

ANIV-G Actions Programme

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ANIV-G

- Aim

*"ANIV-G is the group of **young researchers** within ANIV. Its goal is to **promote cooperation in the Wind Engineering discipline**, ease the **exchange of ideas**, support the **spreading of knowledge** and **favor contamination with other scientific communities**. The group is open to **students, PhDs, researchers** and **practitioners** who are interested in deepening their knowledge, sharing their experience and contributing to the development of Wind Engineering."*

- ANIV-G Actions

1. ANIV-G Meetings

- to foster **collaboration, exchange of ideas & outline next ANIV-G steps**

2. ANIV-G PhD Sessions

- to promote **informal dissemination of research** performed by young members which are completing their last year or just obtained their PhD

3. ANIV-G Live Talks

- to introduce **innovative research topics** from different scientific communities through **seminars**
- to promote dissemination of **research funding opportunities** and **transversal competencies** through **workshops**

ANIV-G Meeting

Who we are

- 83 ANIV-G Members from 17 Nationalities
 - 72 from University (46 PhD + 26 Researchers)
 - 11 from Companies
- 34 Universities
- 5 Companies

Past Activities

17/01/2020 - ANIV-G Kick-off Meeting

- Foundation of ANIV-G
- Presentation of research activities

Next Activities

04/09/2022 - ANIV-G Meeting in occasion of IN-VENTO 2022

- Report of the activities
- Passing of the baton
- Gather feedback from the members
- Outline of the next 2-year program

09/2024 - ANIV-G Meeting in occasion of IN-VENTO 2024



ANIV-G PhD Session

Past Activities

07/09/2020 - PhD Session in occasion of the In-Vento 2020 web event

- 7 speakers
- 25 min talks (presentation + Q&A)

Next Activities

04/09/2022 - PhD Session in occasion of the In-Vento 2022 Conference

- 14 speakers
- 3 min presentation
- Top 3 qualified will deliver 30 min talk (presentation + Q&A)

09/2024 - PhD Session in occasion of the In-Vento 2024 Conference

- 3 min presentation contest
- or (depending on the feedback of 2022 PhD Session)
- 1 min presentation to arouse curiosity from all ANIV-G members + informal poster session to promote exchange of ideas and interaction among participants

ANIV-G		PHD SESSION 2020
https://www.aniv-g.com/2020/		September, 7th 2020 together with In-Vento 2020 online event
DETAILED PROGRAM		
	9:15 - Bernardo Nicese <i>University of Florence</i>	Effects of cross-section details and angle of attack on VIV response of a bridge deck
	9:40 - Federico Canepa <i>University of Genova</i>	Physical investigation of downburst outflows embedded in ABL flow and thunderstorm translation
	10:05 - Marko Horvat <i>Politecnico di Torino</i>	Computational wind engineering simulations for design and performance assessment of sand mitigation measures
	10:30 - Michela D'Amico <i>University of Genova</i>	General method of wind-induced fatigue analysis of slender structures
	11:10 - Stefano Brusco <i>University of Genova</i>	Transient aerodynamics and aeroelasticity of structures subjected to thunderstorm outflows
	11:35 - Viet Le <i>Northeastern University</i>	A performance-based wind engineering framework tailored to the analysis of vertical structures impacted by downburst and tornado wind loads
	12:00 - Alessandro Fontanella <i>Politecnico di Milano</i>	Wind Tunnel Hardware-in-the-loop experiments about floating offshore wind turbines

ANIV-G Live Talks

Past Activities

Approx 2 Live Talks per year

3 seminars on Research topics + 1 workshop on Soft Skills

- 29/10/2020 - G. Buresti (Università di Pisa)
“The fascinating challenges of bluff-body aerodynamics”
- 12/02/2021 - T. Stathopoulos (Concordia University)
“Seminar on Scientific and Technical Publishing”
- 25/06/2021 - G. Haller (ETH Zürich)
“Material barriers to the transport of momentum and vorticity in turbulence”
- 11/03/2022 - F. Lombardo (University of Illinois Urbana-Champaign)
“Full-scale measurements of wind and wind loading: A renewed importance”

Next Activities

2 Talks on Scientific topics + 2 Talks on Research Founding Opportunities

- 01-03/2023 – Seminar/Workshop on MSCA Postdoctoral Fellowship
- 07-09/2023 – Seminar on ERIES: Engineering Research Infrastructures for European Synergies
- 01-03/2024 – First talk on scientific topic
- 04-06/2024 – Second talk on scientific topic

Topics' proposal on the next slides

ANIV-G Live Talk: MSCA Postdoctoral Fellowship

Aim of **MSCA PF**:

Support researchers' careers and foster excellence in research. MSCA PF targets **researchers holding a PhD** who wish to carry out their research activities **abroad**, acquire **new skills** and **develop their careers**. PFs help researchers **gain experience in other countries, disciplines** and **non-academic sectors**.

