PhD AWARDS

**AN AWARD FOR THE BEST DOCTORAL THESIS ON COMPUTATIONAL MECHANICS IN ITALY**

Vito Diana, holder of a PhD in Architecture, Built Environment and Construction Engineering (Advisor Prof. Siro Casolo) of Politecnico di Milano, has been awarded by AIMETA (Italian Association of Theoretical and Applied Mechanics, Computational Mechanics Group – GIMC) as the best Doctoral Thesis on Computational Mechanics in Italy, and selected as Italian AIMETA candidate for the European ECCOMAS PhD Awards 2019. As winner of the (AIMETA) Italian national selection, Vito has been automatically also nominated as finalists for the 10th ECCOMAS PhD Olympiads and has been recently invited to write a paper related to his thesis for the prestigious international Journal "Archive of Computational Methods in Engineering".

During his PhD, Vito has been visiting researcher at University of Houston, TX, where in 2017, he started to write MiPe, his micropolar lattice model computer code that implements a peridynamic mechanical formulation inspired by Voigt's studies on Crystals in the context of molecular theory of elasticity.

Vito's research focuses on the development and application of theoretical and computational models for characterizing the response of materials in problems involving fracture and multiphysics. In his PhD thesis, "Discrete Physically-Based Models in Solid Mechanics" he presented the first full orthotropic peridynamic continuum model based on pairwise interactions, which has been applied recently to study anisotropic fracture and electrical conduction in bovine cortical bone.

Interested readers may go through his papers at this link. Below, some pictures from Vito's recent works.
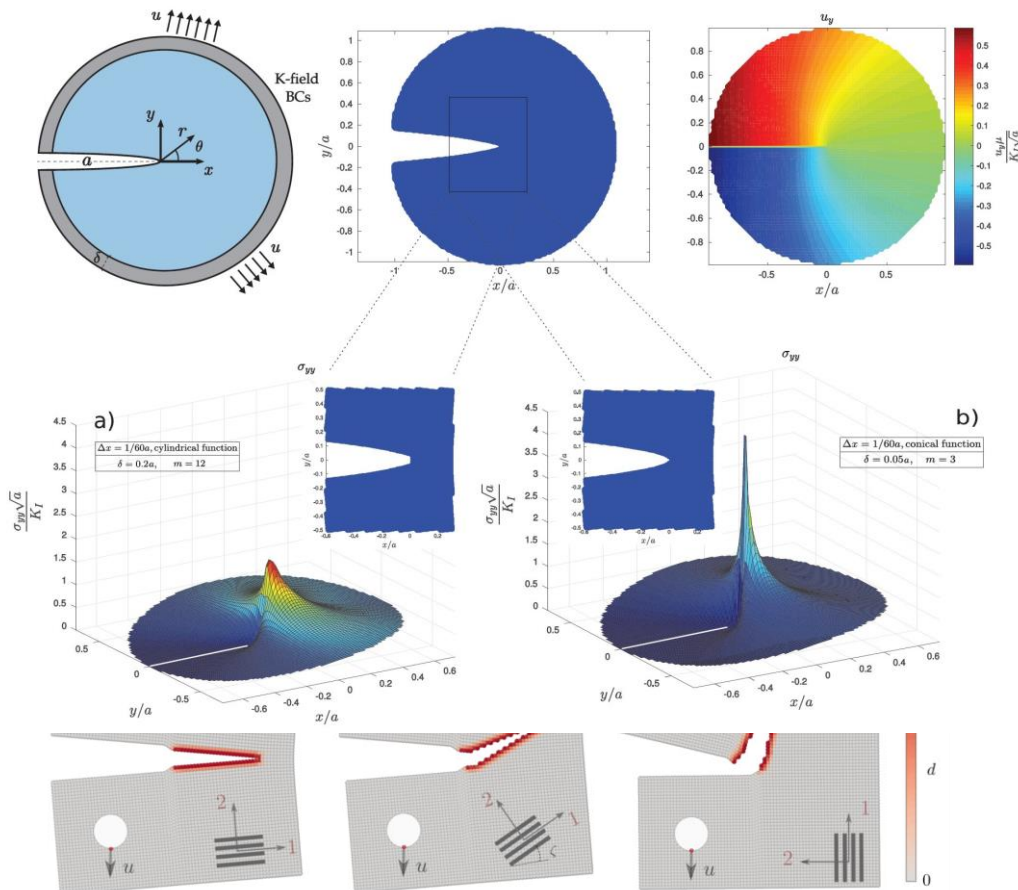
CALLS AND EVENTS

