



Massachusetts Institute of Technology  
Environmental Initiative Solutions

## **METRO LAB INITIATIVE COURSE 2018**

### **Co-creating the metro discipline / January 8-12**

Environmental Solutions Initiative  
One Broadway, 12th floor  
Building E70, Suite 1201  
Cambridge, MA 02139

### **Metropolitan environmental solutions / January 15 - 19**

Sam Tak Lee Building  
DUSP Arena  
105 Massachusetts Avenue,  
Cambridge, MA 02139

The Metro Lab Initiative course 2018 is offering a two-week peer learning course during the IAP period at MIT. This third edition is supported by the MIT Environmental Solutions Initiative, and sponsored by AySA, ACUMAR and CIPPEC. The course session has two modules, which may be taken together or separately. Each module offers dissertations, debates, workshops, panels and field visits, all of them based in peer-to-peer learning methods, where participants will have the chance to exchange experiences with outstanding academics and practitioners from different parts of the world.

In the first module, "Co-creating the metro discipline", the following dimensions will be discussed with a metropolitan scale in mind: environment, society, wealth, governance and knowledge. The second module, entitled Metropolitan environmental solutions, will focus on how to apply the the main principles of metropolitan planning and management to a specific case: The Matanza-Riachuelo basin, in Buenos Aires, Argentina. The group will have discussions about the global agenda, the gray, blue, green and white infrastructure, as well as the future of metropolis for sustainable development. As a result of this course, we expect to co-create new approaches to face the metropolitan challenges and move forward the debate about the rising the metropolitan discipline.



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## Module 1: Co-creating the metro discipline

### DAY 1. Metropolitan environment - Monday, January 8<sup>th</sup>

After a brief presentation of the course, the participants and the ESI, Gabriel Lanfranchi will introduce the Metro Gap Analysis, highlighting the main lessons learned during MIT Metro Lab 2016 & 2017 editions “Shaping the Metro Gaps”, setting the methodological framework for the course. The main topic of discussion will be the understanding of why the metropolitan approach has become one of the most pressing challenges to achieve equitable and sustainable growth. The QUID of knowledge exchange peer learning method, developed by the lab, will be implemented to capture the collective lessons learned during the sessions.

Professor John Fernandez, Director of the MIT Environmental Initiative Solutions, will present the concept of the urban metabolism, in order to discuss and seek for solutions to some of most relevant environmental challenges. After that, Pedro B. Ortiz and Christian Taylor will introduce in separated speeches the main problems presented when managing the metropolitan “grey, green and blue infrastructure”, and some examples of successful solutions in metropolitan areas will be discussed. In addition, some participants will choose a topic/study case to make a short presentation along the open fair space.

**Instructors:** Gabriel Lanfranchi, David Gómez Alvarez, John Fernandez, Pedro Ortiz, Christian Taylor.

#### Timetable

9:00 - 9:30 AM	MIT Metro Lab Presentation	Gabriel Lanfranchi (Metro Lab), David Gómez Alvarez (Metro Lab), John Fernandez (ESI-MIT)
9:30 - 11:00	Introduction: The Metro Gaps	Gabriel Lanfranchi (Metro Lab)
11:00-12:30	Natural Environment: Urban Methabolism	John Fernandez (ESI - MIT)
12:30-2:00 PM	LUNCH BREAK.	
2:00 - 4:00	Metropolitan Infrastructure: Gray and Green	Pedro Ortiz (Int. Sr. Consultant)
4:00 - 5:00	Metropolitan Infrastructure: Blue	Christian Taylor (AySA)
5:00 - 5:30	Open Fair Exchange	By our participants
6:00 – 8:00	Welcome dinner to Instructors (Closed event)	Instructors and Guests Speakers



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## DAY 2. Metropolitan society - Tuesday, January 9<sup>th</sup>

The world has become mostly urbanized, in this context, it is important to develop an academic corpus of knowledge about the metropolitan phenomenon. Thus, Gabriel Lanfranchi will present the concept of “Planificaxtion”, in order to enhance the capacity of planning through actions with the metropolitan society: public & private sectors, NGOs & academics. With the aim to increasing the knowledge about the social cohesion and social capital, Alyssa Bryson and Nicolas Buchoud are going to explain us the values for the metropolitan community and the methods they are implementing for collaborative development in metro areas.

David Gómez Alvarez will bring to the course concepts and examples of metropolitan participation, Ramón Reyes will analyze the concept of security, explaining the role of the Security Metro Agency & Metro Security Lab in Guadalajara. Lastly, David Gómez Álvarez, Robin Rajack and Gabriel Lanfranchi will close the second day of the Metro Lab Initiative course presenting the book “Steering the Metropolis”.

**Instructors:** Gabriel Lanfranchi, David Gómez Alvarez, Alyssa Bryson, Nicolas Buchoud, Ramón Reyes, Robin Rajack.

### Timetable

<b>09:00-9:30 AM</b>	Introduction to Metro society	Gabriel Lanfranchi (Metro Lab)
<b>09:30-11:00</b>	Social Cohesion	Alyssa Bryson - COLAB, MIT
<b>11:00-12:30</b>	Social Capital	Nicolas Buchoud (Renaissance Urbaine)
<b>12:30 – 2:00 PM</b>	LUNCH BREAK & PHOTO	
<b>2:00 - 3:30</b>	Metropolitan Citizenship	David Gómez Alvarez (Metro Lab)
<b>3:30 - 4:30</b>	Security	Ramón Reyes (UDG)
<b>4:30 - 5:30</b>	Book Presentation: Steering the Metropolis	David Gómez Alvarez (Metro Lab), Robin Rajack (IDB), Gabriel Lanfranchi (Metro Lab)
<b>5:30-7:00</b>	MIT Tour + Drinks (Participants and Metro Lab Staff)	Participants and Metro Lab staff



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### **DAY 3. Metropolitan wealth - Wednesday, January 10<sup>th</sup>**

According to UN-Habitat, 85% of urban agglomerations constitutes metropolitan areas, which are the major generators of wealth and innovation (OECD). In order to understand the metropolitan wealth concept, Horacio Terraza will focus on productivity and the relevance of metroareas for national development. Pedro Ortiz will complement the concept, confronting the tension between metropolises and nations as wealth creators.

