Design for Social and
Technological Innovation in Development

MASTER

TECHs4

CHANGE

2018/19

POLITECNICO
DI TORINO

master
M
school

TECHs4CHANGE **MASTER //**

Aim of the Programme

The programme is based on a long-term experience (about 30 years) in postgraduate education on these topics gained by the Politecnico di Torino, i.e. the School of Specialisation in "Technology, Architecture and City in Developing Countries" (1989-2003), the postgraduate Courses "Habitat, technology and development" (2003-2015) and "Habitat and cooperation" (2015-2016).

The rapid pace of urbanisation at a global level, poverty reduction and unequal distribution of resources are some of the key issues described in the UN Sustainable Development Goals. The Programme aims to provide students with the necessary knowledge and skills to develop an interdisciplinary approach to international development cooperation and manage projects which encompass urban, architectural and the technological dimension. The Programme has a multidisciplinary focus on technologies; i.e. topics related to architecture and design, energy and climate, water and sanitation and the environment.

Teaching Program

Cluster			Module	SSD	Credits	Class hours	Teaching Staff Coordinator
I	Context/frameworks	1	Visions for the Future	ICAR 12	2	20	Francesca De Filippi
		2	Policies and actors	M-GGR/02	3	30	Mohamed El Sioufi
II	Modalities of Intervention	3	Project Management for Development	SECS-P/07	4	40	Alessandra Merlo
		4	Facilitating complex change	SPS/10	3	30	Silva Ferretti
III	Urban context	5	Urban Resilience	ICAR 20 SPS/10	4	40	Fabio Armao
IV	Information technologies	6	IT for Humanitarian Assistance, Cooperation and Action	ICAR 06	4	40	Piero Boccardo
		7	ICT4D	ICAR 06/ ING-INF/03	4	40	Simone Sala
V	Technologies for habitat	8	Access to Water and Sanitation	ICAR 02	4	40	Francesco Laio
		9	Sustainable and Resilient Buildings	ICAR 12	4	40	Francesca De Filippi
		10	Energy access for all	ING-IND 11	4	40	Enrico Fabrizio
VI	Practical experience	11	Team exercise on a case study	ICAR 14 ICAR 12	4	40	Paolo Mellano
		INT	Internship in international agency or NGO				G. Cocina – R. Pennacchio

MODULES COORDINATORS

Francesca De Filippi

Architect and PhD, associate professor and Director of the Research and Documentation Centre in Technology, Architecture and City in the Global South (CRD-PVS) at Politecnico di Torino (Italy).

Research activity and generally the scientific interests mainly focus on: living heritage conservation, urban regeneration, habitat in extreme climatic and social conditions, appropriate technologies and sustainable building materials. These fields have been explored and experienced through international research and cooperation projects, the teaching activity and along with the professional work.

Enrico Fabrizio

PhD in Energy Technologies from Politecnico di Torino and INSA de Lyon, is associate professor of Building Physics and Building Services at the Department of Energy of Politecnico di Torino and works on performance simulation and optimization of zero-energy buildings, energy systems for buildings and climate control for agricultural buildings. Participated to IEA Annex 59 and IEA Annex 31. He served as a reviewer for many international journals and various bodies, and he is associate editor at Sustainable Cities and Society. He was awarded the REHVA Young Scientist Award by the European Federation of Air Conditioning Associations in 2014.

Alessandra Merlo

Independent consultant and professor at Valle d'Aosta University, Italy, in EU Financing and Project Management. Her experience includes 20 years of design and cooperation projects management in developing and transition countries (conception, strategy design, work planning, monitoring, evaluation, reporting, donor negotiation). She organised and delivered training programmes in Project Cycle Management for students and professionals, and facilitated multistakeholders workshops to identify strategies for sustainable urban development. She worked in China, India, Laos, Croatia, Ivory Coast, S. Africa, Macedonia, Romania, and Italy.

Fabio Armao

Fabio Armao is Full Professor of Politics and Globalization Processes, and of Urban Security, at the University of Turin, Italy. He has been Visiting Professor at Cornell University.
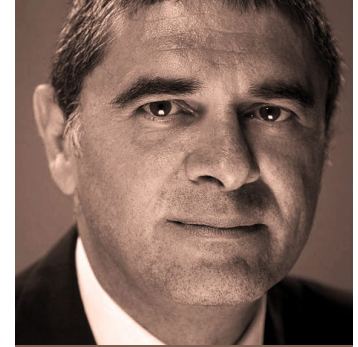
He is member of the Standing Group on Organized Crime, European Consortium for Political Research, and of the Editorial Board of 'Global Crime'.

His research interests focus on wars and geopolitics, on non-state armed actors and transnational organized crime.

Piero Boccardo

From 2018, Full Professor in the field of remote sensing and mapping at Politecnico di Torino. From 2006, Director of ITHACA and President of the public company 5T, devoted to mobility management and Intelligent Transportation Systems. President of the Remote Sensing Italian Association from 2011; member of the ASITA Scientific and Steering Committees from 1997; chair of the Working Group 1 (Remote Sensing and Disasters) of Commission VIII (Remote Sensing Application) of International Society of Photogrammetry and Remote Sensing. Author of more than 180 publications, edited at National and International level, attended as speaker and chairman, more than 100 National and International scientific congresses.

