



DIAMOND UNIVERSE FORUM

DIAMOND, SUPERABRASIVES & ULTRA-HARD COMPONENTS FOR INDUSTRIAL USE, TECHNOLOGIES & APPLICATIONS

With an enchanting and warm welcome on the beautiful gulf, Naples will host, from 18th to 20th January 2021, the 38th National Conference of the Italian Metallurgy Association, AIM. During the event will take place an important Session concerning Diamond, Superabrasives & Ultra-Hard Components.

The 38th AIM National Conference will be held at Università degli Studi di Napoli Federico II – Complesso Napoli Est – Corso Nicolangelo Protopisani 70, and will include a special event. This event will take the form of a large working Session entitled the "**DIAMOND UNIVERSE FORUM**" and will be dedicated to the innovative applications of Diamond, Superabrasives & Ultra-Hard Components, therefore to Raw Materials, Production Technologies, Diamond Tools, as well as Plants and Machineries using them. We will look at the potential of these materials and their impact on industrial technologies.

Through this Forum we want to pay tribute to the scientific Research, the commitment of Companies and the passion of People in the diamond sector who have marked its path, from tradition to innovation.

The Forum is organized by AIM and the Department of Materials Engineering and Industrial Production, under the supervision of the University of Naples Federico II and in cooperation, as media partner, with the magazine "Diamante Applicazioni & Tecnologia" that will anticipate the event commencing from the edition number 100, the first stage of a journey through History, Tradition and Evolution.

Many experts of industrial diamond technology will be attend as Participants, Speakers and Supporters. In the striking Neapolitan atmosphere Academics, Researchers, Professionals, sector Operators, Students and Organizations will convene to update and share experiences that can open up new horizons, submitting productivity issues but also processes and products sustainability concerns.

Grouping of Themes:

To the unique properties and potentialities of Diamond, Superabrasives and Ultra-Hard Components, we join all the industrial sectors that, in their individual specialisms, are taking advantage from them and are allowing their usage. The main program will be announced as soon as it is available.

At the venue it will be possible to join an optional tour of the prestigious goldsmith Centre "Il Tari", in Marcianise, Caserta, which has been home to 400 Companies since 1996.

We warmly wish to see you at the Federico II Congress Center, a splendid and bright structure overlooking the unforgettable seafront of Naples, equipped with state-of-the-art comforts and technical equipment, ensuring maximum functionality for each moment of the conference.

APPLICATIONS FOR GUEST SPEAKERS AND EXPERT EDITORIAL

Those interested in submitting speaking proposals or editorial papers to the Forum must send the abstracts by **October 31th 2020**, indicating the subject title, the names of the Authors, their affiliation and a summary of about 300 words ([link](#)).

There are two ways to submit proposals:

- by filling in the online form on the AIM website ([link](#))
- by sending all information (title, authors with affiliations, contact details of the speaker and summary) by e-mail: aim@aimnet.it.

A brief summary of each proposal, if received by **October 31th 2020** will be published in the edition "Diamante A&T" of September, which will introduce the event and the final programme.

The speaking proposals or editorial papers accepted by the AIM Secretariat will be published in full in Diamante A&T Magazine as Papers of the Proceedings of "Diamond Universe Forum"

TOPICS: INNOVATIVE TECHNOLOGIES & APPLICATIONS

The Forum will focus on the evolution of the applications of Diamond, Superabrasives & Ultra-Hard Components, made possible not only by the development of the basic materials, but also by the demanding new materials processing and by the urgent environmental issues.

In particular, we will have regard to the production processes of the diamond tools, and to the production processes and the products to which they are applied to present their unique efficiency, energy and environmental challenges, as well as the safety and health of Operators and Users.

The development of scientific and technical issues will affect the whole world of the Diamond, Superabrasives & Ultra-Hard Products.

By way of example, the basic materials, systems and applications on which to develop the works even through case history:

> **Components**

- Natural diamond, Synthetic diamond, cBN (Cubic Boron Nitride), PCD (Polycrystalline Diamond), PcBN (Polycrystalline Cubic Boron Nitride), CVD, MCD, Micro Diamond Powders, Nanorod Diamond, etc.
- Cores
- Ferrous and non-ferrous metal powders
- Resins
- Graphite
- Brazing alloys
- Additives

> **Diamond Tools and Abrasives**

- Design
- Production systems and plants
- Optimization
- Innovation

> **Applications and Processing**

- Flooring and covering Ceramics: cutting, calibration, polishing and other surface treatments, grinding
- Construction: Cutting and Coring in De-Construction
- Jewelry & Goldsmithing: Cutting, Milling and Finishing
- Stone: Cutting, Calibration, Grinding and Polishing
- Wood: Cutting and Milling
- Agglomerated materials: Cutting, Calibration, Grinding and Polishing
- Mechanics: Removal processes (cutting, grinding, chip removal, grinding), surface conditioning (lapping, polishing), anti-wear coatings, controlled friction coatings
- Mining, oil and gas industry: Boring and Drilling
- Glass: Cutting and Grinding
- Aerospace and Electronics: Heat sinks, semiconductors, anti-wear coatings
- Health: Dental, manufacture of prostheses, surgery

> **R&D, Case Histories and Company Profile**



Segreteria organizzativa

ASSOCIAZIONE ITALIANA DI METALLURGIA

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