



Innovation-Employability Training – Tunisia

## Linking academic research to industry

Location	Remote – Zoom (or Microsoft Teams)	
Meeting date/times	Thursday 21 October 2021 Friday 22 October 2021	09:30-12:00 UCT + 1 (Tunisia) 10:30-13:00 UCT + 2 (CH/ES)
Language	English/French with live translation	
Method of presentation	Subject area speakers, case presentation (best practice), guided discussion	
Participant profile	High level decision-makers of HEIs & research centres, policymakers, and representatives from industry and intermediaries in Tunisia	
Closed number	60 participants	
Cost	Training is provided by UfM with support from GIZ	
Completion	Participants attending both sessions receive a UfM Certificate of Completion	
Presenters/speakers	TBA	

## Description

Alliances and networking with higher education institutions and research centres have become critical success factors for industry to stay competitive. The interactions between knowledge centres and industry have moved **beyond a one-way flow of knowledge** from universities to industry in many parts of the world. Tunisian graduates, especially in scientific fields have increased dramatically, yet the industry lacks confidence in the potential value added that these graduates can bring. This calls for **re-examining the interaction between academia and industry** with the support of policymakers to enact enabling conditions for productive research collaborations that can **support academic requirements through degree programmes** while strengthening industrial output. Tunisia currently faces a struggle to move **from a closed to open system of innovation** – true collaboration can valorise higher educational research through growing innovation.

Academia is therefore confronted with expectations and demands that position them as a central player of the Triple Helix Model (Leydesdorff & Etzkowitz, 1998). This new and challenging role not only calls for **academia to be closely interlinked with its industry partners**, but also requires them to become embedded in the regional and national ecosystem amidst the many different actors that range from business and policymakers to civil society organisations and investors.

This training provides participants with a **theoretical overview** of the Triple Helix Model of Innovation (with the Quadruple (Carayannis & Campbell, 2009) and Quintuple (Carayannis, Barth & Campbell, 2012) expansions), as a framework for **linking academic research to industry**. The training invites participants to rethink cooperation between higher education institutions and research centres to **address needs of industry through research** topics. Potential approaches are presented, including collaborative doctorates,

industrial placements in master's programmes and other hybrid degrees that **connect theory to practice**, and develop theory through practice via cooperation between academia, industry, and policymakers.

Examples of **best practice initiatives in Tunisia** and elsewhere are presented as viewed through the lens of the Triple Helix in terms of how the different players can strengthen collaboration and move towards a **community of practice in the region**.

## **Evaluation of Course**

Participants complete a survey at the end of the training.

## **Certificate**

Participants in both sessions receive a UfM Certificate of Completion.

# Schedule

Session 1 of 2 Thursday 21 October 2021 09:30-12:00 UCT + 1 (Tunisia)	
09:30 – 09:40	<b>Open and welcome</b> <i>Giuseppe Provenzano UfM, Andreas Garbade GIZ, Tunisian Ministry Representative TBC</i>
09:40 – 09:45	<b>UfM initiative “Reinforcing the innovation-employability nexus in the Mediterranean”</b> <i>Giuseppe Provenzano UfM</i>
<b>Part I: Applying the Triple Helix</b>	
09:45 – 10:05	<b>Theoretical framework – the Triple Helix Model</b> <i>Dr Nina Volles, Paeradigms</i>
10:05 – 10:15	<b>University governance and internationalisation in North Africa</b> <i>Silvia Marchionne, Mediterranean Universities Union</i>
10:15 – 10:25	<b>Knowledge exchange between the blue economy and higher education</b> <i>Prof Mounir Ghribi, Blue Skills</i>
10:25 – 10:30	<i>Coffee Break</i>
<b>Part II: Tunisian Context</b>	
10:30 – 10:50	<b>Student employability via university-industry linkages: Overview of best practices in Tunisia</b> <i>Prof Ahlem Dakhlaoui Chateur, National Observatory of Sciences and Technology, MHESR, Tunisia</i>
<b>Part III: Examples of best practice in Tunisia</b>	
10:50 – 11:00	<b>Tunisian Start-up Act</b> <i>Dr. Sihem Laarif, MHESR, Tunisia</i>
11:00 – 11:10	<b>Academia: Entrepreneurial students</b> (students who study while launching a project) <i>Prof Salma Damak, Vice-President of University of Carthage, Tunisia</i>
11:10 – 11:20	<b>Academia: Technopole experience,</b> <i>Ms. Rim Saied, DG Valorisation of scientific research MHESR, Tunisia</i>
11:20 – 11:30	<b>Policy: PNRI Programme national de recherche / innovation</b> <i>Kais Mejri, DG Innovation and Technology, MIPME</i>
11:30 – 11:40	<b>International cooperation: Projets PRIMA avec les partenaires industriels</b> <i>Prof Samia Charfi Kaddour, DG Scientific research</i>
<b>Part VI: Discussion and key learnings</b>	
11:40 – 11:50	<b>Guided discussion – best practices</b> <i>Moderators: Giuseppe Provenzano, UfM and Prof Chedly Abdelly DG ANPR, MHESR, Tunisia</i>
11:50 – 11:55	<b>Key learnings</b> <i>Dr Nina Volles, Paeradigms</i>
11:55 – 12:00	<b>Close and reminder</b> <i>Giuseppe Provenzano, UfM and Prof Ahlem Dakhlaoui Chateur National Observatory of Sciences and Technology, MHESR, Tunisia</i>
<b>end</b>	