CA²RE | CA²RE + MILAN | COMPARISON
The 8th CA²RE conference together with the 3rd CA²RE+ event series is promoted by the Department of Architecture and Urban Studies (DAStU) and the PhD Program in Architectural, Urban and Interior Design of Politecnico di Milano, gathering early-career and PhD researchers in the realm of Design Driven Research.

October, 28th - 30th 2020 (online event)

SEMINARS AND WORKSHOPS

GREENING CITIES SHAPING CITIES
The proposed GREENING CITIES-SHAPING CITIES symposium (to be held at the Politecnico di Milano, Department of Architecture and Urban Studies, DASTU) aims to address how greening strategies such as the integration of nature and Nature-based Solutions (NBS) into the built environment encounters opportunities and challenges in shaping cities in terms of transformation, occurring both in the domains of morphology and governance, through inclusive co-production of space.

Key questions to be addressed at the symposium emerge from Clever Cities ongoing research project, investigating in particular the role of NBS to address urban regeneration challenges and promote social inclusion in cities across Europe, South America and China.

Registration available through this link

12-13 October 2020

STARTING COURSES – DOCTORAL PROGRAMMES

PHD IN *INFORMATION TECHNOLOGY*

ANALYSIS OF COMPLEX NETWORKS: THEORY AND APPLICATIONS
Prof. Carlo Piccardi

A network is a set of agents pairwise connected by links. Despite the simplicity of this definition, the theoretical properties of networks are extremely rich and diversified. Most notably, networks turn out to be extremely flexible in modelling a broad variety of phenomena characterized by a large number of interconnected elementary units: social networks, the Internet and the WWW, sensor networks, ecological communities, biochemical systems, energy transportation networks, economic and financial networks, are just but a few examples. Since networks permeate almost every conceivable discipline, the study of "network science" is becoming a crucial component of modern scientific education. The course is aimed at illustrating the fundamental theoretical notions as well as a number of applications in specific fields.

From 6th to 15th October 2020

OTHER NEWS

THE TEAM OF POLITECNICO DI MILANO WON THE FIRST EDITION OF THE "LEONARDO DRONE CONTEST. AN OPEN INNOVATION CHALLENGE"

The team of Politecnico di Milano, composed of Gabriele Roggi (XXXV cycle PhD student), Mattia Giurato, Simone Panza and Marco Lovera (from the Department of Aerospace Science and Technology) and Matteo Matteucci (from the Department of Electronics, Information and Bioengineering), won the first edition of the "Leonardo Drone Contest. An Open Innovation Challenge". The competition was launched by Leonardo, in collaboration with six Italian universities, to promote the development of Artificial Intelligence applied to unmanned systems.

The competition was held on 17-18 September 2020 in Turin. On the competition field, set up by Leonardo at the headquarters of Leonardo's Aircraft Division, the teams of the six universities involved challenged each other: Politecnico di Torino, Politecnico di Milano, Alma Mater Studiorum - University of Bologna, Scuola Superiore Sant'Anna of Pisa, University of Rome Tor Vergata and University of Naples Federico II.

The team of Politecnico di Milano developed the autonomous navigation, trajectory planning, collision avoidance and landing systems for the ROG-1 drone, in collaboration with ANT-X, a spin off company of Politecnico di Milano. The autonomous system has reconstructed 70% of the competition field area, identified and mapped 7 out of 10 of the QR-Codes used to define the landing pads and made 3 autonomous landings in a single flight.

The winning team of the Leonardo Drone Contest (left) and its ROG-1 drone (right).