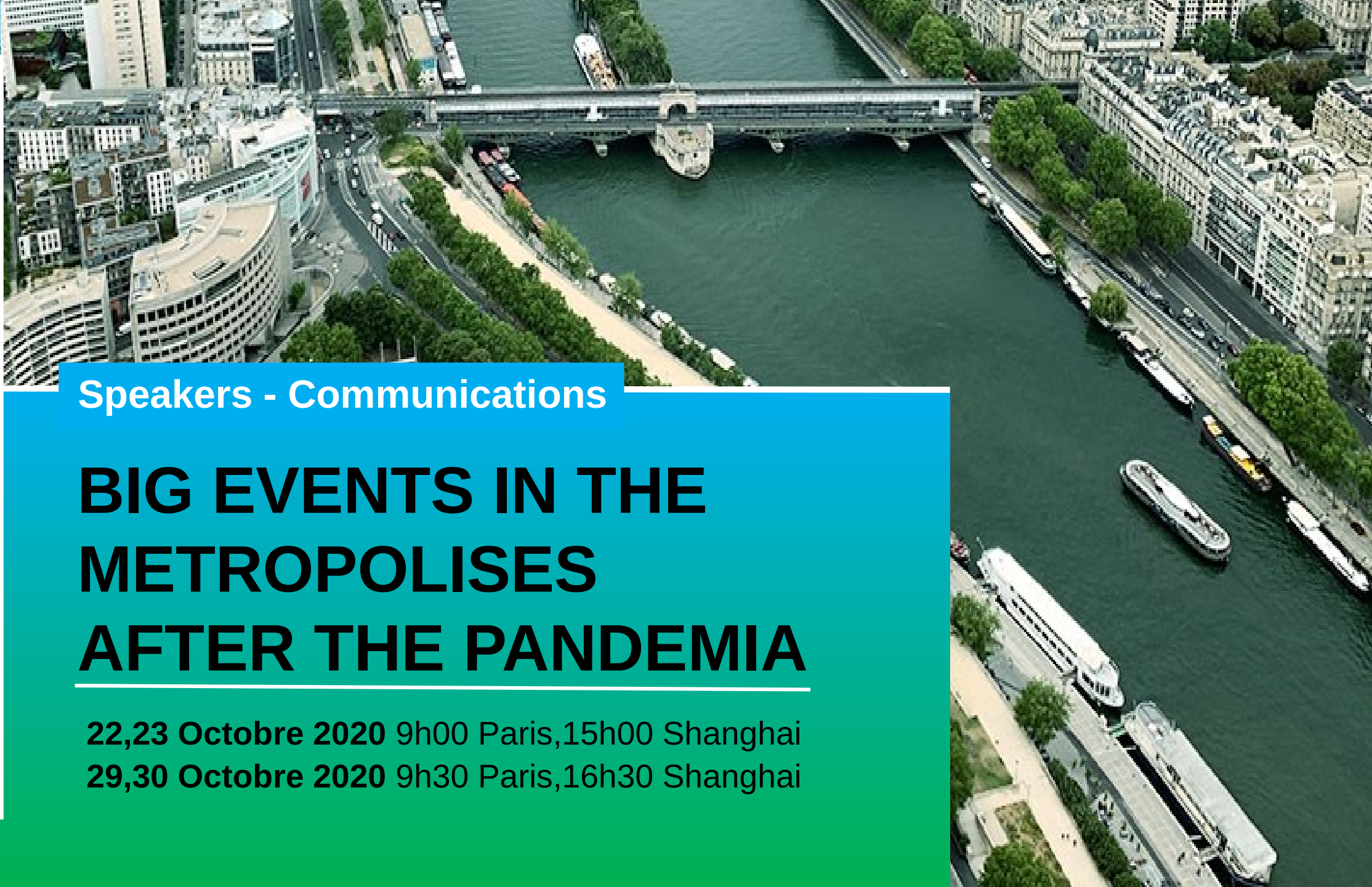


VIDEO-FORUM
THNS 2020

Speakers - Communications

BIG EVENTS IN THE METROPOLISES AFTER THE PANDEMIA

22,23 Octobre 2020 9h00 Paris,15h00 Shanghai
29,30 Octobre 2020 9h30 Paris,16h30 Shanghai



VIDEO FORUM THNS 2020

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22/10/2020

Welcome Session THNS-T²M chaired by :