Later, we will focus on the main asset every metro area has: its land. Robin Rajack will present how different mechanisms of land readjustment, can be used to consolidate and upgrade slums. Enrique Silva will complement this concept with other innovative tools for land value capture, focusing on the political perspective.

**Instructors:** Pedro Ortiz, Horacio Terraza, Robin Rajack, Enrique Silva.

#### **Timetable**

<b>09:00-9:30 AM</b>	Introduction to Metropolitan wealth	Gabriel Lanfranchi (Metro Lab)
<b>09:30-11:00</b>	Metropolitan Productivity	Horacio Terraza (WB)
<b>11:00-12:30</b>	The wealth challenge: Metropolis vs Nations?	Pedro Ortiz (Int. Sr. Consultant)
<b>12:30 – 2:00 PM</b>	LUNCH BREAK	
<b>2:00 - 3:30</b>	Metropolitan assets: Land readjustment	Robin Rajack (IDB)
<b>3:30 - 5:00</b>	Metropolitan assets II Land Value capture	Enrique Silva (LILP)
<b>5:00 - 5:30</b>	Open Fair Exchange	By our participants



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#### **DAY 4. Metropolitan governance - Thursday, January 11<sup>th</sup>**

The metropolitan governance is a fundamental topic which varies from metropolis to metropolis, where each metropolitan city has developed its own mechanisms. Being able to monitor and evaluate metropolitan policies is essential. Gabriel Lanfranchi is going to present the topic of metropolitan governance, highlighting the importance to reach consensus, and to include diverse approaches and actors during the governing process, positively impacting all sectors of society.

Pedro Ortiz and David Gómez Alvarez will present the legal and institutional framework, explaining the complexity of the government system and the types of governance that will be taking place at the metropolitan areas. After that, Igor Calzada will examine how a new political regionalism pattern claims expressed and embodied via geo-democratic practices. Afterwards, Eugeni Villalbi will introduce us the Metropolitan Observatory where the transformations that characterize contemporary cities and metropolitan areas today can be analyzed. Finally, three participants will choose a topic/study case to make presentation along the open fair space.

**Instructors:** Gabriel Lanfranchi, David Gómez Alvarez, Pedro Ortiz, Igor Calzada, Eugeni Villalbi.

#### **Timetable:**

<b>09:00-9:30 AM</b>	Introduction to Metropolitan Governance	Gabriel Lanfranchi (Metro Lab)
<b>09:30-11:00</b>	Legal Framework	Pedro Ortiz (Int. Sr. Consultant)
<b>11:00-12:30</b>	Institutional Framework	David Gómez Alvarez (Metro Lab)
<b>12:30-2:00 PM</b>	LUNCH BREAK	
<b>2:00 - 3:30</b>	Political regionalism	Igor Calzada (Oxford)
<b>3:30 - 4:30</b>	The metropolitan observatory	Eugeni Villalbi (Metrópolis)
<b>4:30 - 5:00</b>	Open Fair Exchange	By our participants
<b>5:30-8:00</b>	Closing dinner	Instructors and Participants



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### **DAY 5. Metropolitan knowledge - Friday, January 12:**

The last day of the first module will start with a field visit to the Boston's Metropolitan Area Planning Council (MAPC). A panel with specific cases on metropolitan entities will be developed by Mark Racicot (Boston - MAPC), Rafael Forero (Colombia), David Gómez Alvarez (Guadalajara) and Eden Tekpor Gbeckor-Kove (Accra).

Back at ESI, Antonella Contin will present the concept of Metropolitan Architecture, which is a ground project that involves geography and history, among other disciplines. It is a technique informed by the relationship between the real and mental map as well as the relationship between the social and individual spatial-temporal projects. With the guidance from several experts, and as a conclusion of the first module, we will share and discuss about the rise of an emergent metropolitan discipline. Lastly, envisioning the future of metropolises, the Professor of City and Transportation Planning at the Massachusetts Institute of Technology (MIT), Jinhua Zhao, is going to present the urban agenda for autonomous vehicles. As a closing session, Gabriel Lanfranchi and David Gómez Alvarez are going to share the conclusions of the first module.

**Instructors:** Gabriel Lanfranchi, David Gómez Alvarez, Mark Racicot, Rafael Forero, Eden Tekpor Gbeckor-Kove, Pedro Ortiz, Giovanni Santamaria, Antonella Contin, Ramón Reyes Rodríguez, Jinhua Zhao

#### **Timetable:**

<b>09:30 - 11:30</b>	Field visit MAPC	Mark Racicot (MAPC, Boston), Rafael Forero (UN Habitat - Colombia), David Gómez Alvarez (Metro Lab), Eden Tekpor Gbeckor-Kove (SPURS- MIT)
<b>11:30 - 1:30</b>	LUNCH BREAK	
<b>1:30 - 3:00</b>	Metropolitan Architecture	Antonella Contin (Polimi)
<b>3:00 - 4:00</b>	Metropolitan Discipline (Round Table)	Gabriel Lanfranchi, Pedro Ortiz, Antonella Contin, David Gomez Alvarez, Giovanni Santamaria, Ramón Reyes Rodríguez
<b>4:00 - 5:00</b>	The future of metropolis: autonomous vehicles	Jinhua Zhao - MIT
<b>5:00 - 5:30</b>	Closing Act	Gabriel Lanfranchi & David Gómez Alvarez



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## **Module 2: Metropolitan environmental solutions for the Matanza - Riachuelo basin case, Buenos Aires, Argentina.**

### **DAY 6. Gray infrastructure - Monday, January 15:**

With the aim to foster the development of a new metropolitan discipline that could respond to the scale and scope of metropolis, Rafael Tuft is going to open the second module of the course introducing the relevance of resiliency on the context of the New urban agenda. Then, Dorina Bonetti and Guido Quiroga will present the case of ACUMAR, as a transformative tool for the Matanza – Riachuelo Basin. José Luis Inglese (AYSA) and Pablo Bereciartua (Argentina’s Federal Government) will also explain the implications of metropolitan governance at the basin, from different perspectives.