<b>Session 2 of 2</b> Friday 22 October 2021 09:30-12:00 UCT + 1 (Tunisia)	
09:30 – 09:40	<b>Open and review</b> <ul style="list-style-type: none"> <li>• Giuseppe Provenzano, UfM</li> <li>• Prof Ahlem Dakhlaoui Chateur</li> </ul>
<b>Part I: Valorising existing capacity</b>	
09:40 – 10:00	<b>From knowledge transfer to open innovation</b> <i>Dr Nina Volles, Paeradigms</i> <ul style="list-style-type: none"> <li>• Transitioning from one-way knowledge transfer to exchanging knowledge in multiple directions (open innovation).</li> <li>• Establishing confidence among employers of the value of high-skilled graduates through knowledge exchange.</li> <li>• Relevant instruments for knowledge exchange.</li> </ul>
10:00 – 10:10	<b>Examples of collaborative doctorates and master’s programmes</b> <i>Moderator, Prof Ahlem Dakhlaoui Chateur, National Observatory of Sciences and Technology, MHESR, Tunisia</i>
10:10 – 10:20	<b>Technology Transfer Tools at the National Agency for the Scientific Research Promotion</b> <i>Prof Chedly Abdelly, DG ANPR, MHESR, Tunisia</i>
10:20 – 10:30	<b>Le montage du mastère co-construit avec un témoignage d’une université Tunisienne</b> <i>Mustapha Baccouch, UTICA</i>
10:30 – 10:40	<b>Montage d’un Centre de Certification co-construit en Contrôle Non-Destructif POLYTECH/VIBRATECH pour le marché libyen</b> <i>Prof. Nidhal Rezg, Centrale Polytechnique de l’Université Centrale du Groupe « Honoris United Universities »</i>
10:40 – 10:45	<i>Coffee Break</i>
<b>Part II: Organisational change</b>	
10:45 – 11:05	<b>Leadership perceptions of knowledge exchange and culture shift</b> <i>Amine Moussa</i>
11:05 – 11:20	<b>Guided discussion</b> <i>Moderators: Giuseppe Provenzano, UfM and Prof Chedly Abdelly DG ANPR, MHESR, Tunisia</i>
<b>Part III: Way forward and conclusion</b>	
11:20 – 11:50	<b>Ideas on concrete actions</b> <i>Moderators: Giuseppe Provenzano, Prof Ahlem Dakhlaoui Chateur</i> <ul style="list-style-type: none"> <li>• Linking initiatives for greater impact</li> <li>• Enabling policies</li> </ul>
11:50 – 11:55	<b>Key learnings</b> <i>Dr Nina Volles, Paeradigms</i>
11:55 – 12:00	<b>Close and thanks</b> <i>Giuseppe Provenzano UfM, Prof Ahlem Dakhlaoui Chateur National Observatory of Sciences and Technology, MHESR, Tunisia</i>
<b>end</b>	

**Dr Nina Volles** is the lead instructor. She is German/Iranian-born and was educated in Germany, France, the UK, and Switzerland. She is the Managing Director of Paeradigms and has over two decades of experience in education, communications, and international cooperation, working in industry, academia, and development sectors. A social scientist by training with a background in higher education management, she has been involved in the design, implementation, monitoring, review, and quality assurance of a wide spectrum of higher education programmes in Africa, Europe, North America, and Asia. In recent years, her interest has shifted to capacity development in international cooperation with a focus on education and training through university-industry-government partnerships (e.g. industrial doctorates, strategic partnership development, academic policy-making, stakeholder engagement, and change management through development principles). She holds a doctorate in Higher Education Management, an Executive Master of Science in Communications Management, a Master's in International Relations and a Bachelor's in English and French Literature and Civilisation.