Prof. Dr. Wu Zhiqiang (Vice President at Tongji University)

23/10/2020

Panel: New Mobility and Urban Pace

Hervé PHILIPPE, Michel PARENT, Dominique RIOU, ZHAN Ruijing

29/10/2020

Special Session : Pedestrian traffic on the quais of railway stations platforms

Fabien LEURENT, Kang LIANG

Panel : Urban motilities in the post-pandemic era

Michel ROSTAGNAT, Marc GUIGON, Cristiana MAZZONI and FAN Lang, ZHANG Xiaohe

30/10/2020

Panel : Street for people, CONVID influence and Green Urban Transport

LIU Bin, ZHUO Jian, YUAN Qi

Panel : New mobilities, the Digital Future



**Hervé
PHILIPPE**

Ministry of Transport/ CGEDD

Senior officer at the Innovation, Digital and Territories Task Force of the French Department of Transport, Hervé Philippe is in charge of Artificial Intelligence in the field of transportation, of Intelligent Transport Systems and of autonomous vehicles.

Hervé Philippe has been working for 10 years in China, first as the resident director of ParisTech in China, based in Shanghai, then as the founder of a consulting company in the field of Transport, ITS, and road infrastructures. Before, he was a researcher in the field of robotics and AI (CNRS) and road pavements network monitoring and management (LCPC) and then, deputy head of the Val d'Oise (95) local agency of the French Ministry for Inclusive and Ecological Transition.

Born 1958, Paris Polytechnique Alumnus, member of the French «Bridges» Senior Civil Servants' Corps, PhD in computer science / artificial intelligence.

The prospective workshop on robomobile life or how to envision possible societal impacts of massively deployed automated mobilities *(Hervé Philippe)*

Scientific and technological progresses allow the design and the development of prototypes of automated vehicles at large scale. It is a breakthrough innovation on a massive scale. Many organisations throughout the world are competing and cooperating to meet this challenge. First legal implementations, for specific use cases and with very well defined operational design domains (ODD) are expected near 2030.

Besides those necessary and impressive efforts, which all aim at providing those new automated mobility systems, the French Ministry for Transport, University Gustave Eiffel and LAET have established in spring 2017 a permanent future workshop on « robomobile life », i.e. automated mobility life, aiming :

- to give to political, civil, economic, scientific and legal stakeholders dynamic visions on our societies beyond the 2050s, in which automated vehicles would be generalized,
- to enlighten their actions and their actual choices, by foreseeing as well as possible the opportunities and threats of this future, especially in the field of public action.

This presentation deals with the working methods, the work themes and the results of this workshop as well as the next directions for coming years.

<https://www.mobilite-intelligente.c...> (most pages in French with some in English)



**Carlos
Holguin, Msc**

SuburVAN

Urban and mobility planner specialized in the integration and deployment of fully automated vehicles in urban areas, and a Product Designer Carlos developed his expertise through the real-life experimentation of on-demand mobility services using automated vehicles since 2004, in particular in the CityMobil (as member of INRIA) and CityMobil2 (as member of the University of Rome “La Sapienza”) projects.

He has managed deployment projects with automated vehicles in over 15 cities across Europe, as well as the world’s first autonomous shuttle service in public roads, in 2011 in La Rochelle, France.

Presently he’s leading SuburVAN, a startup providing an autonomous minivan solution for suburban commuters.



Autonomous vehicles can improve the modal share of public transport *(Carlos Holguin, Michel Parent)*

How can autonomous vehicles help public transport increase its modal share in suburbs after the COVID-19 ?

The key indicator for public transport to compete against the private car is commercial speed. If, after the PANDEMIA and lockdown, suburban inhabitants rush to their cars, congestion will increase, reducing private cars' commercial speed.

This will open a window of opportunity for public transport to expand to suburbs with a high-quality, high-frequency offer providing reliable travel-times, with the benefit of helping to compensate for the foreseeable loss of revenue from dense areas.

However, as we'll see in this presentation, current autonomous vehicle technologies are not fully adapted to public transport operation in suburban areas.



**Dominique
RIOU**

Paris Region Institute

Dominique Riou is project manager at L'Institut Paris Region, the Paris/Ile-de-France Regional planning Agency, in the transportation and mobility department. He has been involved in many regional planning projects. He notably wrote and compiled the transportation chapter of the new master plan of the Paris Region. He took part in the elaboration of the travel plan of the Paris Region.