Pedro Ortiz will present the metropolitan subsystems, which are divided in two continuous systems: with special emphasis in the Grey Infrastructure, including TOD approaches. Moreover, Giovanni Santamaria will present inspirational talks about landscape and urban metabolism. With all the information about the context participants are expected to develop concrete solutions for the study case, fostering a space of peer to peer learning among instructors and participants based on the QUIDs approach.

**Instructors:** Rafael Tufts, Dorina Bonetti, Guido Quiroga, José Luis Inglese, Pablo Bereciartua, Gabriel Lanfranchi, Pedro Ortiz, Giovanni Santamaria.

### **Timetable:**

<b>9:00 - 9:30 AM</b>	Introduction to Metropolitan Environmental Solutions	Rafael Tufts - call (UN-Habitat)
<b>9:30 - 11:00</b>	Study case presentation. ACUMAR, AYSA, CIPPEC: The Matanza – Riachuelo Basin case	Dorina Bonetti and Guido Quiroga (ACUMAR), José Luis Inglese (AYSA), Pablo Bereciartua (Argentina’s Fed. Gov), Gabriel Lanfranchi (CIPPEC).
<b>11:00 - 12:30</b>	Solutions for Gray Infrastructure	Pedro Ortiz (Int. Sr. Consultant)
<b>12:30-2:00</b>	LUNCH BREAK	
<b>2:00-3:30</b>	Landscape as a metropolitan Project	Giovanni Santamaria (NYIT)
<b>3:30 - 5:00</b>	Workshop	Instructors and Participants
<b>6:00 - 7:30</b>	Welcome dinner for Instructors (closed event)	Instructors and Guests Speakers



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## DAY 7. Blue infrastructure. Tuesday, January 16th

The metropolitan scale challenges require specific methods, frameworks and instruments which can help practitioners to understand and act with a metropolitan scale in mind. John Fernandez will introduce the main contents of the metropolitan blue infrastructure. With the guidance from Pablo Bereciartua and Jose Luis Inglese, we will analyze the National Water Plan and the components and lessons learned from AySA's Water Plan. In addition, Jennifer Sara is going to explain the complexity of the Finance and Blue infrastructure as one of the major challenges that the metropolitan areas have to deal with.

Then, Diane D'Arras will present de Blue Infrastructure Solutions in order to analyze and explain the key themes for a water-wise world. The workshop #2 will take place at the final of the day, fostering a space of peer to peer learning among instructors and participants. Lastly, all of the senior specialist of this day are going to make some comments and share the conclusions about this day.

**Instructors:** Pablo Bereciartua, José Luis Inglese, Rita Cessti, Diane D'Arras, John Fernandez

### Timetable:

09:00-10:30 AM	Blue Infrastructure Planning	Pablo Bereciartua (SSRH, Arg.)
10:30-11:30	Blue Infrastructure Management	José Luis Inglese (AYSA)
11:30-12.30	Blue Infrastructure Finance	Rita Cessti (World Bank)
12:30-2:00 PM	LUNCH BREAK	
2:00 - 3:00	Blue Infra Solutions	Diane Darras (IWA)
3:00 - 4:30	Workshop	Instructors and participants
4:30 - 5:30	Round table	John Fernandez, Pablo Bereciartua (SSRH, Arg.), José Luis Inglese (AySA), Diane D'arras (IWA), Rita Cessti (World Bank), Dorina Bonetti (ACUMAR)
6:00 - 7:30	MIT Tour + Drinks in Harvard Sq. Instructors and metro lab staff.	Instructors and Participants





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### Wednesday, January 17: Green infrastructure

The green infrastructure is a concept related to the provision of environmental services. A new paradigm, the ecosystemic urbanism for the design of new urban developments and the regeneration of existing ones will be shared by Salvador Rueda. In addition, Eric Huybrecht is going to present the Metropolitan Plan of Paris, highlighting the meaningful role of the Regional Planning Agency of Paris Region. These cases will be analyzed with the aim to find solutions for the study case during the workshop. Lastly, a panel about Landscape and Green Planning will be held by Alfredo Ramirez, Giovanni Santamaria and Antonella Contin, where we will share and discuss all lessons learned during the day.

**Instructors:** Gabriel Lanfranchi, Salvador Rueda, Eric Huybrecht, Alfredo Ramirez, Giovanni Santamaria, Antonella Contin.

#### Timetable:

<b>09:00-9:30</b>	Introduction to Green Infrastructure	Gabriel Lanfranchi (Metro Lab)
<b>09:30-11:00</b>	Urban Ecology Planning	Salvador Rueda (BCN Ecología)
<b>11:00-12:30</b>	Green Planning	Eric Huybrecht (L'IAU)
<b>12:30-2:00</b>	LUNCH BREAK	
<b>2:00 - 3:30</b>	Workshop	Instructors & participants
<b>3:30 - 5:00</b>	Green Infrastructure Panel	Alfredo Ramirez (AA, London) / Giovanni Santamaria (NYIT) / Antonella Contin (Politecnico di Milano)
<b>5:00 - 5:30</b>	Open Fair Exchange	By our participants



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## Thursday, January 18: White infrastructure

To conclude the last chapter of the Metropolitan Infrastructural Systems, Gabriel Lanfranchi is going to introduce the concept of the White Infrastructure, related to renewable energy, technology and the sharing economy. Afterwards, Salvador Rueda and Alfredo Ramírez will focus on sustainable energy, and landscapes of technology and innovation.

Then, the final stage of the workshop will be held after the lunch break, consolidating an open space of peer to peer learning among instructors and participants. In addition, hover around three participants will choose a topic/case and make a short presentation along the open fair space. To conclude, Lorena Isla will present us the future of the mobility finishing with the last inspirational talk of the course.

