rod Diridon

SUMMIT DAY FOUR

The last master-class of the seminar will be: BIM based approach to railway. BIM is a useful tool that helps you to plan, design, construct, and manage infrastructure.

After this, the last day will be, reserved for the exhibition of different success cases, how they were developed and their subsequent impact. Each of our sponsors, will choose one(or more) of their most important cases and will be analyzed.

Once the cases are finalized we will proceed to summarize all the topics covered in the previous days,

And finally, in the closing ceremony, each student will receive a certificate of participation that recognizes the course content and their successful completion.

09:30

17th Masterclass: Design to Perform:
A BIM BASED APPROACH TO RAILWAY
given by: CHAKRI GAVINI (Senior Product Manager at Autodesk)

11:00

Coffee break

11:15

1st Success case: Telecommunication AUXITEC
given by: Auxitec Director

11:45

2nd Success case: Track GORAIL
given by: Gorail Director

12:15

Lunch time

13:30

3rd Success case: Railway electrification (TPS & Catenary) SIEMENS
given by: Siemens Director

14:15

4th Success case: Signaling THALES
given by: Thales Director

15:00

Coffee break

15:15

TRACK FOR HSR summary
given by: EDUARDO ROMO URROZ (FCH President)

15:30

INSTALLATION summary
given by: ANTONIO ARRIBAS (Eurif President)

15:45

Overall Summary
given by: ROD DIRIDON (Mineta Transportation Institute Emeritus Executive Director)

16:00

Closing Speech
given by: FRANK VACCA (California High-Speed Rail Authority CPM)

16:30

End 4th day

This seminar will be taught by leading engineers in this field, providing a current vision of the high-speed rail. Here are the profiles that will give you the different classes:

EXCLUSIVE PRESENTATION BY LEADING SENIOR ENGINEERS

HIGH-SPEED RAILWAY EXPERTS



MICHEL LEBOEUF
(UIC area director)



EDUARDO ROMO URROZ
(FCH President)



ANTONIO ARRIBAS
(Eurif President)



PETER GENTLER
(APTA Member)



MANUEL CUADRADO
(Senior railway engineer FCH)



INGO PAUKNER
(Senior railway expert)



MÁXIMO LÓPEZ (UPM Professor)



ANDRÉ DOELLING
(Senior railway engineer)



WOLFGANG JACOB
(Senior signaling railway engineer)
//confirmation pending



ARMIN KEMENATER
(Senior project engineer in rail Electrification)



JOSÉ LUIS MEDINA
(Technical Signaling Director)



CHAKRI GAVINI
(Senior Product Manager at Autodesk)

-Currently UIC Director of intercity & high-Speed

-SNCF (Société Nationale des Chemins de Fer) president exconsultant

-Exdirector of major projects like Paris-Toulouse high-speed

-Professor Ph.D. of Polytechnic University of Madrid (UPM). Has been teacher of Electrical Engineering since 1983

-Has been President of Technical Committee of certification of Electric Railway Systems

-Senior Railway engineer with over 30 years of experience in transport

-Director of an important Multinational Company. He leads important research & development projects

-Railway normalization expert being the Spanish representative of CENELEC TC9X and SC9XA for 14 years.

-Mechanical, Electrotechnical and communications expert

-He provides project management and technical consultancy for railways Infrastructure and Concrete Sleepers manufacturing Technology

-International expert in High Speed railway systems. He has carried out about one hundred infrastructure, track, equipment, stations & facilities designs in Pakistan, Malaysia, Portugal, China, India, Turkey, US...

-He has organized & taken part in congresses, seminars and international courses on railways technics

Antonio Arribas

-Senior installation engineer with over 25 years experience

-Researcher and senior consultant for transport sector & IRSE fellow

-Participant in all high-speed lines in Spain, Ankar-Istanbul & Meca-Medinah

Manuel Cuadrado

-Civil engineer, member of the Technological Committee of the Fundación Caminos de Hierro for the promotion of Railway Research.

-Participator in the main High-Speed lines of Spain, and in European High Speed Line projects (Portugal, Turkey)

André Doelling

-Traffic and Transport Engineering, specialized in Planning and Design of Electrical Railway Networks

-He es currently Head of Catenary Components (Engineering and Product Management)

Chakri Gavini

-Chakri is a BIM expert, BIM is an intelligent model-based process that provides insight to help you plan, design, construct, and manage buildings and infrastructure.

