

サステイナブルな未来都市を 実現するための工学の役割

日時： 2025年3月12日(水) 13:20~16:20

場所： 大阪公立大学文化交流センター 大ホール
大阪駅前第2ビル6F (定員100名)

無料

13:00 ~ 受付開始

13:20 ~ 13:30
開会 -趣旨説明, 研究科長挨拶-

13:30 ~ 14:00 講演 I

『Engineering & Planning initiatives to
realize a sustainable future city in Osaka』

Osaka Metropolitan University -YOSHIDA Nagahiro-

14:00 ~ 15:00 招待講演 I

『The role of civil engineering in the urban
planning: from the old to the modern city』

UPC-BarcelonaTech -Prof. Joan R Casas-

15:00 ~ 15:15 休憩

15:15 ~ 16:15 招待講演 II

『Built Environment in the New Economy:
Perspectives from CEE@NUS』

National University of Singapore -Prof. Quek Ser Tong-

16:15 ~ 16:20 閉会

主催:大阪公立大学大学院工学研究科
共催:大阪公立大学大学院工学研究科都市系専攻
問合せ先 大阪公立大学 都市系専攻 助教 林 巖 hayashi-g@omu.ac.jp

講演者



YOSHIDA Nagahiro
Associate Professor
OMU

専門分野は交通工学, 交通行動分析, 都市交通計画など多岐に渡る。特に, 交通弱者の行動分析や交通事故リスクの統計的モデリングやアジア諸国の自転車交通政策に関する研究で高い評価を受けている。また, 地方自治体や国の交通関連委員会でも活躍している。



Joan R Casas
Full Professor
UPC-BarcelonaTech

専門分野は橋梁工学, FOSを用いた構造ヘルスマニタリング(SHM)である。IABMASの創設メンバーであり, 1999年から事務局長を務めている。EUROSTRUCTやIABSEでも委員長などを歴任している。さらに, 学術誌「Structure and Infrastructure Engineering」など, 多くの学術誌でエディタを務めている。



Quek Ser Tong
Professor
NUS

専門分野はスマートマテリアル, 構造ヘルスマニタリング(SHM), 信頼性解析, 構造力学など多岐に渡る。土木構造や地盤工学分野の動的解析や確率有限要素法において高い評価を受けている。NUS工学部 副学部長を歴任され, 様々な大規模プロジェクトで技術的助言を行うコンサルタントとしても活躍している。

お申込み:

締切:3月5日(水)

QRコードにて所定事項を入力ください。

<https://forms.office.com/r/4A0J4mmQZ9>





Keynote Lecture Summary

講演 I

Osaka Metropolitan University

-YOSHIDA Nagahiro-

In order to realise a sustainable future city, some examples of urban regeneration and development projects centred around railway stations in Osaka will be introduced. In these projects, the introduction of various new concepts is being considered in conjunction with the timing of renewal of infrastructure functions. For example, there is a move towards enhancing public spaces with the aim of encouraging open innovation, Realisation of a Carbon Neutral districts, and the formation of mobility hubs that make use of autonomous vehicles, shared mobility and flying cars. In the process of giving shape to these new concepts, it will be necessary to make major changes to the way urban engineering-related technologies and planning are approached, and I would like to introduce new perspective on engineering, such as promoting dialogue between diverse stakeholders through interdisciplinary or transdisciplinary approaches.

招待講演 I

UPC-BarcelonaTech -Prof. Joan R Casas-

The lecture analyzes how urban planning and the development of the cities up to now has been highly influenced by the role of civil engineers because of their mastering in the design, execution and management of infrastructure systems. The old and actual cities have emerged around the infrastructure services (transport, water, energy, sewer, drainage, ...) necessary for good standard of life and that have been for years in the core of the civil engineering curricula of universities and higher education institutions. Recently, the need for more environmentally friendly cities has also emerged and civil engineering curricula were partially adapted to this new societal requirement (see, as an example, the conversion of many former civil engineering departments into new departments of civil and environmental engineering).

However, now, a new concept of city is appearing. Apart from providing a high quality of living and being environmentally correct, the cities should be sustainable (in the most wide and accepted version of sustainability based on 3 pillars: economic, social and environmental), smart and resilient. This will be shown through the case study of the new developments in the city of Barcelona.

This transformation process experienced in many cities around the world will be explained with the example of the city of Barcelona.

This is a new challenge in the education of civil engineers when looking to the main programs and syllabus in actual civil engineering diplomas. The lecture will analyze up to which point the traditional academic background of civil engineering fit into these new requirements of the modern city and which should be the new areas of knowledge and expertise that must be introduced and to what extent to better respond to the new requirements of the modern city.

招待講演 II

National University of Singapore -Prof. Quek Ser Tong-

A brief introduction to sustainability and infrastructure resilience is first given, including Singapore Green Plan 2030 to address challenging issues. An overview of the National Research focus in Singapore is presented and the alignment of research in the NUS Department of Civil and Environmental Engineering for the new economy is discussed. These include directions addressing coastal protection and flood management with regards to climate change, sustainable construction materials, ageing infrastructures, automated construction and digital twins, resilience in urban cities, future mobility technologies, environmental science and technology. Finally, challenges to attracting students to take up CEE educational program will be shared.