**Instructor:** Gabriel Lanfranchi, Salvador Rueda, Alfredo Ramirez, Lorena Isla.

### Timetable:

<b>09:00-9:30 AM</b>	Introduction to White Infrastructure	Gabriel Lanfranchi (Metro Lab)
<b>09:30-11:00</b>	Renewable Energy	Salvador Rueda (BCN Ecología)
<b>11:00-12:30</b>	Landcapes of Innovation	Alfredo Ramirez (AA, London)
<b>12:30-2:00 PM</b>	LUNCH BREAK	
<b>2:00 - 3:30</b>	The future of mobility	Lorena Isla (Frost & Sullivan)
<b>3:30 - 5:00</b>	Workshop	Instructors and Participants
<b>5:00 - 5:30</b>	Open Fair Exchange	By our participants
<b>6:00 - 8:00</b>	Closing dinner	Instructors and Participants



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## **DAY 10. Leadership for Metropolitan Governance. Friday, January 19:**

As a final field visit, the course will interact with MIT Media Lab researchers from the Changing places group, who will show us the result of different projects conceived by their members.

After two weeks of reflections, thoughts, analyses and discussions, several proposals will be presented by the participants, summarizing the main arguments and rationale for co-creating a metro discipline. Teams and instructors will work together, and the results will be presented in an open panel.

The Metro Lab strongly believes that a new practice requires a new disciplinary corpus. A draft which includes an integral proposal for a metropolitan curriculum as a base for further courses and research agendas will be developed as part of the conclusion of the Metro Lab 2018.

**Instructors:** Gabriel Lanfranchi, David Gómez Alvarez, Phil Tinn.

### **Timetable:**

<b>10:00-12:00 AM</b>	Field visit. MIT Media Lab	Organized by Phil Tinn (MIT Media Lab)
<b>12:00-2:00 PM</b>	LUNCH BREAK	
<b>2:00 - 3:30</b>	Final Presentation	by participants
<b>3:30 - 4:30</b>	Final Panel	Practitioners and Academics
<b>4:30- 5:00</b>	Closing act	Gabriel Lanfranchi (Metro Lab) & David Gómez Alvarez (Metro Lab)



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## Organizers

**Gabriel Lanfranchi**, *Metro Lab initiative Founder and Director*



Gabriel is an Architect and Urban Planner from the University of Buenos Aires (UBA). He holds a master's degree in urban economics from Torcuato Di Tella University and a SPURS fellowship from MIT. He was the director of the Metropolitan Office that coordinated the Strategic Guidelines Plan for the Buenos Aires Metropolitan Region. He also led suburban poverty alleviation development projects at Fundacion Pro Vivienda Social. He worked on the Verona Mobility Plan and the Green Plan for Barcelona at the Urban Ecology Agency of Barcelona. He was consultant for the IDB, AySA, and other institutions. He currently works as Director of the Cities Program at CIPPEC and is co-leading the T20's Task force on Climate action and infrastructure for development. He is professor of Urban Planning at and Director of Laboratorio Metropolitano research program at UBA.

**David Gómez Alvarez**, *Metro Lab initiative Co-organizer*



David has a Ph.D. and a master (M.Phil.) in Public Administration from New York University (NYU); a master (M.Sc.) in Public Policy from the London School of Economics and Political Science (LSE); a bachelor in Public Administration from College of Mexico (Colmex). He has been researcher since 1998 in public administration, local government and political science at the ITESO, Jesuit University in Guadalajara, and professor at the University of Guadalajara as well. He is author of many publications and has collaborated in media and newspapers as political analyst. He is an independent consultant for international organizations, as UNDP, UN Habitat and the World Bank. David is the founder and executive director of Jalisco Cómo Vamos, citizen observatory; president of the Electoral Institute of Citizen Participation at the State of Jalisco; Undersecretary of Planning and Evaluation of Jalisco. He was visiting scholar at MIT and is executive president of Transversal, Tink Tank based in Guadalajara, Mexico.



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## Team Metro Lab

**Fernando Bercovich**, *MIT Metro Lab initiative 2018. Logistics Coordinator*



Fernando Bercovich studied sociology at the University of Buenos Aires, completed a Master's Degree in International Affairs and Urban Policy (The New School University) and Economic Sociology (National University of San Martín). In 2017, he joined the CIPPEC Cities Program as Coordinator. Previously he served as Coordinator of the Digital Culture Program and as data analyst of the Cultural Information System of the Ministry of Culture of the Nation

**Maria Victoria Rezaval**, *MIT Metro Lab initiative 2018. Logistics Coordinator*



Victoria Rezaval is an Architect and Urban Planner from the University of Belgrano, with doble accreditation of the Royal Institute of British Architects (RIBA). She has experience in the private sector, working as a Junior Assistant of Architecture and Maintenance in the Property Area of the Supervielle Bank. She taught in the same University and worked as a Consultant at CIPPEC. Currently, she holds a position as an Analyst at CIPPEC Cities Program where she is focus on the researching of the Metropolitan Areas of LATAM. From 2017, she has worked as one of the Coordinators of the *Metro Lab UBA*.

**Eden Tekpor**, *MIT Metro Lab initiative 2018. Logistics Coordinator*



Eden Tekpor Gbeckor-Kove is head of the town and country planning department at the Accra Metropolitan Assembly in Ghana. He is secretary to the spatial planning committee that vets and issues planning permits for prospective developers and participated in the land use planning and management Project. He has a bachelor's degree in planning from the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana, and studied for a master's degree in human settlement at KU Leuven in Belgium. At MIT he intends to study urban design, regeneration and the integration of land-use and transportation planning.



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**Juan Miguel Luna, MIT Metro Lab initiative 2018. Logistics Coordinator**



Juan Miguel Luna is a Lawyer with large experience in planning and zoning, real estate and infrastructure projects in several jurisdictions. Currently working as a Principal Senior Associate at PPU, a well renowned Iberoamerican law firm. He holds an LL.M of Boston University, postgraduate studies from Javeriana University of Bogotá, and its Law Degree is from University of Salamanca, Spain.