**Amine Moussa** is part of the instruction team. He is Lebanese and was educated there and in the UK and Germany. Amine is a computer scientist who began his career in industry and has over 10 years of experience with online teaching. In 2013, Amine joined Notre Dame University (Lebanon) as Senior Specialist and Head of the Library Information Systems Department, where he is involved in digital transformation processes. Since 2009, Amine has also been part-time faculty of the Arab Open University (HEI partner of the Open University UK). He holds a bachelor and master is in Computer Information Systems from Notre Dame University (Lebanon) in Lebanon and has participated in certificate courses in the US and the UK. He is currently pursuing his Doctorate in Higher Education Management at the University of Bath, where he is researching the role of ethical leadership in higher education and its implications for employee knowledge sharing behaviour.



**Prof Ahlem DAKHLAOU** is currently the director of the observatory of sciences and technology at the Ministry of higher education and scientific research in Tunisia. She is full professor in quantitative methods at the Carthage High Commercial Studies Institute and researcher at the Polytechnic School of Tunisia in the Laboratory of Industrial Economics and Management, LEGI - University of Carthage and associate researcher at CREATE, Laval University, Canada. She is vice-Dean of the faculty of Economics and Management of Nabeul, University of Carthage, Tunisia. Previously, she was vice-Dean of the faculty of Economics and Management of Nabeul, University of Carthage (2017-April 2021); she has chaired the department of quantitative methods (2003-2008) and director of Ph.D. program in economics (2015-2018). She received a Ph. D in quantitative economics and econometrics from Toulouse School of Economics (TSE) in 2002. She has 20 years of professional experience in academic research in the fields of Modelling and numerical simulation of public policies, statistic and applied econometrics, computational economics, industrial organization, energy and environmental modelling. She has recipient several national and international scholarships: National Excellence Scholarship for Graduate Studies in France, High-level Research scholarship from university of Duisburg-Essen for training program, High-level Research scholarship French Institute of Cooperation (IFC), Research Fellowship TSE and University of Laval. She is also reviewer of many peer-reviewed international journals. She is also senior fellow-WTO Chair program, Tunis Business School, University of Tunis and member of econometrics Society and member of Eurasia Business and Economics Society.



**Ms. Rim SAIED**, (Female) is a general director of research valorization director at the Ministry of Higher Education and Scientific Research of Tunisia. She had occupied the position of the director of Technology parks in the same structure (General Directorate of Research Valorization). She has the grade of architecture general. She has obtained a Master's degree in Architecture and urbanism. She has taught urbanism in Higher Institutes of Technological Studies and geometry in National College of Architecture and urbanism. She has managed a wide range of projects that financed by European Investment Bank, World Bank and Japan International Cooperation Agency (JICA), including "Tunisian Techno parks program", "Higher Institutes of Technological Studies Program". Actually, she is on the head of the coordinate structure in charge of research valorization including: - Monitoring Tunisian technology parks program "EIB, Loan 23060" and "Borj Cedria Science and Technology Park Development Project" (JICA Loan TS-P26); - Monitoring of valorization strategy, programs and mechanisms in the Ministry of Higher Education and Scientific Research of Tunisia. - Coordinating some bilateral projects in research valorization implemented with different partners (Wallonie-Bruxelles, AUF, BMBF from Germany, Japan, ...), African partners especially South Africa, and president of the Arab network of incubators and techno-parks "ARTECNET".



**Dr Sihem Larif Oueslati** holds a Ph.D. in Management and a master's degree in accounting, decision making and control from Paris-Dauphine University, France. She is actually advisor to the Minister of Higher Education and Scientific Research in charge of employability and openness to the environment. Besides that, she is an Associate Professor of Management at ESSEC University, Tunis. Dr. Larif lectured at Paris-Dauphine University. She worked with Deloitte and Touch (Tunisia) and on the implementation of the ERP system of Air France (Paris). She also worked in the Controllers and Corporate Portfolio Department of the International Finance Corporation in Washington, DC (IFC, World Bank Group). Besides teaching, Sihem Larif is a consultant in entrepreneurship and a founding member of the entrepreneurship competition Open Start Up Tunisia (OST). She was director of the entrepreneurial program OSTX, fostering Tunisian entrepreneurial ecosystem and promoting youth engagement in entrepreneurship. OSTX is developed in partnership with public and private partners including Columbia University (NYC), the Tunisian Ministry of Higher Education, the US Embassy in Tunisia, Africinvest, Fondation Drosos, Flat6 Labs and Columbia Global Center, Tunis.



