

---

## Introduction

---

### Narendra B. Dahotre

Department of Materials Science and Engineering,  
University of North Texas,  
1155 Union Circle #305310,  
Denton, TX 76203-5017, USA  
Email: Narendra.Dahotre@unt.edu

**Biographical notes:** Narendra B. Dahotre is an author of four books and 268 papers, and Editor of 13 books. He is an inventor of 16 issued US patents, advisor/mentor to 17 MS and 17 PhD students, and 11 Postdoctoral Fellows. He is a Fellow of *AIMBE(2016)*, *WIF(2014)*, *NAI(2013)*, *MRS-I(2011)*, *SME(2010)*, *AAAS(2009)*, *IIM(2009)*, *ASME(2008)*, and *ASM(2004)*. He is a University Distinguished Research Professor and former Chairman (2010–2013) of the Department of Materials Science and Engineering (MSE), University of North Texas. His prior positions include a joint faculty with Oak Ridge National Laboratory and MSE Department, University of Tennessee-Knoxville (2002–2010), and Director, Deputy Director and senior faculty member of the Center for Laser Applications, University of Tennessee, Space Institute (1995–2010). His degrees include BS from the University of Poona, India, and MS and PhD from Michigan State University.

---

We are delighted to introduce the first issue (N1) of volume one (V1) of *International Journal of Additive and Subtractive Materials Manufacturing (IJASMM)*. The *IJASMM* is uniquely positioned to include both the manuscripts covering newly emerging and rapidly expanding additive manufacturing (AM) as well as the manuscript on subtractive manufacturing (SM). AM has been in existence in various forms (coating, welding, casting, etc.) for several decades, however, it has gained visibility and importance only in last 5/6 years due to development of highly controllable and automated tools such as lasers and their manifestation into 3D printer. On the contrary, SM is the basis of major activities in the field of manufacturing for as many decades as the existence the field of manufacturing. It continues to be an important approach in the modern manufacturing and will remain so in decades ahead. In light of this, *IJASMM*, a sole journal dedicated to ages old SM and very new AM together will be complimentary to establish and develop a platform for evolution of the next generation manufacturing.

*IJASMM* is poised to handle the works on fundamentals of science and engineering of additive and SM processes/techniques with respect to the aspects including but not limited to heat transfer, mass transfer, fluid flow, microstructure and phase evolution, and development of physical, mechanical, and chemical properties. All these aspects will be considered at multiple levels ranging from nano to micro to meso scale manufacturing. Furthermore, both experimental and computational approaches to additive and SM will be considered. A range of processing techniques (photonic, mechanical, chemical, and hybrid) and materials (metals, ceramics, organic/polymer, composites, and biomaterials) are of interest to the journal. The principles and applications of designing and fabricating parts for real-world problems/applications and more will also be considered.

Overall objectives and mission of *IJASMM* are to provide a unified platform for dissemination of the basic and applied knowledge about both AM and SM. The specific mission of the journal is to give scientist, researchers, teachers, students, and practitioners the tools and information they need to build successful careers and also be an impetus to the advancements in next generation manufacturing. The general objective of the journal is to become a leading source of basic and applied knowledge in the field of manufacturing through the specific objectives including but not limited to:

- 1 providing high quality scientific, engineering/technological information
- 2 publication of the articles that are related to basic and applied science as well as highly technologically and engineering oriented
- 3 providing the platform for publications of in-depth articles, short, and rapid communications on new developments, review articles focusing on specific timely important subfields, and theme-based timely and scientifically/technologically important topics
- 4 maintaining an interdisciplinary nature of the content of the journal for wider and larger audience/participant (authors and readers).

This first issue (V1, N1) includes a set of manuscripts that reflect the broader scope of AM and SM and objectives and mission of *IJASMM* described above. Although the issue includes a small set of manuscripts, the topics of these manuscripts range over optimisation, characterisation, and development of AD and SM process and process effects along with a review of novel concept of friction-based process for adaptation in AM without melting the material. The follow up issues are expected to continue to maintain the similar flavour as the current issue. We are excited to receive tremendous support from the authors through their contribution of manuscripts and deeply hope to serve and provide a platform for exchange of knowledge in the manufacturing community by sustaining and growing the journal in years to come.