**Tommaso Cossu, MIT Metro Lab initiative 2018. Logistics Coordinator**



Tommaso Cossu is an Architect focused on Metropolitan Architecture. He holds a B.Sc. and a M.Sc. in Architecture at Politecnico di Milano, where he started his research on a new paradigm for architecture and planning. He is currently working on projects spanning from interior design to urban agriculture and landscape.

## Instructors

**John Fernández, MIT Environmental Solutions Initiative**



John E. Fernández, class of 1985, has been on the faculty of MIT since 1999. He is a full Professor and Director of the Building Technology Program in the Department of Architecture and is Director of the Urban Metabolism Group, a highly multidisciplinary research group focused on the resource intensity of cities and design and technology pathways for future urbanization.

**Pedro Ortíz, International Senior Consultant**



Pedro Ortiz is the leading world specialist on metropolitan land-use integration. As former Deputy Mayor of Spain's Capital, Madrid, and Director General for Metropolitan Planning for the State of Madrid he managed rapid growth of the metropolis. His experience is being used now by Multilaterals, International Non-Government Organizations (INGO's) as the World Bank, InterAmerican Development Bank, UNHabitat, UNCRD.



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**Christian Taylor, AySA**



Christian Taylor is the Technical Planning Director in AySA. Previously he was Networks Manager in AYSA for 11 years. He also was a member of the Technical Committee for the IWA (International Water Association) Water and Development Congress & Exhibition in Buenos Aires, Argentina. He is a civil engineer from the Universidad Nacional de La Plata. Christian holds a master's degree in Business from Universidad Católica Argentina.

**Alyssa Bryson, MIT-COLAB.**



Alyssa is Deputy Director of the MIT Community Innovators Lab, where she oversees program development throughout the Americas. She developed programs with mid-career global professionals at MIT, and the design and implementation of an innovation school with community leaders in the Pacific Region of Colombia. Aly holds a BA in Political Science from Northwestern University and a Masters in City Planning from MIT.

**Nicolas Buchoud, Renaissance Urbaine**



Nicolas is the President of the Grand Paris Alliance, an awarded nonprofit think-tank promoting the Metropolitan Compact. He is the co-owner of Renaissance Urbaine, an urban R&D consultancy established in 2006. He has been elected in 2017 at the Executive Committee (ExCo) of the U.N. General Assembly of Partners (GAP), a global civil society platform implementing the SDGs and the New Urban Agenda.

**Ramón Reyes Rodríguez, University of Guadalajara**



He has a Ph.D. in Urban Design from Université Laval (Qc., Ca.), a Master in Habitat and Development from Université Catholique de Louvain (LLN, Be.) and a Master in Conservation of Monuments and Sites from Katholieke Universiteit Leuven (Leuven, Be.). He has a Bachelor in Architecture and a bachelor in Geography from University of Guadalajara. Ramón is professor and Head of Urban Projects Department (UDG).



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**Robin Rajack, *Interamerican Development Bank***



Robin Rajack has worked as Lead Specialist for Housing and Urban Development at the Inter-American Development Bank (IDB) in Washington D.C. since 2014 where he is engaged in operations, research and policy dialogues and an emerging program on metropolitan governance. Before joining the IDB, Dr. Rajack worked for the World Bank for more than a decade on land, housing and urban development. He holds an M.Phil. (1994) and Ph.D. (1997) both in Land Economics from the University of Cambridge, U.K.

**Horacio Terraza, *World Bank***



Horacio Terraza is Lead Urban Specialist at the World Bank. Previously he has worked as Coordinator of Emerging and Sustainable Cities at the IDB for seven years. Horacio holds a master's degree in Development Economics and International Development from John Hopkins University.

**Enrique Silva, *LILP***



Enrique Silva is a Fellow and Associate Director for the Program on Latin America and the Caribbean (LAC) at the Lincoln Institute of Land Policy (LILP). Prior to his arrival at LILP, Silva was an Assistant Professor of city planning and urban affairs and the Program Coordinator for the graduate programs in city planning and urban affairs at Boston University. Silva holds a PhD in City and Regional Planning from the University of California, Berkeley, a Master's of Science in Planning from the University of Toronto, and a Bachelor of Arts in Political Science from Columbia University.

**Igor Calzada, *Oxford University***



Igor Calzada, MBA, FeRSA, is a Lecturer, Senior Research Fellow and Policy Adviser at the University of Oxford. His main research interest concerns comparing social, economic, technologic, democratic and politically innovative processes in smart cities and city-regions by paying special attention to regional/metropolitan governance issues regarding devolution cases in Europe. Outside academia he worked for ten years in the Mondragon Co-operative Corporation and as a Director in the Basque regional government (Spain).





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**Eugeni Villalbi, *Metrópolis***



Eugeni is a technical engineer of Public Works, specialized in transport and urban services at the Universitat Politècnica de Catalunya (UPC-ETSCCPB, Barcelona). He holds a master's degree in urban planning, administration and transport specializing in metropolitan strategies at the Paris-Est Marne-la-Vallée University (Institut Français d'Urbanisme). Since April 2016 he is part of the team of the General Secretariat of Metropolis.

**Mark Racicot, *MAPC Boston***



Mark Racicot, Manager of the Land Use Division, has worked at MAPC since 1996. He supervises an interdisciplinary team of professional planners and collaborates with other MAPC divisions to undertake a wide range of planning work throughout the region. He holds a Bachelor of Arts in Biology from Tufts University and a master's degree from the Yale School of Forestry and Environmental Studies. He is a member of the American Planning Association.

**Rafael Forero, *UN - Habitat***



Engineer. Specialist in development, public policies and project management. International consultant on subjects related to urban and territorial development. In 2010 he joined to the United Nations where he has held several positions, working with UN-Habitat in different offices worldwide. In 2014 he started the Programme of Metropolitan and Urban-Regional Integration of UN-Habitat in Colombia. Currently, he leads the Urban Safety, Governance and Legislation portfolio of UN-Habitat for the Andean Countries.

