

# PhD NEWSLETTER

### DOCTORAL DEBATES (AND OUR MENTAL HEALTH)

by Enrico De Angelis

There are millions of internet pages about PhD studies (how much is it difficult, how to start, how to complete it, what to do after ...). Hundreds of books have been written about a career in Research and about Doctoral Education in general; there are forums, commercial sites, even comic strips. The network provides you tips (few of them really smart and worth, the most similar to what is proposed to succeed in fitness or in losing weight), it offers you aids and support services (not for free) and it diffuses a lot of stereotypes about scientists, their life and their first steps as PhD candidates. Few sites are worth to be followed and we provide you few links.



Jorge Cham with his main characters (2018).

The first we propose is a strip: PhD Comics. His author, Jorge Cham, started it during his PhD in Robotics. Cham (see him here), deeply engaged in science communication, is well known for his (20 years old!) characters and nice jokes about PhD fears, commonplaces and cliché.

He is not the only cartoonist with a PhD, nevertheless: the Italian Matteo Farinella started cartooning just after a PhD in neurosciences and is practicing and studying <u>visual narratives</u> <u>in science communication</u>. Their work is worth a visit, at least for a smile.

Second, we quote *The Guardian* and *The Times*, well known competitors in the news industry, and their sites dedicated to the academic world: *Guardian Universities*, that recently renewed its site and aims at covering the topic «from every perspective», and *THE*, acronym of *Times Higher Education*, a portal providing a complete series of information and news, one of the most known *University Ranking*, a *job market-place* with thousands of job offers in the sector and other things.

The first has a non-commercial policy, without advertisement or sponsored news, in a total opposition to the last one. Whatever you prefer, they both provide interesting debates and updated news, at least if you are interested in the problems of Research, University, Higher Education and PhD studies.





The European Council of Doctoral Candidates and Junior Researchers

Last, we quote EUA and the <u>Council for Doctoral Education (CDE)</u>, an EUA branch. EUA is a network of European Universities, an Association born as a lobby representing needs and entries of Universities to the EU Commission, grown as place of debate among academic leaders about strategic and policy questions and progressively opening as community of all the professionals in the field.

We suggest, in particular, the recently started the <u>Doctoral Debate</u>, a forum hosting posts about fundamental questions concerning PhD Programs and the improvement of PhD life.

The most recent topic put forward is the health of PhD Candidates, in particular their **mental health**. Are our post-grad students even more crazy than the <u>Big Bang Theory</u> characters? *Katia Levecque* and *Anneleen Mortier* (both from Ghent University), who study the wellbeing and performance of Human Resources in Research, explain us that Academies need healthy and supportive work environments to flourish as every other system but «are lagging far behind in terms of investments in the wellbeing and mental health». Mental health, particularly among young adults, is a growing concern everywhere, because of its social and economic cost and *Barbara Dooley*, University College Dublin, tells how EUA-CDE Steering Committee is facing the topic (<u>developing an evidence-based approach</u>) and its objective: enhance doctoral students resilience and their capacity to navigate stress and uncertainty.

Is it an awkward, embarrassing topic?

Quoting *Mathias Schroijen*, PhD Candidate in health psychology and member of the Board of the *European Council of Doctoral Candidates and Junior Researchers*, <u>eurodoc</u>, it is «an opportunity for the scientific community to create healthy and empowering working conditions». See more <u>here</u>.

### **CALLS AND EVENTS**



# GÉRARD MOUROU @POLIMI: PASSION FOR EXTREME LIGHT

Gérard Mourou, worldwide recognized for his work in ultra-short, high-intensity, optical pulses and laser technology is professor at the <u>École Polytechnique</u> (France) and the University of Michigan, is one of the three Nobel Laureate in Physics 2018. Join him for his Lectio Magistralis and a debate about the "Future of light". The participation is free but registration (here) is required.

Thursday 10 January 2019, 3pm, Aula Rogers - Leonardo Campus - Via Ampère, 2





### GMA PRIZE FOR THE BEST PHD THESIS IN MECHANICS OF MATERIALS

AIMETA is the Italian Association for Theoretical and Applied Mechanics. Its Gruppo Materiali has announced the 4th edition of the "Prize for the best PhD thesis in Mechanics of Materials", to be conferred to a young scholar who obtained his/her PhD in 2018, with a thesis on related topics.

