
Editorial

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Biographical notes: Ioannis N. Prassianakis is a Professor of Mechanics at the Section of Mechanics, Department of Engineering Science, National Technical University of Athens, Greece. He has been the President of the Hellenic Society of Non Destructive Testing (HSNT) since 1997. His scientific areas of speciality are fracture mechanics, the strength of materials, experimental mechanics, NDT, qualification and certification. He has authored 12 books on the strength of materials and NDT and presented 95 papers in international journals and conference proceedings. He also has 60 publications in various Hellenic and foreign journals. He has participated in 40 conferences and organised 10 international and national conferences on NDT. He has supervised more than 90 diploma and PhD theses. He is a member of 30 international and national scientific societies and committees.

Janez Grum is a Professor of Materials Science at the Faculty of Mechanical Engineering, University of Ljubljana, Slovenia. He is also the founder and Editor-in-Chief of the *International Journal of Microstructure and Materials Properties* (IJMMP) and has been the Editor of the *Journal News of Society for Nondestructive Testing* of the Slovenian Society for Non-Destructive Testing, Ljubljana, Slovenia, since 1994. He is also a member of the Editorial Board of several international journals. He is the Editor of the six *NDT Conference Proceedings*, two ASM and Marcel Dekker book chapters and five books with several reprints. He has also published more than 200 refereed journal papers and more than 400 conference papers on heat treatment and surface engineering, laser materials processing and materials testing, including nondestructive testing.

The papers included in the present issue of the *International Journal of Microstructure and Materials Properties* (IJMMP) were presented at the *4th International Conference on NDT of the Hellenic Society for NDT* (HSNT). The conference took place in Chania-Crete, Greece, on 11–14 October 2007. Chania is located in the north-western side of Crete, the island where the famous Minoan civilisation was developed 45 centuries ago and is now a lively, exciting and fascinating city.

The theme of the conference, ‘Non Destructive Testing: Skills- Applications- Innovations, Industrial Manufacturing- Aerospace- Marine’ was chosen to emphasise and promote Nondestructive Testing (NDT) methods to a wide range of industrial and scientific areas.

NDT is a unique hope for the safe development and survival of a contemporary society and economy. This kind of testing is useful and crucial given the fact that only by these methods can the materials that will be used or are already used in construction be checked thoroughly. Accordingly, this is the only way to guarantee the qualitative and safe level of any technical construction.

The aim of the conference was to bring together scientists and engineers in an attempt to exchange knowledge and recent experience in research and development activities that are relevant to the NDT field.

The conference venue was the ‘Megalo Arsenali’ building of the Centre of Mediterranean Architecture (CAM), a historical and wonderful Venetian building of the 16th century located in the old port of the famous and beautiful historic city of Chania.

The technical programme contained 112 papers, 85 as oral lectures and 27 as poster presentations; 62 of them originated outside Greece. The conference was organised in sessions whose main subject was related to industrial applications and scientific areas. The book of abstracts and the proceedings were included in a CD and distributed during the conference.

The scientific board of the conference selected 29 papers for publication, of which 10 will be published in IJMMP and 19 will be published in the *International Journal of Materials and Product Technology* (IJMPT). The selected papers were strictly reviewed and chosen on the recommendation of the reviewers considering the scientific area covered by each journal.

The topics covered by the conference included all thematic areas of the current research and industrial use of NDT. The main topics of the conference were: applications and innovations of NDT methods, inspection, training and certification, composite materials, welding and adhesion, digital radiography, NDT technology transfer, NDT for the diagnostics and refurbishment of cultural heritage monuments, applications for the shipping and aerospace industries, applications for power generation (including nuclear power technologies), theoretical modelling, NDT applications in the civil structures industry, noncontact NDT methods, industrial manufacturing and aerospace and marine applications.

The presented papers in the conference covered all NDT methods from a theoretical and experimental point of view. More specifically, the conference included the presentation of papers concerning the qualification and certification of NDT personnel, research concerning the examination of composite materials by various NDT methods, many applications of ultrasounds, industrial radiography, acoustic emission, thermography, eddy currents, dye penetrants in industry, the important applications of many NDT methods for the testing of artworks and monuments, infrastructures and civil engineering works and finally, the important analytical methods concerning NDT.

More than 350 people attended the conference. Among them were authors, attendees, exhibitors and sponsors coming from 30 countries and Greece.

During the conference opening, the president of the HSNT, Professor Ioannis N. Prassianakis, emphasised that “NDT corresponds to economy and safety in a contemporary free, peaceful and democratic society.” Many distinguished participants had the opportunity to express their thoughts and welcome the participants during the opening ceremony. Dr. Gerhard Aufricht, the president of the Austrian NDT Society, represented the European Federation for Non-Destructive Testing (EFNDT). Dr. Sotirios J. Vahaviolos, the former president of American Society for Non-Destructive Testing (ASNT), closed this session and gave the opening lecture, ‘NDT – the science, the business and the future forecasts’.

During the conference, the annual meeting of the EFNDT Board of Directors was held in the CAM ‘Megalo Arsenali’ building. The gala dinner took place at Nykterida restaurant, located in the magnificent place of Akrotiri near the harbour of Souda. Finally, the conference finished with an excursion to the famous ancient Minoan city of Knossos.

The conference constituted the ninth conference organised by the HSNT. Earlier, five national and three international NDT conferences were successfully conducted by the same group.

The HSNT was founded in 1987. It is a unique national and nonprofit Hellenic society for NDT and is also a member of EFNDT and International Committee for Non-Destructive Testing (ICNDT).

Today, HSNT encompasses more than 400 members who originate from the country’s universities, industries, companies and organisations, with approximately more than 1000 NDT inspectors.

The tasks of the association are to promote NDT in Greece, organise lectures and educational seminars on NDT, promote theoretical and practical research on NDT and publish the results, provide advice on NDT quality control, constantly keep members updated on NDT subjects and publish and make available magazines, pamphlets and books on NDT.

The society has signed agreements of mutual cooperation and collaborates with similar societies worldwide, such as ASNT of the USA, BistNDT of England, ABENDE of Brazil, DGZFP of Germany, BSNDDT of Bulgaria, SSNDT of Slovenia, *etc.* It has also signed an agreement on the multilateral, mutual recognition of NDT-personnel certification schemes with other European countries (EU/EFTA).

HSNT is a founding member of the Balkan Peninsula Society of NDT (BP S NDT) and the East European and East Mediterranean Society of NDT (SEEEM NDT).

The article ‘NDT in Greece’, published in the scientific magazine *Insight* on June 1999 (Vol. 41, No. 6, pp.350–371, June 1999), was essential for the international recognition of HSNT.

The Hellenic Accreditation System (ESYD) has accredited HSNT in March 2005 according to the ELOT-EN-ISO/IEC 17024 standard as an independent certifying body to assemble examination centres for the qualification and certification of NDT personnel in Greece. HSNT has also been approved by the EFNDT in 2005. At the moment, HSNT has approved one examination and certification centre (KETEPE in Bolos, Greece).

Sincere thanks go to all the participants and exhibitors, especially to those who travelled to Chania, Greece. We hope that they enjoyed the conference as much as we have dreamt of. Many thanks also go to all the sponsors of the conference for

their support and the members of the organising and scientific committees (who planned the sessions and achieved a close connection between industry and research and development) for their excellent work, as well as the authors and numerous other individuals who contributed to the success of that conference.

Finally, special thanks are due to the IJMMP, which agreed to host these scientific papers, and also to the authors for contributing their papers to this special issue of the IJMMP. This is the result of the serious work of the reviewers and authors. The papers satisfy high standards of quality.