**Antonella Contin, *Politécnico di Milano***



Ph.D. is Research Associate at DASTU / Department of Architecture and Urban Studies, School of Architecture Urban Planning Construction Engineering at University of Politecnico di Milano. She is Coordinator of MSLab – Measure and Scale of the Contemporary city exploring the metropolitan world of networked multitudes, new collective associations and individualities, formal and informal, whose urban future is uncertain and multi-dimensional.



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**Giovanni Santamaria, *New York Institute of Technology***



Giovanni Santamaria is an architect and educator. His research focuses on Landscape and Ecological Urbanism. He earned a Ph.D in Architecture and Urban Design from the Facoltà di Architettura of Politecnico di Milano, after obtaining a degree in Architecture from the I.U.A.V. in Venice. He is currently Associate Professor at the School of Architecture and Design at NYIT- New York Institute of Technology, where he has been teaching several studio. He is also the co-creator of the Exchange Agreement with Politecnico di Milano.

**Jinhua Zhao, *MIT***



Jinhua Zhao is the Edward and Joyce Linde Associate Professor of City and Transportation Planning at the Massachusetts Institute of Technology (MIT). Prof. Zhao brings behavioral science and transportation technology together to shape travel behavior, design mobility system and reform urban policies. He holds Master of Science, Master of City Planning and Ph.D. degrees from MIT and a Bachelor's degree from Tongji University. Prof. Zhao directs the Urban Mobility Lab ([mobility.mit.edu](http://mobility.mit.edu)) at MIT. He very much enjoys working with students.

**Rafael Tufts, *UN-Habitat***



Raf Tufts is Director of the Programme Division at UN-Habitat, based at its Headquarters in Nairobi, Kenya. He is overseeing the work of UN-Habitat's seven thematic branches and four regional offices. Earlier assignments with UN-Habitat included coordinator of the Urban Planning and Design Branch, focusing on promoting compact, integrated and connected cities that are inclusive and resilient to climate change. He was also acting coordinator of the Housing and Slum Upgrading Branch, coordinator of the Cities and Climate Change Initiative, chief of Training and Capacity Building Branch and manager of the Localising Agenda 21 Programme.



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**Pablo Bereciartúa, *Undersecretary of Hidric Resources of Argentina***



He is the Federal Undersecretary of Hidric Resources of Argentina and the President of the Planning Agency of the Buenos Aires Province. He holds an MSc in Engineering & Economics, University of California at Berkeley CA, and Engineering (with Distinction) UNESCO-IHE Delft, an MBA from the Universidad de San Andres, and he is a Civil Engineering from the Nacional University La Plata (UNLP). Former General Director for Infrastructures at the Buenos Aires City Government. Former Dean of the School of Engineering and Mangement at the Buenos Aires Institute of Technology (ITBA).

**Dorina Bonetti, *ACUMAR***



Dorina Bonetti currently serves as president of the Matanza Riachuelo Basin Authority (ACUMAR). She is in charge of overseeing and coordinating policies to address complex environmental and social challenges. Her position demands extensive cooperation efforts with multiple government institutions to achieve the environmental recovery of the basin area. In addition, she has over twenty years of experience as a public servant in social, environmental and State modernization projects. She holds a degree of Political Science at the University of Buenos Aires, a Masters in Public Policy and Admin. at Universidad de San Andrés and a Masters in Public Admini. at Universidad Complutense de Madrid.

**Guido Quiroga, *ACUMAR***



Guido Quiroga has developed a career focused on public management, strategic planning and policy evaluation. He is currently Planning and Modernization Director at the Matanza Riachuelo Basin Authority (ACUMAR). He has over eight years of experience working with government agencie. He holds a degree of Political Science, a Masters in Public Policy and Economics at Universidad Torcuato Di Tella and a Masters in Public Policy at University College London.



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**Rita E. Cestti, World Bank**



Rita E. Cestti is the Practice Manager for the LATAM Region with the World Bank's Water Global Practice. She is responsible for managing and leading the work of the GWA04 Unit, ensuring the World Bank is providing the highest quality support to clients in the region; and for providing a leadership role in the setting of the strategic vision for water resources management and for agriculture in the region. She holds a professional degree in Civil Engineering from the Pontificia Universidad Católica, Peru, and master's degrees in Engineering Admin. and Economics from the George Washington University, USA.

**José Luis Inglese, AySA**



Graduated with honors at the Engineering School of the University of Buenos Aires, Argentina; postgraduate diploma in Sanitary Engineering, a scholarship from Obras Sanitarias de la Nación in 1973. Won the National Academy Prize "Ing.Enrique Butty" for his achievements in Sanitary Engineering for 40 years. Chairman of the Board of AySA, water and sewerage company of Greater BA, Argentina. Former President of the Argentine Association on Sanitary and Environmental Engineering and VP of interAmerican Association on Sanitary and Environmental Engineering.

**Diane D'Arras, IWA**



Diane D'Arras is a civil engineer from the "École des Ponts ParisTech" and graduated from the Paris Institute of Politic Sciences. In 1998, she became Research Senior Vice President at Degrémont and then, joining the Comex of Suez, she was in charge of Technology, Research and Innovation at the group level. She in parallel developed the concrete and day-to-day technical support to Suez operations. From 2011 to 2017 she was for Suez the Water Western Europe Senior Executive V.P. and President of the International Water Association since October 2016.



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**Salvador Rueda Palenzuela, *BCN Ecologia***



Salvador Rueda Palenzuela has a degree in Biological Sciences and Psychology. Also, he has a Diploma in Environmental Engineering and Energy Management. He directs the Urban Ecology Agency of Barcelona, since its foundation in 2000. He has held management positions in the Environment departments of the Generalitat de Catalunya (1992-2000), in the City Council of Barcelona (1986-1992) and in the City Council of Sant Adrià del Besòs (1980-1986).

**Eric Huybrechts, *Institut d'Aménagement et d'Urbanisme d'Île-de-France***



Eric Huybrechts is a senior Architect and Regional/Urban Planner, member of Isocarp and Icomos, Officer in the royal order of Sahametrey (Kingdom of Cambodia). He is in charge of the International and European affairs for the Regional planning Agency of Paris Region. He has developed a large experience in the field of Urban and regional Planning as expert and team leader. He has prepared projects at local level, sub metropolitan, metropolitan, regional and national scales.