**Prof. Chedly Abdelly** obtained his Doctorate of State in Natural Sciences from the Faculty of Sciences of Tunis (1997). He coordinated several national and international research projects. He is internationally recognized as an accomplished ecologist and eminent halophyte specialist. He serves as CEO of the Tunisian National Agency for the Promotion of Scientific Research since 2017, CEO of the Centre of Biotechnology of Borj Cedria, CBBC, 2011-2017; Director of the laboratory of Extremophile Plants (2010-2018) and the Laboratory of Plant Adaptation for Abiotic Stresses (2002-2010). Professor Chedly Abdelly has actively and remarkably contributed in the field of Biological Sciences, with particular emphasis on the characterization of the of plant responses to abiotic constraints using physiological, biochemical and molecular parameters, addressing plant behavior to combined environmental constraint, the valorization of extremophile plants in the rehabilitation of marginal areas and the characterization of extremophile plants in order to identify promising species which combine stress tolerance and economic potential, new sources of biomass for human nutrition and the production of energy biomaterials and biomolecules of interest. He has an outstanding proven track record of publications in distinguished journals (440 publications, h index 68, 18294 citations) and edited the book "Biosaline Agriculture and High Salinity Tolerance". Besides 03 patent inventions, he supervised 73 PhD thesis and 37 Master students. He obtained several prestigious prizes: the Presidential Prize of the Graduation Diploma from the Higher School of Teaching (1980), the Presidential Award for the Best Researcher in Biotechnology (2016); the National Order of Merit for Science and Education (2017), the Presidential Award for the best Laboratory (2018) and Continental Prize for scientific excellence "Kwame Nkrumah" (2020). Finally, he was elected as full member of the Tunisian Academy of Sciences, Letters and Arts (2019) and Fellow African Academy of Sciences 'FAAS' (2019).



**Prof. Nidhal REZG**, an electrical engineer from ENIT (Ecole Nationale d'Ingéneurs de Tunis), obtained his doctorate in Industrial Automation from INSA Lyon in 1996, and his habilitation in 2003 from Paul Verlaine University in Metz. He was a teacher-researcher at the Ecole Centrale de Lyon from 1996 to 1997 and then an Assistant Professor at the School of Engineering of the University of Moncton in Canada, from 1997 to 1999. He was MCF at the Paul Verlaine University of Metz during the period 1999 - 2004, then Professor in Industrial Engineering at the Paul Verlaine University (Metz) until 2014, and finally Professor of Exceptional Class at the University of Lorraine. Actually, he is the director of the Ecole Centrale Polytechnique of the Central University of the Honoris United Universities group. Specialist in the field of simulation and optimization of maintenance policies coupled with production and logistics, Nidhal REZG is interested in the use of Artificial Intelligence tools in simulation models. He is co-author of two books published by WILEY with 90 publications in international journals with high impact factor. He is also the author of two book chapters by springer. Professor REZG has also organized and been invited to speak at several international conferences. The most recent invitation was from the IEOM Society for the IEOM Zimbabwe Conference from 7-10 December 2020 with the Distinguished Professor Award. He has also directed 28 theses, 25 of which were defended, and has been the leader of numerous industrial contracts with major companies such as Dassault Systèmes, RENAULT, DACIA.



**Prof Samia Charfi Kaddour**

Technical assistance from

# PÆRADIGMS

Developing Capacity for Change


Address Union for the Mediterranean (UfM)  
Palacio de Pedralbes  
Pere Duran Farell, 11  
ES-08034 Barcelona, Spain

Web <http://www.ufmsecretariat.org>


Higher Education & Research

Phone +34 93 521 41 51

E-mail [education@ufmsecretariat.org](mailto:education@ufmsecretariat.org)

 [ufmsecretariat](#)

 [@UFMSecretariat](#)

 [union-for-the-mediterranean](#)

[@ufmsecretariat](#)