His competency on regional planning issues has also been developed through his involvement in many international projects (Casablanca, Tangier, Tetouan, Beirut, Hanoi, Erevan, Damas, etc) by being in charge of transportation issues. He worked on preliminary studies of the tram project of Bordeaux. He led many studies concerning transport systems, modes and infrastructures.

He is especially involved in active modes and public spaces sharing issues. He strongly takes part in the « Réseau Express Régional Vélo / RER V » project.

Dominique Riou has a degree in civil engineering (National Institute of Applied Sciences of Lyon, 1992) and a Master in Urban Planning (University of Lyon II, 1993).



The express bike network project, RER-V, for Paris Region (Dominique RIOU)

20 km/h is the average speed for an urban biker, without exceptional effort, thanks to an efficient cycling infrastructure. That's the goal of the RER-V project and thus make cycling a leading mode of transport in the urban mobility.

In the Paris Region, there are already 5800 km of the road network that can be considered as cycling, especially 1860 km of dedicated cycling ways. Those are a powerful foundation for quick routes, secure and identified, particularly useful to connect people to employment sites and to reinforce the links between the heart of metropolis and its outskirts. A cycling network with a high quality of service, will make biking a powerful mode of transport for both metropolitan and local territories.

In order to fulfil these objectives, the project of the « Réseau Express Régional Vélo RER V » has been initiated to connect the main urban poles with cycling ways across the region and to offer, on the model of public transport, a new alternative to some of the users of cars or public transport. The project led by the Paris Region - Région Ile-de-France - has been worked out with the technical help of L'Institut Paris Region. The President of the Region, Mrs Valérie Pécresse, has announced she would massively support it, up to 300 million euros.



**Fabien
LEURENT**

ENPC ParisTech

Professor at Ecole des Ponts ParisTech is a senior researcher at the Laboratory on City, Mobility and Transport (LVMT), a research unit of both Ecole des Ponts and Université Gustave Eiffel.

His research interests pertain to the technical, economic and environmental modeling of mobility systems (roadway networks and parking, transit networks, shared mobility services) and of land-use systems (real estate, housing supply and demand). The resulting models are intended for planning studies, for operations schemes and system design.

He leads the “Territorial Mobility” Chair operated by ENPC in partnership with Ile-de-France Mobility, the regional mobility authority. He has also led a number of research projects in partnership with Renault, Vinci, RATP, SNCF etc.

Pedestrian and train traffic on railway station platforms, Part 1: key issues and systemic framework for analysis

In metropolises, especially megacities, railways with large train units operated at high frequency constitute the most massive mode of passenger transportation. In Paris, line A of RER: Regional Express Railways, accommodates up to 30 trains per hour and per direction at peak periods on working days, each train with nominal capacity of 2,800 passengers (and often more people in it). Such massive flows entail proportional pedestrian flows on station platforms.

A station platform fulfills two functions of, first, passenger flowing and, second, passenger storage. The platform layout is initially designed and then adapted to enable for safe traffic and sufficient fluidity, with special attention to emergency situations and evacuation procedures.

Our aim is to provide a systemic analysis of a station platform as a traffic system which involves two types of mobile entities, namely pedestrians (users) and vehicles (trains), each one with specific conditions, behaviors and circumstances. The respective entity dynamics and their interactions are described in a structured way. We shall feature out the traffic system structure in terms of components and relations. Sub-systems are identified. Systemic diagrams will be provided to summarize the system's anatomy and physiology.

After a general introduction, the communication will address in turn each of the following sub-systems: (i) the platform layout, (ii) the spatial structure of pedestrian flows, (iii) the dynamics of train traffic and platform pedestrian traffic in interaction. Lastly, we assess the modeling ability of a selected set of traffic simulation models.



Kang LIANG

ENPC ParisTech

Kang is an engineering student in dual degree from Tonhji University and Ecole des Ponts Paristech, where he specialized himself in transport engineering.

He is especially interested in transport system modeling, traffic simulation, model calibration in order to replicate traffic flows as well as usage behaviors such as path choice along transit networks.

He will undertake a doctoral thesis under the dual supervision of Fabien LEURENT and Mahdi ZARGAYOUNA, who is the deputy-head of the GRETTIA, a laboratory on traffic simulation, network management and artificial intelligence at University Gustave Eiffel.

