4th International Conference

On

Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT)

(Hybrid mode)

(Selected papers are likely to be published in Springer Proceedings and special issues of journals)

28 – 30 September 2023

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Call for Abstracts

Organized by

Department of Mechanical Engineering
Sardar Vallabhbhai National Institute of Technology
(An Institute of National Importance of Government of India)
Surat – 395 007, Gujarat State, INDIA
Website: www.svnit.ac.in

About the Host Institute:
The institute was established as Sardar Vallabhbhai Regional College of Engineering & Technology in 1961 and was upgraded by Government of India as a National Institute ofTechnology on 4th October, 2002. The institute is one of the pioneering institutions of Indiaand has contributed many outstanding engineers in India and abroad. At present, it is conducting six UGprograms and 19 PG programs in engineering, 3 PG programs in applied sciences andPh.D. program in all disciplines of engineering and applied sciences. The institute has anexcellent placement record with a number of top ranking companies visiting the campus everyyear.

About the Department:
The Department of Mechanical Engineering came into existence in the year 1961. Thedepartment has qualified and dedicated faculty members with the specialization in variousareas. At present, the department is conducting a UG program (Mechanical Engg.), five PG programs (Mechanical Engg., Turbo Machines, Manufacturing Engineering, CAD/CAM andThermal System Design) and a research program leading to Ph.D. degree.

About Surat:
Surat is a top ranking industrial city of India. It is well known worldwide for textiles, zari anddiamond industries. Several large scale industries and establishments are located in the city(e.g. RIL, L&T, ESSAR, NTPC, etc.). The city is situated on the main western railway routebetween Vadodara and Mumbai. Direct flights operate daily between Delhi and Surat.

About the Conference:
The 4th international conference on **"Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT)"** is scheduled to be held during **September 28-30, 2023**. The objective of thisconference is to bring together experts from academic institutions, industries and researchorganizations and professional engineers for sharing of knowledge, expertise and experiencein the emerging trends related to advanced engineering optimization techniques and theirapplications.

The conference is structured as plenary and keynote speeches followed by parallel sessions. Thekeynote speeches will be delivered by the eminent personalities at international level invited tointroduce the theme of the conference. Each parallel session starts with an invited talk on aspecific topic followed by contributed papers.

Papers are invited from the prospective authors from industries, academic institutions,R&D organizations and from professional engineers belonging to the engineering disciplines.

Potential topics to be addressed in this conference include, but are not limited to, the following:

Applications of the following advanced optimization techniques (not limited to) in the disciplines of MECHANICAL, MANUFACTURING, CIVIL, STRUCTURAL, ELECTRICAL, ELECTRONICS, COMPUTER, CHEMICAL BIOTECHNOLOGY, AERONAUTICAL, and AUTOMOBILE engineering:

- Optimization using: Genetic algorithm (GA), Differential evolution (DE), Simulatedannealing (SA), Particle swarm optimization (PSO), Artificial Bee Colony (ABC)algorithm, Harmony search (HS) algorithm, Ant colony optimization (ACO),Artificial immune algorithm (AIA), Teaching-learning-based optimization (TLBO) algorithm, Charged system algorithm, Cuckoo search algorithm, Firefly algorithm, Bacteria foraging optimization, Sine-cosine algorithm, Grey wolf optimization algorithm, Ant-lion optimization algorithm, Jaya algorithm, Rao algorithms, Hybrid optimization techniques, and other latest meta-heuristic techniques.
- Multi-objective and many-objective optimization techniques and the applications
- Artificial neural networks (ANNs) based optimization and the applications
- Deep neural networks and their applications
- Application of fuzzy logic in optimization
- Big data analytics, Understanding complex networks, Internet-of-things and cyber-physical systems
- Intelligent transportation systems & smart vehicles
- Intelligent fault detection, fault analysis, diagnostics and monitoring
- Real-time intelligent automation, and their associated supporting methodologies and techniques, including control theory and industrial informatics
- Applications of chaos theory and fractals
- Finite element analysis, Computational fluid dynamics, simulation
- Taguchi's Design of experiments, Orthogonal arrays, ANOVA, Response surface methodology (RSM)
- Multi-attribute decision making methods such as AHP, TOPSIS, ELECTRE, PROMETHEE, VIKOR, GRA, DEA, DEMATEL, R-method, UTA, OWA, ORESTE, etc. and their fuzzy versions

In addition to the presentation of papers and keynote addresses during various sessions of the conference, SPECIAL LECTURES will be delivered FREE to the participants during the 3-days of the conference. The special lectures will be based on various latest optimization techniques. These lectures are FREE to only those who have registered for the conference bypaying the fees. These special lectures will be delivered during the conference daysin a separate hall. Attending these special lectures is not compulsory and theparticipants who attend the conference to present their papers may attend theselectures also, if they wish. However, there may be

participants in the conference whohave come only to attend the conference (and not having a paper to present). Theselectures will be more useful to such participants and the "Certificate of Participationin the International Conference" will also be given to them.

IMPORTANT NOTE:

The conference will be conducted in a hybrid mode. The participants (particularly Indians) who wish to present their papers personally can attend the conference physically. However, the participants (whether Indians or foreigners) who wish to present their papers only in online mode are allowed to do presentation as per their choice.

Registration Fees:
- **Delegates from academic institutions (faculty/students)/industries and R&D organizations: Rs. 2000 + 18%GST = Rs. 2360 (Indians)**
- **Participants from abroad: US$100**

Registration by at least one of the authors and presentation is compulsory for each paper (i.e., registration and presentation is necessary for each paper). The participants are required to send the registration fees by Online Bank Transfer.

Account	Director,SVNIT-CCE
Account No	37030749143
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SWIFT Code	SBININBB260

Payment can also be made: https://www.svnit.ac.in/Data/cce/directorsvnitcce@sbi.pdf

Important Dates:
The guidelines to prepare the Abstracts are available under the 'Events' section of www.svnit.ac.in). Abstracts not following the guidelines will NOT be considered. Authors are required to submit the one-page abstracts as e-mail attachments to aeotit@gmail.comand ravipudijaya@gmail.com on or before July 15, 2023. Acceptance will be informed within 10 days from the date of submission. **The Registration Fees Due: September 27, 2023. The accepted papers are likely to be published in the Springer Proceedings and special issues of few international journals of repute.** Plagiarism check will be made on the final camera-ready manuscripts, and the similarity content should not be more than 15%.

- **Submission of extended abstracts of one page: 15th July 2023**
- **Decision on the provisional acceptance/complete rejection: 25th July 2023**
- **Submission of full manuscripts in Springer format: 15th August 2023**
- **Submission of revised papers in Springer format: 25th September 2023.**
- **Conference dates: 28th – 30th September 2023.**

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Accommodation:
Reasonable accommodation is available in the institute's hostel guest house (Narmad Bhavan, http://svnit.ac.in/web/hostel/narmad.html) and institute's main guest house (http://www.svnit.ac.in/web/campus.php?tag=guesthouse) at nominal rates in twin shared rooms for the Indian participants who wish to present the papers offline by visiting the campus. Also, a no. of hotels at rates ranging from Rs.500–Rs.3500 per day are available in Surat city.

Salient Features of the Conference:
- Select proceedings to be published by Springer
- Special issues to be published by reputed international journals
- Special lectures on advanced optimization techniques
- Keynote speeches by eminent persons from India and Abroad