International Conference on Materials, Alloys and Experimental Mechanics (ICMAEM) is an International Conferences intended to confer, share and innovation on recent developments and trends in Engineering for their research communities. Experts from the Material Science, Physics, Engineering sciences and Information Technology communities attended ICMAEM. This conference series provides an international forum to exchange experiences and the needs of a wide community, and to present and discuss recent, ongoing, and future activities. Although we are organizing first International Conference, we have taken every measure which keeps up the reputation of the college as well as Journal. Mainly, the latest developments in Material Science, Physics, Engineering Sciences and Information Technology were presented. The Mathematical models and computing for Material Science has been massively evolved since then, and along this inventions spread in to all parts of Engineering. A vibrant community of experts on a wide range of different Material Science and Engineering experiments, as well as technology explorer and industry contacts, attend and discuss the present and future challenges, and shape the future of an entire community. In such a rapidly evolving area, aiming to capture the state-of-the-art on Materials, software and computing through a collection of proceedings papers on a journal is a big challenge. Due to the large attendance, the success is enormous. Additionally, the contributions often report about studies at very heterogeneous statuses, namely studies that are completed, or are just started, or yet to be done. And by the time of conference, new ideas and explorations were discussed, suggested, and presumably have also followed previously unpredictable directions. The ICMAEM proceedings with IOP: Material Science and Engineering, in their variety and thanks to the condensed form of knowledge they offer, are what most likely will be more easily preserved for future generations, thanks to the outstanding Support of IOP for a collaboration of many Innovative ideas. The NREC (Narsimha Reddy Engineering College) centre hosted the event, and offered an outstanding location and efficient facilities for the event.
Narsimha Reddy Engineering College (NRCM) is promoted & managed under the inspiring & dynamic Chairmanship of Sri. J. Narsimha Reddy and a fleet of dedicated members. This is the first institution belonging to JAKKULA EDUCATIONAL SOCIETY was established in 2007 to serve the people of this backward region of the state of Andhra Pradesh (India). This institution is developed strictly in accordance with the provisions of governing rules & regulations of the approving bodies.

NRCM aspire to establish a system of quality assurance on a continuous basis evaluation, monitoring the quality of education and training imparted at the institute. We strive for improvising teaching – learning process to make NRCM the centre of Excellence.

NRCM vision is to emerge as a destination for higher education by transforming learners into achievers by creating, encouraging and thus building a supportive academic environment.

NRCM Mission is to impart Quality Technical Education and to undertake Research and Development with a focus on application and innovation which offers an appropriate solution to the emerging societal needs by making the students globally competitive, morally valuable and socially responsible citizens.

In ICMAEM experimental physicists and computer scientists with data engineers and data scientists even further. Many area of research are covered, and the techniques developed and adopted are presented in a richness and diversity never seen before. In numbers, ICMAEM 2017 attracted a very high number of oral and poster contribution, 296 in total, and hosted 450 participants from 28 countries. Authors felt good while presenting and at the hospitality. ICMAEM process created 8 topical tracks, well balanced in content, manageable in terms of number of contributions, and able to create the adequate discussion space for trend topics. ICMAEM hosted contributions on Materials; Alloys; Experimental Mechanics; Functional Materials; Solid State Physics; Thermal Energy; Combustion Energy; Semiconductor Physics; Electronic Devices and Materials; Aerodynamics; Structural Engineering; Renewable Energy; Aerospace Composites; Robotics and Automation Technology; Applied
Physics Energy; Differential Equations and Applications; Material Science in either specific, related or mixed and even exploiting hardware features. Throughout the entire process, we were blessed with a forward-looking group of competent colleagues in our International Advisory Committee, whom we warmly thank. All the individuals in the Program Committee team, who put together the technical tracks of the conference and reviewed all papers to prepare the sections of this proceedings journal, have to be credited for their outstanding work. And of course the gratitude goes to all people who submitted a contribution, presented it, and spent time to prepare a careful paper to document the work. These people, in the first place, are the main authors of the big success that ICMAEM continues to be. 1st International Conference on Materials, Alloys and Experimental Mechanics (ICMAEM) conference cycle continues to stay strong and to evolve in rapidly changing times towards a challenging future, covering new grounds and intercepting new trends as our field of research evolves.

We are Thankful for the enormous support of IOP Conference series in every step of our journey towards success. Their support is not only strength but also an inspiration for organizers.