-He is currently working for autodesk helping industry professionals to be innovate and compete

Peter Gentler

-He has over 25 years of experience in the development, design and program management of transportation infrastructure and rail projects.

-Peter is a Board Member of the American Public Transit Association (APTA) and Chair of APTA's High Speed and Intercity Rail Committee

Wolfgang Jacob

-Senior signaling railway engineer

-Development Director of the system: drive automatic onboard

-Development Director of LZB system
//confirmation pending

Armin Kemenater

-ExSiemens senior project engineer in rail Electrification

-Participant in the development of important electrification projects in Siemens

-Expert in TPS systems

José Luis Medina

Ingo Paukner

Eduardo Romo

SIEMENS

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www.hsr.ca.gov

whole responsible for the first high-speed rail system in the US



www.uic.org

international union of railways



www.pbworld.com

one of the world's leading engineering professional services consulting firms



www.gorail.eu

Expert in Engineering, consulting, technical assistance & development of railway projects



www.autodesk.com

Autodesk, Inc., is a leader in 3D design, engineering and entertainment software



www.ushsr.com

organization focusing on advancing high speed rail network across the country.

SPONSORS INFORMATION

THALES

AUXITEC

World leader in transport automation. In addition to high-speed european systems, they have developed the CBTZ & LZB systems for driverless subways

World leader in transportation, security & space

www.thalesgroup.com

Auxitec is an International company established in 1992 whose main activity is to provide engineering services to transport infrastructures, facilities and telecommunications.

leader in engineering services

www.schwiehag.com

HOST & ORGANIZERS

eurif.com



Association of engineers and architects for the promotion and dissemination of railway technologies. Becoming a tool for the support of the European engineering outside Europe. EURIF is a Private non-profit organization, improving technological sector of the railways in Europe

MINETA TRANSPORTATION INSTITUTE

The Mineta Transportation Institute (MTI) was established by Congress in 1991 as part of the ISTEA legislation and was reauthorized under TEA-21. MTI then successfully competed to be named a Tier 1 Center in 2002, 2006, and 2011 in the SAFETEA-LU legislation. MTI focuses on research, education, and technology transfer.

The internationally renowned members of the MTI Board of Trustees represent all major surface transportation modes. MTI's focus on policy and management resulted from the Board's assessment of the transportation industry's unmet needs.

FUNDACIÓN CAMINOS DE HIERRO

FCH is a non-profit making organization dedicated to research into the field of engineering and railway technology in general. Providing solutions for the development of transport systems through the consultancy services. FCH is an Affiliate Member of the UIC and APTA.

fcaminoshierro.com



transweb.sjsu.edu



ADDITIONAL INFORMATION

How to participate in this PAPERLESS seminar?

There are 3 different ways to get in this seminar:

1- the first one is send an email to albaarribas@eurif.com, mariana@fundacioncdh.com and karen.philbrick@sjsu.edu, asking for the participation in HST seminar and including your contact address and your curriculum vitae (if you are currently working, remark it in the email), before the expiry of the deadline. Then, a selection process will be made and the 30 engineers with the best academic scores will be selected. After this process, the 30 engineers will get a notification and then, they will only have to pay the registration fee established on 200\$. No more payments will be needed with this grant.

2- If you have send an email to the previous email-addresses, and you havent been selected, the organization will send your CV to the different sponsors, each sponsor have 5 grants to distribute with their own requirements, so if you are selected by one of them, you will get a notification and then, pay the registration fee (200\$), also, as in the previous grant, no more payments will be needed.

3-If you havent got any grant and you want to participate in this seminar you could pay it by your own (established on 4850\$), sending an application email to albaarribas@eurif.com and mariana@fundacioncdh.com and then, they will answered with more information about how to made the registration form

Certificates

During the closing ceremony of the seminar, each student will receive a certificate of participation that recognizes the course content and their successful completion.

Lunch time

Throughout this seminar Lunch and beverage service is included in the cost of registration (vegetarian option is available if requested).

** participation in this seminar does not guarantee any job by the sponsors or organizers

** Sponsors reserve the right to provide reduced versions of their presentations to participants

Imagine your world in high-speed....

HST CALIFORNIA 

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