**Alfredo Ramírez, *Architectural Association, London***



Jose Alfredo Ramirez is an architect co-founder and director of Groundlab and Co-Director of the Landscape Urbanism MArch/MSc Graduate Programme at the Architectural Association. He studied Architecture with honours in Mexico City and a Landscape Urbanism MA at the Architectural Association. At Groundlab, Jose Alfredo has led the development of projects at the junction of architecture, landscape and urbanism in a variety of contexts such as China, Mexico, Chile, UK among others.

**Lorena Isla, *Frost & Sullivan Latin America, Mexico City***



Lorena Isla has a B.S. in Economics from ITAM, Mexico City, Mexico. He has an extensive experience on operational and business development expertise. Currently, she works as a Consultant and Research Director at Frost & Sullivan for more than 13 years. She has experience in the industry on base covering broad range of automotive areas, leveraging long-standing working relationships with leading industry participants' Boards, C Level and Senior Executives.



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### **Phil Tinn, MIT Media Lab**



Phil Tinn is a Research Scientist of MIT Media Lab, specialized in Future Mobility, Persuasive Technology and Urban Information Systems. His projects exemplify a new cross-disciplinary approach to Urban Innovation by combining interventions in design, policy, engagement and behavior change in a way that humanizes technology to help cities deliver experiences that match the needs, expectations and aspirations of their users. He holds a master degree in City Planning Mobility Design & Urban Information Systems at the same university.

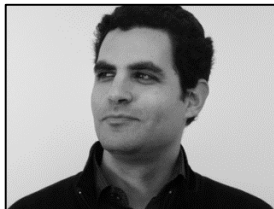
## **Participants**

### **Kathleen O'Donnell, UK**



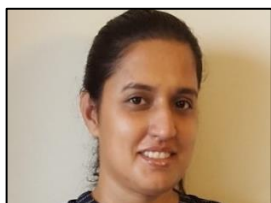
Kathleen O'Donnell has a M.A. in Emergent Technologies and Design. Professor and Investigator at Oxford Brookes University School of Architecture. President, Founding Principal of WOS (Work\_OS).

### **Enrique Alejandro Zuleta y Ferrari, Argentina**



Enrique is an Architect graduated from University of Buenos Aires in 2003. He teaches in the same University, currently as Urban Design Chief of Practice. Since 2016, he have been coordinating the Master in Cities, a postgraduate interdisciplinary program oriented to produce applied knowledge from urban planning and management practice in contemporary cities.

### **Kanchan Ghadge, India**



Kanchan is an Architect and Urban Planner from India and is currently pursuing a Masters in Environmental studies in Planning at the University of Waterloo. She has worked in the public sector on developing conservation strategies for the natural and built environment. She was involved in preparing the 3rd regional plan for the Mumbai metropolitan region which is a 20-year strategic plan for the region.



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**Joseph Ortiz, EEUU**



Joseph is an architecture thesis student at New York Institute of Technology. He has achieved his Associate's Degree in Architecture Technology and will be graduating this spring with a Bachelor of Architecture. He holds a current intern position at Kohn Pedersen Fox Associates, working on the Hudson Yards team. He is an active member in both the AIA and AIAS, holding the current position of AIA NY State Student Director.

**Laszlo Kovacs, Romania**



Laszlo Kovacs grew up in Transylvania, Romania. Curious of how things are made, he assisted his father in building a summer home, sparking his interest in building design and construction. Laszlo studied Civil Engineering back in Romania prior to coming to the United States to continue his education. He spawn his career in a Civil Engineering firm, and eventually his own CADD business.

**Ana María Castillo, Colombia**



Ana María Castillo holds a Bachelor's Degree in both Industrial Engineering and Environmental Engineering from Universidad de los Andes in Bogotá, Colombia. She has experience working with the International Finance Corporation of the World Bank Group as a consultant for the Latin America Cities and Climate Business team, and experience working with the Colombian private sector in the development of Green Building projects.

**Bernd Pfannenstein, Germany**



Bernd Pfannenstein is an expert on urban geography; president of the Mexican consulting firm Planstadt, member of the think tank Transversal and collaborates with the Program Innovative Governance of Large Urban Systems (IGLUS).



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**Pablo Reyes, Mexico**



Pablo Reyes is an Architect graduated from the University of Nuevo Leon. His extended education includes a diplomate from Bioclimatic and sustainable architecture by National University of Mexico, a Diplomate from Urban Growth, challenges and urban solutions by Monterrey's Institute of superior education and Technology and the World Bank, and a diplomate from Smart Cities by Swiss Federal Institute of Technology in Zurich.

**Lautaro Cantar, Argentina**



Lautaro Cantar is a candidate of MS in Urban Informatics (Northeastern University). Research Assistant at Boston Area Research Initiative (BARI) and Urban Data Fellow at "The American City Coalition" (TACC). Lauti Cantar is a Candidate of MS in Urban Informatics at Northeastern University and he is a Research Assistant at "Boston Area Research Initiative" (BARI).

**Thu Hien Bui, Vietnam**



Thu Hien has more than 10 years working for programme and projects of UN agencies (UN-Habitat) in the urban sustainable development and energy efficiency and 10 years working in procurement and financial effectiveness for projects related to infrastructure and industry. Her expertise and experience relates to strategic urban planning, sustainable economic leverage, PPP and capacity building for local governments and communities

**Francisco D´Albora, Argentina**



Architect from the University of Buenos Aires. Currently studying a master's degree in City Planning and Management. He is member of the Council of the Urban Environmental Plan from the City of Buenos Aires. He is also advisor at the Commission of Urban Planning at the Legislature of the City of Buenos Aires and member of the Advisory Council for Patrimonial Affairs.