Deadline for applications: 19 January 2019





### SCHOLARSHIP "ASSOCIAZIONE ALTERO MATTEOLI"

The "Associazione Altero Matteoli per la Libertà e il Bene Comune" launched a call for a scholarship for post-grad students (Master/PhD) enrolled in Programs on topics related to Environment, Transport and Infrastructures systems. Download the call here.

Deadline for: 25 January 2019







### CALL FOR THE GRADUATION AWARD "GABRIELE CORBELLI"

The prize, started in 2012 in memory of Gabriele Corbelli, Italian researcher and start-up entrepreneur, is open to Polimi Master Students who graduated in Biomedical, Chemical or Energy Engineering, Engineering Physics or Materials Engineering and Nanotechnology and have applied for a PhD at Politecnico di Milano in Bioengineering, Industrial chemistry and Chemical Engineering or Materials Engineering, in the 34<sup>th</sup> Cycle. The award is 1.500 €, gross.

Deadline for application: 25 January 2019









### ASSOCIAZIONE ANGELO MARCELLO ANILE - ANILE PRIZE 2018

The prize will be awarded for a PhD thesis (in English) submitted in an Italian university, concerning a topic that bridges the gap between mathematics and its applications. Work that uses advanced mathematics or proposes new mathematical tools in order to solve applied problems from economics, engineering, science and technology is particularly appropriate. The work will be evaluated on the basis of the quality of the mathematics and of its impact on the application.

Deadline: 31 March 2019





### FRONTRUNNER GRANTS

Would you like to join colleagues at other IDEA League universities, to explore an exciting research idea? Consider applying for an IDEA League Frontrunner Grant, a funding instrument open to professors, post-docs and PhD candidates that will support you in your first meeting, workshop or visit, to develop a common initiative and to strengthen or create a network. The grant will provide you a budget from 500 to 5,000 € for venue, catering and additional technical support.

For more information and how to apply visit:



### ERASMUS+ (OUTGOING MOBILITY FOR STUDY PURPOSES)

The Erasmus+ Programme offers support for mobility of students within European countries, plus few Swiss institutions. All Polimi students may apply through their Online Services (see: International mobility for study and, for Swiss institutions, choose Mobility Program and Accordi Bilaterali Extra UE).

Application need the students to be accepted, so, it is advisable to contact the research group in the Host Institution in advance. For general information about the programme and the available destinations, for PhD students, please visit the webpages about Outgoing Mobility, or contact the linked email.

Deadline for applications: 10 January 2019 (12.00 noon)







### **SOCIETY IN SCIENCE**

ETH Zurich proudly hosts this prestigious, international and interdisciplinary program, funding 5yrs postdoc fellowship grants, open to postdocs with outstanding qualifications, pursuing unusual projects on the frontier between society and science. Awarded fellows will be free to choose their host institution.

More details on eligibility criteria, application procedure and the program in general, can be found on the linked web page or obtained via email.

Deadline for applications: 15 January 2019





### A GRADUATE TRAINING PROGRAM AND A PHD PRIZE

CECAM is the EPFL Centre Européen de Calcul Atomique et Moléculaire. It promotes the application of computational methods and, with this aim, offer basic and advanced training in its Schools and Tutorials; provide interaction opportunities with international experts in its Workshops, and host, every year, almost 500 PhD students in different events. CECAM has established also a Graduate Training Program, designed to attract students to the field of Computational Science and Technology, making them feel part of a community that cares about their education, work, and future career, and to leverage the power of the CECAM nodal structure by fostering new collaborations. At the end of the summer event of the Program, the best student will be awarded with the CECAM PhD Prize.

Deadline: 30 January 2019





### MOBILITY GRANTS BETWEEN ITALY AND FRANCE

The Vinci programme promotes collaboration between Italian and French Institutions at the Master, PhD and Post-Doc levels. The call issues grants for four chapters: 1. joint or double Master degrees; 2. mobility grants for doctoral theses in cotutelle; 3. full three-year scholarships for joint or double doctoral degrees; 4. postdoc grants.

Deadline: February 8th, 2019



### OSA CHAPTER AND EPS YOUNG MINDS FOUNDATION

PhD/post-Doc organisations [Optical Society of America (OSA) Chapter, European Physical Society (EPS) Yound Minds] aimed to organise scientific events and create a network with other international student associations.