Mohamed El Sioufi

Mohamed El Sioufi, International Urban Development Advisor, has over 40 years of international experience, 20 of which with UN-HABITAT giving policy, technical and capacity development advice. He developed the "Participatory Slum Upgrading Programme" operational in 40 countries. He coordinated the Housing and Slum Upgrading Branch and the Global Housing Strategy. As prof. of Architecture at Monash University he advises the inter-disciplinary research programme "Revitalising Informal Settlements and their Environments" (RISE). He taught at Stuttgart and Ain Shams universities and was 150th Jubilee professor at Chalmers University.

Francesco Laio

Francesco Laio is a water scientist with expertise in hydrology, water resources assessment, environmental modelling, and statistics. He holds a Ph.D. in Water Engineering (from Politecnico di Milano), and

serves as a Full Professor in Hydrology. His scholarly activities are documented by more than 150 publications. In the past few years he has served as the coordinator of 11 national and international research projects (including a FIRB project and a ERC Consolidator Grant). Technology transfer activities include participation – as the scientific advisor- in the activities of the spinoff WaterView.

Silva Ferretti

Silva Ferretti is a freelance consultant with extensive international experience in both development and humanitarian work. She has been working with diverse organizations, committees, networks and consortia (e.g. Agire, ActionAid, CDAC, DEC, ECB project, Handicap International, HAP, Plan International, Save the Children, SPHERE, Unicef, WorldVision amongst many others).

Her work is mainly focused on improving programs accountability and responsiveness to the needs, capacities and aspirations of the affected populations. Within her whole work Silva emphasizes participatory approaches and learning.

Paolo Mellano

Paolo Mellano, architect, is full professor in Architectural and Urban Composition at Politecnico di Torino, head of the Department of Architecture and Design. His principal research fields are focused on Urban design, Architectural and landscape design, Alpine architecture, and Advanced Architecture. With Flavio Bruna (Bruna & Mellano Architetti Associati) made numerous experiences of design and works management for private and public bodies, taking part in numerous architecture competitions, obtaining awards and reports; they are invited to Exhibitions and Conventions of Architecture and their works are published on the most important architectural magazines.

Simone Sala

Simone Sala is an international advisor on the application of digital technologies for sustainable development, with a focus on agriculture and natural resources management. He has been working with

universities (Columbia University, MIT, University of Milan, USI-Lugano), NGOs, the Food and Agriculture Organisation of United Nations (FAO), and the Italian Development Cooperation, in more than 20 countries. He is currently consulting for FAO on ICT for Development, and collaborates with Data-Pop Alliance as a senior research affiliate on Big Data for resilience and the agri-food sector.

photo: Angela Guastaferro

MASTER TECHs4CHANGE
Design for Social and Technological Innovation in Development

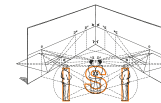|	
Starting date	May 2019
Course length	1 Academic year
Participants maximum number	25
ECTS/CFU	60
Language	English
Didactic organization	360 hours Classwork lectures 40 hours Team exercise on a case study 500 hours Internship in international agency or NGO
Course structure	10 intensive teaching modules, each one regarding key topics in technologies to be applied in International Cooperation field; 1 Teamwork exercise module on a specific case study.
Contents	The education leads to adquire knowledge and abililties to manage complexity and change, as to a wide range of career opportunities within design and planning for sustainable development, as a response to increasing awareness and commitment among both public and private sector.
Cost	4000 € (scholarships available)
Venue	Politecnico di Torino - Lingotto
Coordinator	Francesca De Filippi
Who can apply	Applicants must hold a full degree (Master of Science degree/ Laurea specialistica/Laurea magistrale) by the enrolment deadline in order to be admitted. The programme is intended for graduates who completed a Master's degree programme (or equivalent) in the following areas: Architecture, Design, Urban and Spatial planning, Engineering.
Call and Application	https://www.polito.it https://didattica.polito.it/master/tech4change/2019/

"*Technology - no matter how well designed - is only a magnifier of human intent and capacity*"
Kentaro Toyama

With the contribution of

Compagnia di San Paolo

Supported by

UN@HABITAT

PSUP PARTICIPATORY SLUM UPGRADING PROGRAMME
PROGRAMME PARTICIPATIF D'AMÉLIORATION DES BIDONVILLES PPAB
acp UN@HABITAT

Fondazione ISI
ISI Foundation

Patrocinated by

CITTÀ DI TORINO

Partners

ACRA

act!onaid
REALIZZA IL CAMBIAMENTO

soges
YOUR FUTURE

Africa '70

PLANET
IDEA
SMART ENGINEERING

A&C Architettura & Cooperazione

COP CONSORZIO ONG Piemontesi

ASIA

focsiv

CESVI

nesta
Italia

CISP
COMITATO INTERNAZIONALE
PER LO SVILUPPO DEI POPOLI

ibf
INTERNATIONAL
CONSULTING
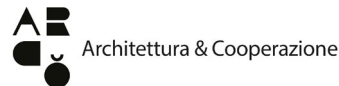
IBF Foundation
generating perspectives

PUSH.