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### **Eric Blandina, *EEUU***



Eric was born and raised in Connecticut. In 2012 he moved to New York City to study architecture at the New York Institute of Technology School of Architecture and Design, where he will graduate with a B. Arch in May of 2018. In that time he has supplemented an inherent interest in design with a thorough understanding of the issues and strategies of modern times that have fundamentally shifted the direction of the field.

### **Patricia Alata, *Perú***



Patricia Alata is currently working as technical coordinator in Lima Cómo Vamos and researcher in Centro Urbes. She's focused on climate change and resilience, citizen participation and public policy. She's passionate about the power of data to generate collaborative social changes."

### **Cid Blanco Junior, *Brazil***



Cid Blanco is an Architect and urban planner at the University of São Paulo (1998, Brazil) and Master's degree in Architecture and Urbanism from the School of Engineering of São Carlos at the University of São Paulo (2006, Brazil). Specialist in planning and program management to reduce urban poverty by the Institute for Housing and Urban Development Studies (2001, The Netherlands) and in housing design and development by the Department of Architecture.

### **Nilima Shrestha, *Nepal***



Nilima Thapa Shrestha is an urban planner at Kathmandu Valley Development Authority, Nepal, specializing in disaster risk management, climate change adaptation and mitigation, and ecological city planning. She has a bachelor's degree in architecture from Tribhuvan University and a MSc in urban planning and management from ITC, University of Twente, the Netherlands. At MIT, she will focus on ecological planning, urban and environmental policies, urban governance, and local economic development.



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**Milimer Mendoza, *Venezuela***



Milimer is a Data Analyst and Research Officer with expertise in climate change mitigation and disaster risk reduction research, with experience in Venezuela, Peru, Brazil and Sierra Leone. She has a multidisciplinary background in Civil Engineering having graduated from the University of Carabobo, Venezuela, where she worked for public and private consultancies in housing and water and sanitation projects.

**Alejandro Saez Reale, *Argentina***



Alejandro Saez Reale is an Engineer with Master in Public Policy at Torcuato di Tella University (UTDT) and Master in City Management and Planning Candidate at University of Buenos Aires (UBA). Public Policy Advisor and assistant manager of Management Tracking at the Ministry of Environment and Public Space, Buenos Aires City Government.

**Kangyi Shen, *China***



Kangyi Shen is an Environment & Interior Design of the The Hong Kong Polytechnic University Hong Kong SAR. He holds a Master Degree of Architecture, University of California at Berkeley United States of America. Also, he did an Exchange Study of Interior Design at the Ryerson University Toronto, Canada. He works as an Intern Architect, at the ZAO / Standardarchitecture Beijing, China.

**Mayra Gamboa, *México***



Mayra Gamboa is an Urban Planner graduated from the Universidad Nacional Autónoma de México (UNAM), and has a Masters Degree in Urban Planning from the University of California, Los Angeles (UCLA). She has worked in Planning and Urban Design fields for both private and public sectors; and has also worked as a researcher in diverse projects.



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### **Rossy Robles de la Mota, *EEUU***



Rossy Robles is currently in the last semester of the 5th year B.Arch. degree at New York Institute of Technology. Also, she work in a small firm where they focus on residential and commercial projects creating construction documents. After finalizing the first step of earning my B.Arch. she will focus on earning an M.Arch. in architectural landscaping to keep exploring the phenology and metaphysical aspects of architecture in natural environment's to hopefully change the ideas of design that are just focus in the aesthetics and not in a full body experience.

### **Anselmo Cassiano Alves, *Brazil***



Anselmo Cassiano holds an MBA in corporate communication FIA/USP. He is a specialist in negotiation, mediation, crisis emergency and business continuity at MIT. He has worked in conflict management at Princeton University and in strategy, conflict and cooperation with the Harvard Economics Department. He is currently captain of the MIT Shotokan-Karate and the Triathlon Teams. He volunteers (TA) with the MIT co-ed Sailing and Tennis programs. At MIT, he studies as a Research Affiliate in Water and Climate Change.

### **Xie Zhuolin, *China***



Xie Zuholin is a student of the Polytechnic University of Milan, School of Architecture Urban Planning Construction Engineering. He holds a degree in Architecture at the same university. He worked in Carlo Ratti Associati, Torino, Italy, as a translator for the project in Chongqing, China. Also, se was an Intern in Steget SRL, Turin, Italy, participating in projects of Reconstruction of residential house in Turin.

## **Further information**

### Readings, assignments and grading

The course is on a pass/fail basis. Participants willing to obtain a certificate of attendance must attend all sessions and submit a final assignment for each module on time. The course assignment requirements and grading criteria will be announced and distributed the first day of each module.



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*The course readings will be based on a forthcoming publication:*

*Steering the Metropolis: Metropolitan Governance for Sustainable Urban Development*, UN Habitat, [steeringthemetropolis.org](http://steeringthemetropolis.org).

*Additional suggested readings:*

*The Metropolitan Century*, OECD, <https://www.oecd.org/regional/regional-policy/The-Metropolitan-Century-Policy-Highlights%20.pdf> and

*Governing and Financing Cities in the Development World*, Lincoln Institute, <http://www.lincolninst.edu/publications/policy-focus-reports/governing-financing-cities-developing-world> Each instructor might suggest further readings that will be distributed to participants in advance.

### Schedule

It is expected from all participants to be on time and attend all sessions regardless the certificate of attendance. The course is from **9:00 am to 6:00 pm** and there will be roughly one hour break for lunch.

### Accreditation

During the first module, everyone will have to go through the security desk for a pass every morning at ESI. This will take roughly **10-15 minutes**.

### Prerequisites and requirements

This non-credit IAP activity is targeted to students and practitioners focusing on public policy; urban management; planning, urban design and architecture; international development; transportation; housing; land use and urban law; environment and climate change.



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### Academic integrity

Plagiarism and cheating are not accepted. Never turn in an assignment that is not your own original work, or turn in an assignment for this class that you previously turned in for another class. Anyone caught cheating on an assignment will be reported, to the provost in line with recognized university procedures. This may result in a failing grade for the course. MIT policy on Academic Integrity: <http://web.mit.edu/academicintegrity/>.