Pedestrian and train traffic on railway station platforms, Part 2: Review of existing simulation models and Model Specification Statement

In the first part, we provided a systems analysis of pedestrian traffic along a railway station platform in relation to train traffic in terms of station arrival and departure times as well as on-board passenger loads. The longitudinal dimension of the platform is especially important since it is associated to (i) platform layout in relation to access points, (ii) passenger positioning for waiting, in relation to the rest of their trips and especially their on-board conditions and their stations of alighting, (iii) train on-board flows taking into account previous boardings and alightings, local alightings and boardings, these in relation with platform flows as well as with passenger behaviors (boarding positions). Every passenger is assumed to optimize his or her generalized travel cost by selecting the waiting position under the constraint of train arrival time and also of platform crowding.

In the second part, our objective is to state a model specification suitable to simulate such traffic situations and scenes in a way both sensible and sensitive. The specification will be an abstract description in the form of a Scope statement, derived from the systems analysis but oriented to traffic simulation.



**Michel
Rostagnat**

Ministry of Transport/ CGEDD

Born in 1956, Paris Polytechnique Alumnus, member of the French " Bridges " Senior Civil Servants' Corps, Michel Rostagnat has pursued his career within the French State Service in charge of Regional Development and Environment. He's for a long time committed in Transport issues (Paris Charles De Gaulle Airport outskirts planning, planning infrastructures in the Massif Central, consultation on the Big Paris Metro project...). He's member of the Ministerial Senior Advisers' Team to the Minister of Ecological Transition, reporting on Transport issues. He's in charge of follow-up of a Sino-French Agreement on Transport and chairs the Alpine Convention Transport Working Group. He's fond of China, Chinese people and Chinese language he discovered 2007 in Paris thanks to its Alumni Association. He's author of two essays: The New Frontiers of Environment (1993) and Christian and French State Senior Civil Servant (2007) (French).

Deconfinement of France in May 2020 : Objectives of the government, difficulties and results

Towards the end of the long confinement ordered on 16 March 2020, the French government had good reason to fear disorder in the public transport networks. Would it be there crush, incompatible with the objective of remain distant from each other? Converse, would distrustful user desert the metro and quicken bankruptcy of local authorities in charge of mobility and of their service providers? Amazingly, deconfinement happened rather well. No crowd in the trains. No hold-ups on the urban motorways. Thanks to spring, bike traffic actually exploded (but its modal share remains under 5 %). So did walking. The same was to be seen by September at the start of the academic year. But what about the next cold season? There are three key parameters revealed by the crisis: the rise of teleworking, the shift of the time of commuting in the morning in order to avoid peak hours, and the user distrust regarding public transport means, especially in Paris. New applications based on big data processing, caught from smartphones followed by mobile phone masts or satellites, may be helpful to understand it. Helping this possible revolution of life-style will imply a true bike policy oriented towards young people, a better distribution of work places among the urban tissue with the help of coworking offices and the permanent adaptation of networks. Companies have to promote teleworking and self-behavior of their staff, what's unfamiliar to the French tradition. That's to debate now.



**Marc
GUIGON**

UIC (International Union
of Railways)

Marc Guigon is Passenger Director at UIC (International Union of Railways) responsible for Passengers activities, including development of High-Speed Rail in the world, Railway Stations, Distribution, Regional and Commuter Train Services and Tourism in Trains.

He is also coordinator of UIC Latin-American Region and chair of the UIC Covid-19 Task Force, which comprises 70 UIC members and 18 International organisations.

Prior to joining UIC, Marc worked 7 years for the office of the French Prime Minister, responsible for French national policies of transport in the field of spatial planning: including railways, roads, urban transport, airports, ports and waterways.

He was also engaged in the development of Champagne-Ardenne Region and was the State contact point for questions related to spatial planning in the region.

Lastly, he was responsible for intergovernmental cooperation between France and China

The task force on Covid-19 created in February 2020 by the International Union of Railways(UIC) *(Marc GUIGON)*

The Covid-19 pandemic has affected the entire global economy, especially the transport sector due to travel bans and restrictions. In order to share the best practices of global railway companies, the UIC created a task force on Covid-19 in February 2020. This is made up of the majority of railway companies and infrastructure managers, but also international organizations related to this sector.