Title (tentative):

"How to build and present a competitive research project for MSCA Postdoctoral Fellowship grants"

Overview (tentative):

- Main aspects of MSCA PF proposal writing
- Understanding of evaluation criteria
- How to build a competitive CV

When (tentative):

01-03/2023

Where:

online

Who:

Expert from non-academic sector +
past beneficiary from academic Wind Engineering sector



ANIV-G Live Talk: ERIES – Engineering Research Infrastructures for European Synergies

Aim of **ERIES**:

Provides **transnational access** (TA) to leading **experimental facilities** to conduct research that will advance frontier knowledge related to seismic, **wind** and geotechnical **hazards**. With **13 partners** from **8 countries**, ERIES builds an essential element toward reducing losses, managing risk, and overall a greener and more sustainable engineering future in Europe.

Title (tentative):

“Into the ERIES research infrastructure network – how to apply for transnational access grants”

Overview (tentative):

- About ERIES – main wind engineering aspects and research goals
- Research infrastructures involved
- How to apply for TA

When (tentative):

07-09/2023

Where:

online

Who:

Promoter is ERIES



ANIV-G Live Talk: Machine Learning

Aim of the seminar:

Machine learning is emerging as a **promising technology** in the field of **Computational Wind Engineering**. For example, it allows to improve turbulence closure modeling, to develop enhanced reduced-order models, amongst others. The seminar is intended to discuss **emerging areas** of machine learning with one eye towards wind engineering as well as some **potential limitations**.

Overview (tentative):

- Insight into Machine Learning Techniques
- Applications in disciplines contiguous or overlapping with Computational Wind Engineering
- Some potential applications on Computational Wind Engineering

When (tentative):

01-03(07-09)/2024

Where:

online

Who:

Expert from academic sector in disciplines contiguous/overlapping to Wind Engineering

ANIV-G Live Talk: Aeroacoustics

Aim of the seminar:

Aeroacoustics has been explored in different engineering fields, e.g. from automotive to aerospace. Nowadays, aeroacoustics is also becoming a key issue in the **building industry** due to the recent **innovation driven by architectural design**. The seminar is intended to discuss **past** and **emerging areas** of aeroacoustics with one eye towards wind engineering.

Overview (tentative):

- Insight into Aeroacoustics
- Applications on field contiguous or overlapping with Wind Engineering
- Some applications related to Wind Engineering (from wind turbines to building facades)

When (tentative):

01-03(07-09)/2024

Where:

online

Who:

Expert from academic sector in disciplines contiguous /overlapping to Wind Engineering and/or from industry

ANIV-G Live Talk: Climate change

Aim of the seminar:

Climate change is one of the **main socio-economic challenges** of the new century. The rising intensification and sharp increase in frequency of **natural disasters related to extreme wind events** invokes a deep understanding of the climate evolution in the last decades to **predict future scenarios** and **adopt the necessary measures**.

Overview (tentative):

- Climate change effect on main climatic parameters over the last few decades
- Mitigation measures and risk management

When (tentative):

01-03(07-09)/2024

Where:

online

Who:

Expert from academic sector in disciplines contiguous/overlapping to Wind Engineering

Dissemination in ANIV-G

ANIV LinkedIn profile

<https://www.linkedin.com/company/aniv-iawe/>

News from ANIV

<https://www.aniv-iawe.org/news-from-aniv/>

ANIV-G section on ANIV website

<https://www.aniv-iawe.org/aniv-g/>

- Update of the ANIV-G promoters (formers and actives)
- Update of the 3 ANIV-G Actions (Meeting, PhD Session & Talks)
 - Add a subsection for every Action to systematically disseminate past events/editions



⇒ ANIV-G Meeting 2020

The first ANIV-G Meeting was held on 17 Jan 2020 at Politecnico di Milano. More than forty members from sixteen institutions participated to the initiative, in order to favor collaboration between the community, short presentations describing the main activities carried out within each research group were collected in the Book of presentations, which can be downloaded from the link reported below.



ANIV-G MEETING 2020 – BOOK OF PRESENTATIONS



⇒ In-Vento 2020 PhD session

During congresses it is usually very hard to convey to the public the complexity of the research performed during a PhD. ANIV-G, in collaboration with the In-Vento 2020 organizing committee, organized an informal session specially dedicated to the dissemination of the research performed by young members which are completing their last year or just obtained their PhD. The book collecting the presentations can be downloaded below.



ANIV-G PHD SESSION 2020