## L'Industria Impiantistica incontra Giovani Ingegneri: Sfide e Opportunità per Aziende e Giovani Ingegneri



INVITO PER TUTTI GLI STUDENTI DI INGEGNERIA

**Meeting Program** June 14th 2012, 10:00 am - 12:00 Aula B1 (Aula Magna) via Pia 15, 16145 Genoa, Italy

www.itim.unige.it/cs/plants/2012/jun2012.html



10:10 Eccellenza e Competitività Oggi

Responsabili di Aziende Leader a livello Mondiale 10:30

evidenziano le Sfide e le Opportunità per Aziende e Giovani

Incontro diretto con le Aziende e Colloqui Preliminari 11:15

12:30 Chiusura e prosecuzione dei colloqui e campus interview















www.itim.unige.it/mipet

Industrial Plant Business Sector meets with Young Engineers:

# Challenges and Opportunities for Young Engineers & Companies

**Aziende** Coinvolte





#### BOMBARDIER





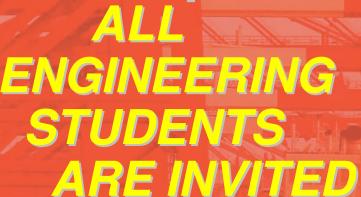












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via Pia 15, 16145 Genoa, Italy

10:00 **Welcome Prof. Agostino Bruzzone** 10:10 **Excellence and Competitiveness Today** 10:30 **Managers from International Major Companies** on Student/Company Opportunities & Challenges 11:15 **Meeting with Companies & Campus Interviewing** 12:30 **Closure & further Campus Interview** 













Free Access, for additional information, please contact: {marina.massei,madeo}@simulationteam.com www.itim.unige.it/cs/plants/2012/jun2012.html

# Intellectual Capital for Future of Engineering

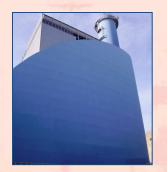
Jack Welch (GE CEO 1981-2001 from \$14 billions market value to over \$410 billions): Globalization has changed us into a company that searches the world, not just to sell or to source, but to find Intellectual Capital: the World's Best Talents and Greatest Ideas

















Scientists investigate that which already is; Engineers create that which has never been Albert Einstein, Physics Nobel Price 1921





### A Two-Speed World

Car Production 2006 to 2010

Slovakia India Indonesia

6 Thailand 7 Egypt 8 Iran

The crisis pointed out by Media is very relative in term of Geographic/Temporal Coordinates for Instance:

- Automotive Vehicles: +17% Worldwide from 2006 to 2010
- Shipbuilding:

**Europe from 8% of World Market to 3% (-60%)** 

2011: 200 Ship in Construction just in Shanghai Area

#### GDP:

2010: Europe 1.5%

USA 2.8% China 10.3% Brazil 7.5%

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Italy 1.3%
Canada 3.1%
India 10.4%
Chile 5.3%



Romania 85.4% Czech 78.4% Uzbekistan 49.0% Poland 45.4% Slovenia 14 Brazil 40.7% Mexico 40.4% Serbia Turkey 33.0% Malaysia 29.0% South Korea 13.1% Hungary 11.1% 3.8% Germany Japan -7.9% -8.8% South Africa -9.1% Portugal -16.7% **Taiwan** France Sweden Belaium -40.9% Netherlands Ukraine



Figures based on Web info



39 Austria

40 Finland

-62.6%

# Global 500 Companies in World during 2011

TOP COMPANIES Worldwide in term of World Sales Percentage 2011 vs. 2009

Main Companies worldwide have serious challenges in 2011 therefore some result are provided:

Wal-Mart	Revenues +3%	Profits	16'389 +14%	1	World Ranking (Previously 1)
Royal Dutch Shell	Revenues +33%	Profits	20'127 +61%	2	World Ranking (Previously 2)
Sinopec	Revenues +46%	Profits	7'629 +33%	5	World Ranking (Previously 7)
State Grid	Revenues +23%	Profits	4'556 NA	7	World Ranking (Previously 8)
Toyota Motor	Revenues +9%	Profits	4'766 +111%	8	World Ranking (Previously 5)
General Electric	Revenues -3%	Profits	11'644 +6%	16	World Ranking (Previously 13)
Samsung	Revenues +23%	Profits	13'669 +81%	22	World Ranking (Previously32)













Figures based on Web info

Global 500 Source

Unclassified



## Global 500 Companies in Italy: **Challenges and Opportunities**

Companies, even in Europe, have to face the challenges, therefore some results are interesting and there are opportunities everywhere and every time if decision making is effective and efficient:

FNI Revenues +12% Profits 8.3GUSD +37% 23rd World Company (previously 24th)

