



MetroExchange

Newsletter #1

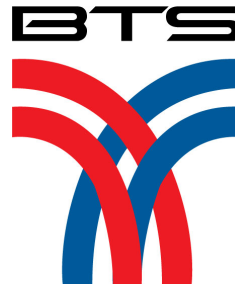
April-June 2018

Welcome!

MetroExchange project aims to improve rail engineering education and research in Thailand by focusing on exchange of good practice in assessment of metro operations in the UK and in Thailand conducted in collaboration between academia and industry. This will be achieved by working in a close collaboration between two universities. Project partners, listed below, will facilitate performance benchmarking and skills exchange activities.



Mahidol University



Project objectives:

1. To build staff capacity in delivering excellent rail engineering higher education in Thailand by organising activities jointly delivered by Thai and the UK project partners:

- > student internships
- > summer school
- > a short course
- > case teaching

2. To engage Thai and the UK project industry partners in delivering excellent collaborative rail engineering research by suggesting metro operations-related research topics:

- > academia-industry supervisory teams
- > innovation in rail engineering education research

3. To share rail/metro operations knowledge between academia and industry by organising events led by the partners and open to a wider audience:

- > two forum discussions
- > scientific papers

Full project title is:
“Thai rail engineering education and research improvement by exchange of good practice in metro operations in Thailand and in the UK”

The project is divided into 4 Work Packages:

- > Education
- > Research
- > Knowledge sharing
- > Management and Dissemination

Project duration: 2 years

Co-funders: Newton Fund (UK) + OHEC (TH)

Project launch

The first two project meetings took place in April 2018, one in Thailand (MU-BTS) and one in the UK (NU, Nexus and MU) where details of the project tasks were discussed.

Education

INTERNSHIPS

Student internships with UK and Thai industry partners have been discussed early in the project and 2 placements were planned to take place during summer break in June-August, 2018.

SUMMER SCHOOL

A summer school on metro operations with contributions from the four partners is planned to take place in summer 2019 at Newcastle University.

SHORT COURSES

Two short courses on metro operations are planned to take place in w/c 12th November 2018 (with Nexus input) and w/c 21st January 2019 (with Newcastle University input) at Mahidol University. The courses will be open to MU staff and students and to the wider rail academic and professional community in Thailand.

CASE TEACHING

One case teaching based on the research developed is planned to be delivered by the end of the project and used in Master rail curricula.

Research

RESEARCH PROJECTS

Student research projects:

- > **Safety culture in metro maintenance environment** (under the supervision of Dr Anna Fraszczyk, MU)
- > **Driverless train design** (under the supervision of Dr Marin Marinov, NU)



Left: BTS and MU team at BTS office in Bangkok, Thailand

Knowledge sharing

FORUM

Two forum events open to a wider audience are planned to take place during the project, one at early stages and one close to the end of the project.

PAPERS

Scientific papers are planned to be written in academia-industry teams once research projects are completed.

Dissemination

NEWSLETTERS

Project newsletters will be produced quarterly and 8 issues are planned to be produced and shared.

REPORTS

Project progress reports will be produced quarterly and shared with the project team and funders.

2 STEM ACTIVITIES

Development of 2 STEM activities related to metro operations is planned. **STEM hands-on activity** will be developed by 3rd year MU students in Q3 2018 and then tested in a primary school in Bangkok. **STEM career sheets**, with case studies of MetroExchange project team, is planned for July-August, in time for Rail Week 2018 events in the UK in October.

Contact

Dr Waessara Weerawat

Mahidol University, Thailand
waessara.wee@mahidol.ac.th

Dr Marin Marinov

Newcastle University, UK
marin.marinov@newcastle.ac.uk



Right: Nexus, NU and MU team at Newcastle University office in Newcastle, UK