# ENGLISH PLUS COURSES II SEMESTER A.Y 18/19 – MILANO LEONARDO AND MILANO **BOVISA**

Registrations for the level test through the Language Courses Catalogue available on the Online Services.

From the 21st of January till the 4th of February 2019



### STARTING COURSES - PHD SCHOOL

### COMPLEMENTARY DOCTORAL SKILLS

#### Prof. Paolo Biscari

The "Complementary Doctoral Skills" course consists in four independent modules.

Part 1. Assessing cognitive biases and affective states through data analytics (prof. M.Tanelli, DEIB)

Part 2. Gender Cultures [in Italian] (Prof. V. Bucchetti, DESIGN)

Part 3. Discriminations and new technologies: risks and opportunities (Prof. F. Costa, DESIGN)

Part 4. Digital (Scientific) Literature, Bibliographies and Bibliometrics (Prof. E.De Angelis, ABC)

Each module can be followed separately and includes an independent assessment. The five credits associated with the "Complementary Doctoral Skills" course are earned only when at least two modules are attended, and the respective examinations are passed (with mark A/B/C/D). One single module does not earn any credits.

From 22 January to 22 March 2019



### A TRANSDISCIPLINARY PERSPECTIVE ON BIG DATA

### Prof. Emanuele Della Valle

Big data is everywhere and researchers from all disciplines are addressing this topic from their own perspective, creating vertical excellent experiments, but often losing the wider picture. This course aims at reconstructing such a picture, analysing critically, how each discipline contributes to practice and academic debate.

7-31 January 2019



### PROFESSIONAL COMMUNICATION

### Prof. Nicoletta Di Blas

The goal is to enhance communication skills in: public speaking, written communication (special emphasis: project proposals) and digital communication. A quote from MIT instructors summarizes our goal: "engineers who don't write [=communicate] well end up working for engineers who do write well".

From 15 January to 8 February 2019



### **RESEARCH SKILLS**

### Prof. Donatella Sciuto

The Goal of this Course is to offer a wide range of training opportunities that may help PhD Students to build up their knowledge in research fields with regards to the following aspects: communication, management, cross cutting knowledge, soft skills.

From 21 January to 5 July 2019



# RESOURCE PLANNING AND MANAGEMENT WITHIN SUSTAINABLE DEVELOPMENT **Prof. Emanuela Colombo**

The mission of the Course is to increase the understanding about global challenges of development at the light of the 2030 Agenda. Our main goals are 1) to deepen the implication of global resource management 2) to provide a framework for their research within the paradigm of Sustainable Development.

From 22 January to 9 February 2019



# SUSTAINABILITY METRICS, LIFE CYCLE ASSESSMENT AND ENVIRONMENTAL FOOT-PRINT

### Prof. Monica Lavagna

The objective of the course is to introduce to the use of environmental sustainability metrics as tools that measure the benefits achieved through a sustainability strategy, leading to informed environmental decisions. The course will explain in detail the LCA methodology, with examples and exercises.

From 28 January to 6 February 2019



### SULLA RESPONSABILITÀ DELLA TECNICA

### Prof. Paolo Maria Ossi

L'indagine scientifico-tecnologica è una avventura intellettuale impegnativa che ha raggiunto impressionanti successi nell'era moderna e continua a raccoglierne in epoca contemporanea. A fronte di questo dato fattuale, alcuni pensatori hanno, nel tempo, messo in guardia sia contro l'incapacità del pensiero occidentale di sviluppare un'etica adeguata alla nuova civiltà orientata dalla tecnica, sia contro l'apparente insensibilità a questo problema. Scopo del Corso è sviluppare criticamente alcune considerazioni sulla differenza fra scienza, tecnica, tecnologia, l'agire tecnico e sull'opportunità e le eventuali difficoltà connesse con la richiesta di definire limiti e controlli all'attività di ricerca scientifica e tecnologica.

From 8 to 22 January 2019



# THE AGEING SOCIETY: A CHALLENGE FOR TECHNOLOGICAL AND SOCIAL INNOVA-TION

### Prof. Costanzo Ranci Ortigosa

The course is aimed to explore the different challenges posed to contemporary society by the ageing society, and the role played by technological and social innovation in providing solutions. Starting from a description of the main challenges, the course develops different perspectives of technological and social innovation trying to solve the main problems related to ageing.