Generali Revenues -4.6 Profits 2.2GUSD +23% 33rd World Company (previously 19th)

ENEL Revenues +8.8% Profits 5.8GUSD -22%

**EXOR/FIAT** Revenues +7% Profits 181MUSD na

56th World Company (previously 60th)

83rd World Company (na)

**TOP 4 Italian Company Worldwide in term of World Sales** 









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Global 500 Source

Unclassified

### **Humans & Globalization**

Workers, Employers, Engineers & Managers are people and subjected to the world market evolution; therefore the capability to move and reorganize effectively such realities could get big benefits from modeling & simulation

**Plant Engineering Prices** 20-30 Euro/hour Italy Brazil 15-20 Euro/hour India 5-10 Euro/hour

**Ship Construction Yard Workers** Italy 2'500 Euro/Month China 350 USD/Month

Korea 600 USD/Month Philippines 450 USD/Month













Figures based on Web info

Jniversità di Genova

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# **Human Capital is becoming Even more Important**

M&S is providing an unique opportunity to improve the Capabilities and Understanding of high qualified people: scientists, researchers, technicians and engineers







### Impiantistica e Ingegneria a Genova

active in Industrial Plant Engineering; for instance the MISS DIPTEM resulted as evolution of the Institute of Technology and **Industrial Plant Engineering & Management** (ITIM) that was focused on these issues since '60; DIST, DICHEP, DINAEL and other **Engineering Departments are also active on** these subjects. The Genoa University is involved in several R&D activities on Plant and Process Engineering and also in Undergraduate, Postgraduate Continuous Education on this area. Simulation Team MISS DIPTEM for instance co-operates actively with major Excellence

In Genoa University several groups are













Centers World-Wide.



### **Simulation Team MISS DIPTEM**

The Simulation Team - DIPTEM of *Genoa University* carries out many industrial simulation projects in cooperation with the large corporations and Small and Medium sized Enterprises; some example of recent industrial simulation project are following:



Fleet Management Planning & Scheduling Chemical Plant Logistics Optimization





Ansaldo









LAMCE Petrobras



**EDA** 











BR







Cetena Fincantieri Simulation for Life Cycle Assessment of New Vessels





Members of MISS are appointed in several positions in simulation community such as:

• General Director M&S Net (34 M&S Centers worldwide)

• Associate Vice President of SCS and Chairman of Technical Chapter

Member of NATO SAS, MSG, and NIAG

Oltalian Point of Contact of ISAG (International Simulation Advisory Group)



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### **MIPET**







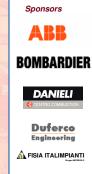








**MIPET Master is devoted to prepare on Industrial Plants Technical** Issues, with special attention to Engineering. The goal is to organize a Master Program based on strong cooperation between **Academic and Technical Experts coming from Leading Universities** and Companies operating in this area with special attention to Engineering and Construction in Power Generation, Iron & Steel and Environment.





PAUL WURTH









# Companies interested in Complex System Engineering







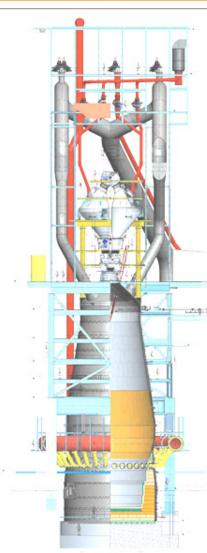






### **Paul Wurth**

### **Leading player in E&C**



- ✓ Ironmaking
- ✓ Cokemaking
- ✓ Environmental Protection
- ✓ Energy Conservation

