



Università
di Genova

Polytechnic School
Engineering



STRATEGOS Workshop: *the new Way to Succeed*

STRATEGOS to master M&S, Data Analytics & AI
for supporting Strategic Decision Making

14.30-17.00, October 30th, 2019, Evans Room, NUSS Kent Ridge
Guild House ,9 Kent Ridge Drive, 119241. Singapore

A **STRATEGOS** is a person able to know better what is going
or is likely to happen (Socrates, Laches, 423BC)

AGENDA

- Welcome
 - Prof. Agostino G. Bruzzone, STRATEGOS Council Chair
 - Prof. Yong Meng Teo, NUS & Program Chair of Asiasim
 - Dott. Raffaele Langella, Ambassador of Italy to Singapore and Brunei Darussalam
- STRATEGOS as opportunity to develop Strategic Engineering
 - Prof. Agostino G. Bruzzone, Università di Genova
- Strategic Engineering in Innovation, Business, Research and Education
 - Prof. Gary Tan, Vice Dean National University of Singapore
 - Prof. Roberto Cianci, Director of DIMS, PhD Program in Mathematical Modeling and Simulation
 - Prof. Adriano Solis, Supply Chain Mngt. & Decision Sciences Programs, School of Adm. Studies, York University
 - Prof. Axel Lehman, Universität der Bundeswehr München, Germany
 - Prof. Roberto Dillon, James Cook University, Singapore
 - Prof. Wentong Cai, School of Comp. Science & Eng., Nanyang Tech. University
 - Prof. Lin Zang, Beihang University, BUAA, China
 - Ing. Giulio Gennaro, CEO 1888 G. Consulting
 - Dr. Claudio Ceccarini, CEO Leonardo Singapore Pte Ltd
 - Mr. Tan Yuh Cherng, General Manager, ST Engineering Electronics in Singapore
 - Dr. Revathi Jayaraman, Senior System Engineering, Thales
 - Ing. Paolo Moretti, Senior Director Marine, RINA, Singapore
 - Dott. Filippo D'Antoni, Indonesia Branch Director, Ansaldo Energia
- Closing Remarks & Welcome Cocktail

This Workshop proposes the opportunity to join the revolutionary initiative **STRATEGOS**, inherent **Strategic Engineering**, with major partners in Institutions, Agencies and major Industries. This meeting is part of the series of **STRATEGOS** Workshops on this subject: Milan (4 July 2019), Berlin (23 July 2019), Rome (16 September 2019), Lisbon (19 September 2019), Genoa (27 September 2019), Singapore (30 October 2019) and Beijing (5 November 2019).

The **STRATEGOS** Workshop "The New way to Succeed" will be held on October 30th, at National University of Singapore Society. The Workshop addresses how **Strategic Engineering** allow to developed innovative solutions to succeed in Strategic Decision Making.

Prof. Agostino Bruzzone, President of the **STRATEGOS** Initiative led by the University of Genoa, will present the innovative concept of **Strategic Engineering** as a new discipline based on the dynamic combination of Modeling, Simulation, Data Analytics, AI (Artificial Intelligence), IA (Intelligent Agents) and Machine Learning to support the Strategic Decision Making Process and Security Issues.

Strategic Engineering dynamically combining these techniques by acquiring and filtering data in real time, extracting valuable information by Intelligent Systems and developing intelligent simulation of the consequence of the Strategic Decisions, monitoring the real system evolution respect to scenario changes and competitor actions. In the Digital Age, this represents an Indispensable Competitive Advantage based on Quantitative Assessments made possible by new data sources and technologies that allow to transform Big Data into aids to guide Crucial Choices.

STRATEGOS

In the **STRATEGOS** Workshop "The New way to Succeed", **Strategic Engineering** is proposed as a Science intended to support Strategic Decisions to become the guide for the development of Companies, Institutions and major Entities, in an increasingly uncertain and competitive world, where data, models and technologies make the difference.

STRATEGOS ("Engineering Technologies for Strategy and Security") born in this context as a synergy between Universities, Industries and Institutions and leads to the creation of a new Master's Degree in **Strategic Engineering**, first in Italy and among the first ones in the world. In facts, **STRATEGOS** is the European forerunner of **Strategic Engineering**, blossomed less than a decade ago in one of the major Universities in the world (i.e. MIT), and already active in Italy.

Indeed **STRATEGOS**, is organized by Genoa University, as a choral work among DITEN, Polytechnic School, DIEC & DISPO, Simulation Team, Elios Lab and the Industrial and Institutions world. In facts, **STRATEGOS** offers a Trans-disciplinary preparation that combines, alongside Engineering, solid foundations of Economics and International Affairs to provide the ability to interact with Decision Makers and to contextualize Geo-Political and Market Scenarios in terms of risks and opportunities.

Fundamental is the close union with the Institutions, International Agencies, Industries, Consulting Firms and Hi Tech Companies and the attention to current needs in terms of Strategies development capacity and resilience on Security issues. This Workshop invites all the subjects interested in these issues, from the ICT to Transportations, from Industry to Consultancy, from Marine to Defense. Indeed **STRATEGOS** addresses the big demand for highly qualified young people in this field as well as the need to provide specific courses to Senior/Executive resources looking to renew themselves.

Companies, Institutions & Universities are invited to join **STRATEGOS** to promote Educational Initiatives, R&D Projects, Workshop, Internships, Summer Stages, Faculty/Student Exchanges.

In fact, the Panel of the Singapore Workshop will provide concrete examples on the importance of this discipline in different fields as well as on how there is a need both to create new solutions, to prepare young resources and to renew experienced executives and manager.

STRATEGOS offers Internships opportunities (6 months), Summer Stages (Jun-Jul-Sept, 3-6 weeks), but also Workshops open to the external people to support a joint Academy, Industry and Institutions development. The last semester is entirely dedicated to the Internship in a Company, an International Lab or an Agency. Indeed there are numerous opportunities for Companies, Agencies & Institutions, to collaborate and benefit from this opportunity.

Precisely for this reason, for the term **Strategic Engineering**, we use, as leitmotiv and reading key, a Socrates quote (reported by Plato), defining it as the Art to better understand what is happening and what will happen. Today, It is evident that the new technologies especially when integrated together with models, algorithms, data and simulation systems, allow to effectively support the understanding and decision-making capacity in a vast spectrum of applications. In the Singapore Workshop, we also refer to another important quote from Sir Thomas Stamford Bingley Raffles, that outlines how a "Strategist ...should have the temper and the spirit of the good cause to carry him through difficulties with satisfaction and credit". This sentence outlines the fundamental role of preparing valuable people able to maximize the opportunities as that one prepared in this new Discipline.

Companies of the caliber of Accenture, Ansaldo, Axpo, BearingPoint, Hitachi, Leonardo, MBDA, Paul Wurth, Rina, Tenova, Thales, AMIU have already declared their adhesion to **STRATEGOS**; furthermore, in addition to large industries, also Hi-Tech & Innovation Companies (e.g. Antycip Simulation Italy & ST, Brandnew Promoter, Sigla Tech, SIM4Future, MCA, Nemea, Sobean, Staraglass, TMC) collaborate in the partnership considering these issues as strategic and there are many others who are considering joining the initiative. Alongside the Industries there are also representatives of NATO and Foreign Centers of Excellence (e.g. NATO M&S Center of Excellence, International Universities) who are emblematic of the numerous contacts with the highest Industrial, Government and Scientific Research Centers already involved.

Further information on **STRATEGOS** are available in www.itim.unige.it/strategos and www.strategos.it