Practices have been exchanged through the creation of databases, media centre, social media and through regular meetings including members from all continents. This task force encouraged solidarity among its members. They did not hesitate to share their knowledge concerning protections against the spread of the disease (masks, ventilation, social distancing, decontamination, etc.), with great empathy and a spirit of cooperation. They also openly shared their ways of working, welcoming customers in stations and on trains, setting up offices, etc. They also provided UIC with information on the financial losses suffered by their company in order to establish a global assessment.

The UIC is continuing its work, in order to be able to provide information on the resumption of activity and to define what could be a "new normal" once the pandemic has finally passed



**Cristiana
MAZZONI**

High School of
Architecture of Paris
Belleville

Cristiana is an architect, urban designer and Professor of Architecture and Urban design in the National Architectural school of Paris-Belleville (ENSA PB). During her academic career she has been teaching as visiting professor in Italy, Germany, France, Spain, USA and China. She is the Director of the Research Center UMR AUSser, in the framework of the French Scientific Research Center (CNRS) and member of the Metropolitan Development Council of Strasbourg. She is in the scientific committee of the Chinese and French “Innovative metropolitan mobility” Chair (IMM Chair) and scientific director of the “Metropolitan Architecture and Great Events” Chair (MAGE Chair).

In 2008 she founded with Yannis Tsiomis the Atelier CMYT studio and she is the Senior Adviser of CMYT R&D for innovative research in urban architecture. The research and professional works of the studio have been exposed in the Venice Biennale of Architecture 2018 (Palazzo Bembo, “Time, Space, Existence” program), entitled “The Power of urban architecture”.



FAN Lang

High School of
Architecture of
Strasbourg

Fan Lang is an architect and urban designer (China and France). In 2018, she defended his doctoral thesis (PhD) in the Strasbourg university about « Neighbourhood relations in today's Asian metropolis. Types of housing and forms of cohabitation analysed through the prism of the notion of Harmony », under the supervision of prof. Cristiana Mazzoni.

She is actually assistant professor in the field of urban design in the Architectural School of Strasbourg and researcher in the AMUP Laboratory (since 2011).

She is part of the research team of the Shanghai Academy of Social Sciences (SASS).

Since 2016, she is in the teaching staff of the Sino-French Chair on Metropolitan Innovative Mobility (IMM Chair - ENSA Strasbourg, CAUP Tongji/Shanghai, SYSTRA).

She is the co-coordinator of the Double Master Degree Program, France-China, « Architecture, urban planning and design », ENSAS-CAUP Tongji/Shanghai (since 2015).

Social Life in Shanghai residential areas during pandemia

(Cristiana MAZZONI, FAN Lang)

Since the 1990s, Shanghai's metropolitan development has grown exponentially (establishment of the market economy, new housing policies). The renewal of central districts and peripheral expansion have led to a major transformation of architectural and urban forms and a strong increase in the residential population. The residential tower, the evolution of mobility, the extension of the metro networks to the whole metropolitan area, the increase in the standard of living of city dwellers have determined the change of the urban silhouette and the emergence of social problems related to exclusion.

Our presentation focuses on the urban spaces developed around high-rise buildings, located between housing and the city, taking the example of the recently built Zhongyuan Liangwan Cheng district in Shanghai. We question the notion of "life cycle" in the design of these landscaped spaces, and their possible innovative function to create a new urbanity at the scale of the district.

In relation to the wealth of practices that have characterised the life of courtyards and alleys in the lilongs of historic Shanghai, we note that this new design allows for a greater integration of natural components in a very dense metropolis and the blossoming of new practices of collective spaces such as walking, playing and active walking.

These examples of Asian metropolises can provide solutions to the need to rethink housing in new situations of confinement everywhere in the world, including Paris.



**Jean-François
JANIN**

URBA 2000

Jean-François is Chairman of the Association URBA 2000 (from 2017), whose aim is innovative action (technical, social and politics) in the cities and territories.

The preferred domains are urban planning, mobility, transport as well as design and operation of public services. website : <http://www.urba2000.com/urba21/>

Professional expérience

- French Transport Department (1997-2016) General Directorate of Infrastructures Transport and Sea, Head of the ITS Task Force (2002-2015)
- Chamber of commerce and industrie of LILLE, CEO (1987-1996)
- Regional Directorate of Industrie – Research French Departments in Clermont-Ferrand (1977-1986)
- French Environment Department (1974-1976)
- Training : Ecole Polytechnique, ENPC ParisTech



Digital Mobility in the near future *(Jean-François JANIN)*

The organisation of mobility in the coming months and years will be targeted on the global objective of sustainability and have to satisfy the immediate necessity of maintaining the economic activity. The Pandemia has made obvious the vulnerabilities of the planet and of our territories.

