# Training on High Speed Systems

## Level I

**Dates**
Lectures from 23 to 27 April 2018
Technical visit on Saturday 28 April

**Venue**
UIC Headquarters
16 rue Jean Rey – 75015 Paris, France

**Price**
LEVEL I = €1,600

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**Level II**

**Dates**
Lectures from 10 to 14 December 2018
Technical visits throughout the week

**Venue**
Fundación de los Ferrocarriles Españoles
c/ Santa Isabel, 44 – 28012 Madrid, Spain

**Price**
LEVEL II = €1,600

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**Price Level I + Level II (30% discount) = €2,240**

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<thead>
<tr>
<th><strong>COLLABORATORS</strong></th>
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<td>All of our speakers are experts in the subjects presented and are drawn mainly from railways, universities and industry. They represent all of the world regions and countries with experience in the field of high-speed rail systems. This training programme has been specially designed by the UIC Intercity and High Speed Committee. This group is comprised of experts from all of the companies and countries involved in HSR systems, such as HS2, SNCF, DB, Trenitalia, PCH, FTE, IR, OR, Via, EUROSTAR, THALYS, RENFE, ADIF, FNM, ATI, MIKAS, ExoCtel, KORAIL, JR, SNCF, CAF, SNCF, TMRC, Tradelinvent, FTA, DD, COP, Motorail, etc.</td>
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**REGISTRATION**

**Online via the UIC website:**
- Level I [https://events.uic.org/14th-training-on-high-speed-systems-level-i](https://events.uic.org/14th-training-on-high-speed-systems-level-i)
- Level II [https://events.uic.org/6th-training-on-high-speed-systems-level-ii](https://events.uic.org/6th-training-on-high-speed-systems-level-ii)

**CONTACT**

- **In Paris**
  - Ms Vanessa PEREZ
  - Passenger Department
  - perez@uic.org
  - Ms Beatrix PERROT
  - Passenger Department
  - perrot@uic.org

- **In Madrid**
  - Ms Rosa EGIDO
  - Spanish Railways Foundation
  - formacion@formacion-ffe.es

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**TRAINING ON HIGH-SPEED RAIL SYSTEMS**

By means of UIC member cooperation, around 50 participants are given the opportunity each year to interact with more than 40 high-level speakers during a week-long training session that reviews all of the components of a high-speed rail (HSR) system in detail. The Training on High-Speed Rail Systems (THSR) is aimed at decision-makers and is held every year, divided into two different stages.
TARGET AUDIENCE
This programme is aimed at professionals already involved in HSR projects or who are likely to become involved in HSR in the near future. Participants come from a variety of backgrounds: railway companies or ministries, local authorities, universities, advisory bodies, agencies or associations, industry, banks. They may be railway, transport sector or engineering experts, decision makers, financiers, economists, project managers or political advisors.

CONDITIONS FOR PARTICIPATION
The seminar is targeted towards all those in search of a comprehensive overview of HSR system. Seminar participants do not need in-depth knowledge of any specific subject matter beforehand.

Attendance at all sessions is mandatory.

Previous attendance of HSR level I is recommended for participation in Level II but is not a prerequisite.

TESTIMONIALS
(Feedback from training participants)

GLOBAL APPROACH
‘It was such an interesting seminar and the chance to meet people from all over the world was really useful.’

THEORETICAL SESSIONS

LEVEL I DRAFT PROGRAM

Paris, 23-27 April 2018

THSR Level I: The main objective is to provide an accurate and comprehensive overview of high-speed rail (HSR) systems. This consists of a series of theoretical sessions and a technical visit to integrate the knowledge acquired during the training.

The training programme will contain the following components:

Introduction

- Main principles of HSR
- THSR Level I will recommend participation in Level II but is not a prerequisite.

Economic and financial aspects

- Financial methods and ways of measuring a HSR project (conventional ways, with or without an agreement, concessions, PPP etc.)
- Economic and financial analysis of HSR projects
- Financing
- Legal aspects of HSR (at European level)
- Managerial aspects, staff management and training, quality, level, image, communication, etc.
- HSR in the future – research

LEVEL II DRAFT PROGRAM

Madrid, 10-14 December 2018

THSR Level II: The main objective is to provide an in-depth and comprehensive overview of high-speed rail (HSR) systems and to discuss and develop practical HSR case studies. Level II is targeted on HSR systems and onsite discussions will help to anchor the knowledge gained during the programme.

INTRODUCTORY MODULE
Introduction to HSR (summary of basic THSR – Level I)

- Overview of HSR systems around the world

THEORETICAL SESSIONS

Each theoretical session will consist of a presentation on the relevant strategic concepts necessary for HSR project development. There will be at least 30-minute breaks between sessions for refreshments.

The strategic subjects are:

- Economic. Presentation of UIC research on the contribution of HSR to sustainable mobility and climate change (giga-joules of CO2 and GHG).
- Stations for HSR systems: Presentation of UIC research on the subject.
- Traffic forecasting: Basic principles of modelling and system capacities.
- Standards for HSR systems: Requirements, and the Level I’ theoretical subjects with the UIC.

Other fundamental values for HSR projects:

- Basics principles for comprehensive planning and Technical visit complementation.
- Functional elements of HSR (safety, security, adaptability, availability, maintainability, safety, quality, management, life-cycle costs, etc.)

CASE STUDIES

For the training and on an alternating basis with the various theoretical sessions, participants will be divided into small teams to work towards developing and discussing a real example of a HSR project, led by a supervisor.

In this practical exercise, participants will go through each of the steps required to define and plan a real HSR project, from the definition of key parameters and implementation of actions. The training session will conclude with a presentation and group discussion. Each group participant will take on a different role (operator, infrastructure manager, government) and will develop the various actions required. The session will provide an opportunity to compare the various solutions.

THEORETICAL VISITS

THSR Level II will have the opportunity to use the HIGH-SPEED PLANNER as part of their training to simulate a real HSR project. The HIGH-SPEED PLANNER is a didactic and dynamic tool, specifically designed to assist project management during training, considering the main parameters to be implemented in any HSR project. All of the key elements (socioeconomic, environmental and economic) will be analyzed to facilitate decision-making and to visualize the resulting outcomes.

TECHNICAL VISITS

In partnership with Fret, RFF and other stakeholders, a series of technical visits will be proposed to complement the theoretical and practical exercises examined during the practical case study.

The training seminar will be held in Madrid, with a number of technical visits in a different climate. Information on this will be provided prior to the on-site visits and all our organiser will take care of all the logistics.