Technology and Innovation is our life insurance in a global market

- √ 224 patented inventions
- √ 1584 active patents
- √ 40 licensees

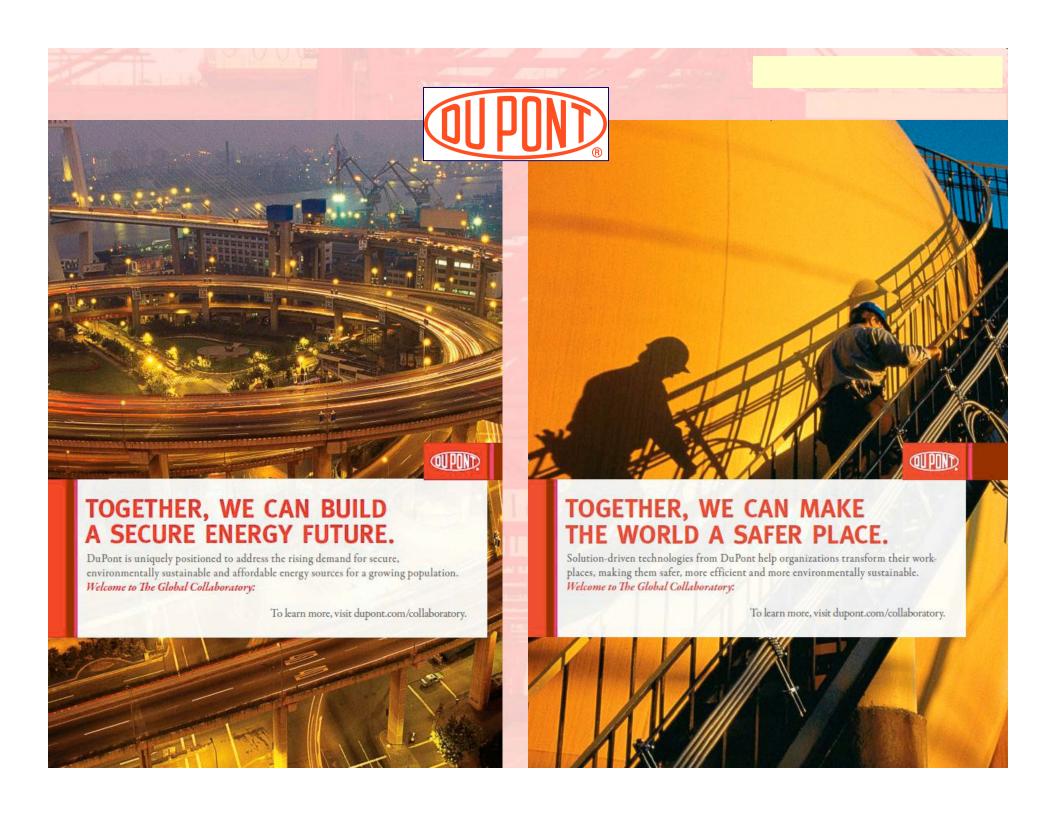
Recent orders in Brazil, Mexico, India, Germany, Japan, Korea, Russia, Taiwan

26 PW entities in 18 countries, totalling about 1600 people.

PW Italia, employing 208 people based in Genoa (65 hired in the last 4 years), is a prominent member of this group with its own long term tradition and a strong sense of belonging of the employees.







### APM Terminals e Vado Ligure – I numeri



#### A.P. Moller-Maersk Group - Copenhagen, Denmark

Fatturato 2011: USD 60.2 mld

(Shipping, Energia, vendita al dettaglio)

108,000 dipendenti in 130 paesi

APM Terminals - The Hague, Netherlands

22,000 dipendenti in 64 paesi

56 terminal marittimi operativi, 15 progetti, 115 terminal inland

Fatturato 2011: USD 4.7 mld

Volumi 2011: 33.5 m TEU

#### Il progetto di VADO LIGURE

Investimenti APMT	EUR 150 mil.			
Inizio operativita'	Seconda meta' 2016			
Piazzale	19 ettari			
Gru da banchina	6 super post panamax			
Gru da piazzale	24 A- RMG			
Capacita'	0,9 mil. TEU			





#### FORMATURA INIEZIONE POLIMERI



Dal 1954 FIP produce valvole e raccordi in materiali termoplastici quali U-PVC, PP-H, PVC-C, PVDF, che trovano ampio impiego negli impianti per il trasporto di fluidi in pressione.

I prodotti FIP racchiudono oltre 50 anni di esperienza e testimoniano una costante ricerca di innovazione.











www.fipnet.it







# SpecTec What Mitigation? SpecTec Leading the way















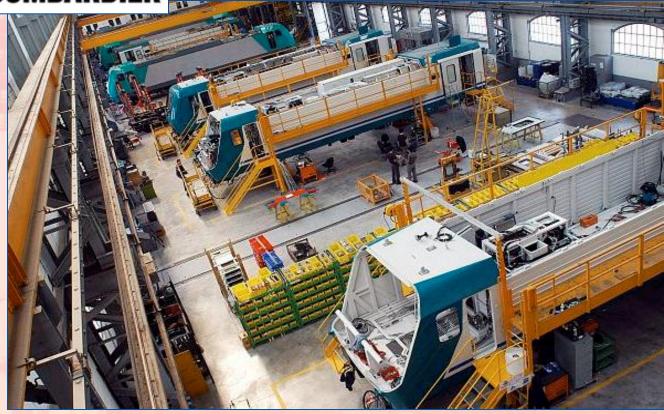
www.spectec.net

francesco.marino@spectec.net











# Interviewing & Free Discussion





### References

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For Further Info on the Meeting and Opportuities please contact: {marina.massei, madeo}@simulationteam.com www.itim.unige.it/cs/plants/2012/jun2012.html