The digital technologies can help the transformation of territories in many different ways. Active mobilities (walking and cycling) can be boosted by digitalisation of mobility and new organisations focused on the customers needs (Mobility as a Service MaaS). Good examples of reducing the place devoted to cars in the center of small and large cities and metropolis can be given and reproduced. In spite of these evolutions, the managers of territories need to answer to the questions of accessibility, especially in low dense territories.

The distance of residences and jobs creates the needs to use cars, even old, dangerous and pollutant to go to working places. Solutions to reduced this constrained mobility are very urgent.



Kaisheng LIU

AFCDUD

Ph.D. in Transport network modelling, Kaisheng has :

- 15-years Cross-Border Innovation experience (Pilot +10 R&D projects : IoT, BigData, Energy Efficiency, Driverless System, Multimodality, Comfort modeling, etc.) ; Expertise on the Smart Mobility, Marketing Strategy Product Partnership, Digital Transformation, "System" approach ;
- Transit systems engineering management ; Involved in + 30 Pre-Studies / Tenders / Projects for + 25 cities worldwide, contribution for the Sustainable Urban Mobility Development.

As co-founder and president of an NGO, the Association Franco-Chinoise du Développement Urbain Durable (AFCDUD) since 2008, he is:

- Enthusiastic and dedicated to the vision and the cause of Ecological Civilization, GreenTech and Public Welfare for Urban Sustainable Development ; and promoting the concept of Smart City Green Life facing to the challenge of new urbanization !
- Promoting technically & politically the development of an Urban Comprehensive System platform (Mobility, Energy, Environment, Urban planning, Smart City, etc.) and the development of a Think Tank Platform (Experts, Wiki, et.) with Global System Approach.

Adapted mobility during a pandemic through information sharing : Digitization, solidarity, collaboration *(Kaisheng LIU)*

Created for the initiative to fight against the spread of the Covid19 virus, webapp.Marketslib.com a web application carried out our 1st experiment on the digital cooperation by the users of proximity mainly in the Paris region.

This application contributes to the Adapted mobility - help regulating flows at places of service :

- It's about sharing information on the affluence and availability of products / services of a place in real time by the inhabitants of the district, in order to allow them to better organize their trips for reasons : "Purchase" "Admin", etc.
- It's an attempt to create a community sharing platform to better inform and be informed by the principle of solidarity and collaboration ;
- It's also an attempt to promote digital transformation in our daily life.



**Francine
DEPRAS**

Member of the Board
of the French Society
for Prospective

Sociologist - Independent researcher (Sociology and public policies)

After studying classical literature and social psychology, my professional activity took place in 3 periods :

- The first from 1970 to 1980 : executive in various private companies and research in the thematic action programs of the Ministry of Research.
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- The second from 1980 to 2000, creation and management of the company Mouvement - Environnement - Communication, urban socio-economy, mobility, public policies.
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- Since 2000, consultant and commitment in various associations

The Great Transformation *(Francine DEPRAS)*

The work method of the French Society for Prospective to prepare its annual reports and the special document published during the Pandemia.

The prospective work method is based on a major international analysis, using all the available quantitative and qualitative data. By cross-examination of the disciplines and expertise brought together within SFdP to highlight the salient features of the situation from different points of view, these data are elaborated in a French vision. It is an identification of the traces that the Covid-19 health catastrophe will prolong or not, to analyze those that will seem to us the most irreversible and structuring to establish scenarios on the longterm evolution of humanity to come :

- coronavirus shock : historical bifurcation or epiphenomenon in the long history of humanity ?
- A troubled humanity : vulnerability- entanglement with natural ecosystems -limits of knowledge.
- Redistributed and contested powers : national and local elected assemblies and administrations ; democracy in question ; society of risk.
- economic and social shock : new capitalism ; consumption-labour ; inequalities versus solidarity.
- Questioned lifestyles and values : relation to time ; relation to the other ; ecology ; ideology ; intergenerational
- geopolitical realignments : West, Far East, South relations -conflicts and tensions- reconfiguration of globalization
- multiple crises that are difficult to resolve : fears- threats – backtracking – risks – How will we be saved ?