From 9 January to 20 February 2019

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### THE PROCESS OF RESEARCH

### Prof. Paolo Gaetano Volontè

This course aims at offering to Ph.D. students awareness of the social and institutional framework of doing research, with particular focus on research for planning, design and techno-scientific disciplines. It provides a comprehensive and reflexive introduction to academic research and academic life.

From 22 January to 13 February 2019



### STARTING COURSES - DOCTORAL PROGRAMMES

# PHD IN ARCHITECTURE, BUILT ENVIRONMENT AND CONSTRUCTION ENGINEER-ING

# TOOLS AND METHODS FOR THE ECONOMIC ANALYSIS OF THE BUILT ENVIRONMENT **Prof. Andrea Caragliu**

The course will illustrate the state-of-the-art of the research in the field of the Economics of Built Environment and provide students with a complete set of analytical tools for measuring, interpreting, and explaining, through descriptive (statistical) and interpretative (econometric) methods, the Built Environment, its economic structure and the performance of its processes. At the end of the course, students will be able to answer to the following questions: 1. Which is the economic rationale for the existence of a city? 2. Which are the drivers of economic growth in the Built Environment? 3. What is the best metrics of the economic specialization and the dynamic performance of the Built Environment?

From January 15th to February 6th, 2019



# EXPERIMENTAL METHODS FOR STRUCTURAL MECHANICS

### Proff. M.A.Parisi, S.Cattaneo, C.Gentile, V.Quaglini

The main objective of the course is to discuss the multifaceted issues to be tackled while designing experimental tests on material and structures, with the primary aim of developing a student's knowledge of experimental techniques and measurement systems for the characterization of the response of mechanical components, structures and materials. A second aim is to inform PhD students on the equipment available at the Laboratory for Material and Structural testing - Politecnico di Milano.

From January 7th to April 30th, 2019



### **FUTURE-PROOF DESIGN**

### Proff. C.Martani (ETHZ), S.Maltese (SUPSI)

The course deals with risk of inadequate level of service through time of infrastructure and construction sytems and presents tools and methods to optimize their maintainability and flexibility, under uncertain future conditions. This includes methods to rigorously quantify the level of service, to model the uncertainty over variable parameters, to identify maintainable and flexible design solutions, eventually, it will propose methods to run simulations and to estimate their impact (i.e. costs of interventions and risk on the service) and to identify the optimal balance with the costs of construction.

From January 28th to February 8th, 2019





### PHD IN ENVIRONMENTAL AND INFRASTRUCTURE ENGINEERING

### STATISTICS APPLIED TO ENVIRONMENTAL ENGINEERING

### Prof. Arianna Azzellino

The course, offered in English, will develops hands-on expertise for analysing environmental data based on application-oriented problems. Hypothesis tests are explained in light of data with non-detects, outliers, and skewed distributions suing a computer-aided analysis approach. Methods for estimation and prediction are illustrated, together with multivariate analysis. Students will be able to prepare data set, to choose statistical methods and to perform statistical analysis of their data

From 17 January to 23 February 2019





### GEOLOGICAL AND HYDROGEOLOGICAL ISSUES IN TUNNELLING

#### Prof. Paola Gattinoni

The course deal with geological and environmental problems in tunneling and the reconstruction of the geological and hydrogeological conceptual model for tunneling: studies, surveys and investigations; geomechanical classification for tunneling; geological and hydrogeological hazard detection and risk assessment; risk mitigation and control; monitoring systems.

From 16 January to 13 February 2019



### **OTHER NEWS**

### 2019 EMPLOYMENT BONUS FOR COMPANIES ENGAGING PHD GRADUATES

The 2019 Italian Budget Law includes a measure aimed at favoring the engagement of young Master of Science and PhD graduates in national companies. Companies that hire permanently PhD graduates and satisfy specific requirements will benefit of tax reductions of up to 8.000 EUR. PhD graduates must have obtained their degree between January 1st 2018 and June 30th, 2019 and younger than 34 years

Please inspect the site of the Italian Ministry of University and Research for further details (in Italian)

