

**International Conference**  
On  
**Advanced Engineering Optimization Through  
Intelligent Techniques (AEOTIT)**



*(Proceedings to be Published by Springer  
Book Series on Advances in Intelligent Systems and Computing)*

**03 – 05 August 2018**

**Patron**

**Dr. S. R. Gandhi**  
Director, SVNIT Surat

**Co-Patron**

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Head, Mech. Engg. Dept., SVNIT Surat

**Convenor**

**Dr. R. Venkata Rao**  
Professor, Mech. Engg. Dept., SVNIT Surat

**Call for Papers**

*Organized by*



**Department of Mechanical Engineering**  
**S. V. National Institute of Technology**  
*(An Institute of National Importance of Government of India)*  
**Surat – 395 007, Gujarat State, INDIA**  
**Website: [www.svnit.ac.in](http://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 of Technology on 4th October, 2002. The institute is one of the pioneering institutions of India and has contributed many outstanding engineers in India and abroad. It is conducting 6 UG programs and 17 PG programs in engineering, 3 PG programs in applied sciences and Ph.D. program in all disciplines of engineering and applied sciences. The institute has an excellent placement record with a number of top ranking companies visiting the campus every year.

## About the Department

The Department of Mechanical Engineering came into existence in the year 1961. The department has qualified and dedicated faculty members with the specialization in various areas. The department is conducting a UG program (Mechanical Engg.), five PG programs (Mechanical Engg., Turbo Machines, Manufacturing Engineering, CAD/CAM and Thermal 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 and diamond 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 route between Vadodara and Mumbai. Flights operate daily between Delhi, Mumbai, Kolkata, Hyderabad, Jaipur, Goa and Surat.

## About the Conference

The international conference on **“Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT)”** is scheduled to be held during **August 03-05, 2018**. The objective of this conference is to bring together experts from academic institutions, industries and research organizations and professional engineers for sharing of knowledge, expertise and experience in the emerging trends related to advanced engineering optimization techniques and their applications.

The conference is structured as plenary and keynote speeches followed by parallel sessions. The keynote speeches will be delivered by the eminent personalities at international level invited to introduce the theme of the conference. Each parallel session starts with an invited talk on a specific 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.

*Authors belonging to any of the following disciplines are encouraged to submit the papers::*

1. MECHANICAL Engg.
2. MANUFACTURING Engg.
3. INDUSTRIAL Engg.
4. AERONAUTICAL Engg.
5. AUTOMOBILE Engg.
6. COMPUTER Science & Engg.
7. ELECTRICAL Engg.
8. ELECTRONICS Engg.
9. CIVIL Engg.
10. STRUCTURAL Engg.
11. BIOTECHNOLOGY
12. CHEMICAL Engg.

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

- Optimization using:
  - a. Genetic algorithm
  - b. Genetic programming
  - c. Evolution strategies
  - d. Differential evolution
  - e. Memetic algorithm
  - f. Simulated annealing
  - g. Tabu search
  - h. Particle swarm optimization
  - i. Artificial Bee Colony algorithm
  - j. Harmony search algorithm
  - k. Ant colony optimization
  - l. Artificial immune algorithm
  - m. Teaching-learning-based optimization
  - n. Charged system algorithm
  - o. Cuckoo search algorithm
  - p. Firefly algorithm
  - q. Bacteria foraging optimization
  - r. Sine-cosine algorithm
  - s. Grey wolf optimization algorithm
  - t. Ant-lion optimization algorithm
  - u. Jaya algorithm
  - v. Cultural algorithms
  - w. Parallel and distributed algorithms
  - x. Adaptive dynamic programming and reinforcement learning

- y. Bat algorithm
- z. Hybrid optimization techniques, and other latest meta-heuristic techniques.
- Multi-objective and many-objective optimization techniques and their applications
- Hyper-heuristics
- Application of fuzzy logic in optimization
- Artificial neural networks (ANNs) based optimization, Neuro-computing, Neuro-fuzzy systems
- Computational neuroscience, neural models of perception, cognition and action, neurodynamics
- Machine learning
- Neuroengineering, brain-machine interfaces, embedded neural systems
- Biometrics, bioinformatics and biomedical applications
- Classification, data mining, clustering and data analysis
- 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
- Evolutionary robotics and autonomous systems
- Applications of chaos theory and fractals
- Finite element analysis
- Taguchi's Design of experiments, Orthogonal arrays, ANOVA, Response surface methodology (RSM)
- Multi-attribute decision making methods (both fuzzy and crisp) such as.
  - a. AHP
  - b. TOPSIS
  - c. ELECTRE
  - d. PROMETHEE
  - e. VIKOR
  - f. GRA
  - g. DEA
  - h. DEMATEL
  - i. UTA
  - j. OWA
  - k. ORESTE, etc.

*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 by paying the fees. These special lectures will be delivered during the conference days in a separate hall. Attending these special lectures is not compulsory and the participants who attend the conference to present their papers may attend these lectures also, if they wish. However, there may be participants in the conference who have come only to attend the conference (and not having a paper to present). These lectures will be more useful to such participants and the "Certificate of Participation in the International Conference" will also be given to them.

## Registration Fees

- **Delegates from academic institutions: Rs. 5000 (Indians); \$200 (foreigners)**
- **Students (PG and PhD): Rs. 4000**
- **Delegates from industries and R&D organizations: Rs. 6000**

The registration fee enables the participants to receive the conference kit, Breakfast, Lunch, Dinner, Tea and Coffee during the conference days. Registration by at least one of the authors is compulsory for each paper (i.e. registration is necessary for each paper).

The participants are required to send the registration fees only in the form of Demand draft (DD) in favor of "Director, SVNIT-CCE, Surat" Payable at Surat, India.

## Important Dates

The guidelines to prepare the camera-ready manuscript and the registration form are available on the conference website (<https://sites.google.com/site/aeotit2018/>). Also watch the 'Events & Seminars' section of [www.svnit.ac.in](http://www.svnit.ac.in). The no. of pages of the manuscript should not exceed eight (8) pages. Manuscripts not following the guidelines will NOT be considered.

Authors are required to submit the camera-ready manuscripts as e-mail attachments to [aeotit@gmail.com](mailto:aeotit@gmail.com) and [raoravipudi@gmail.com](mailto:raoravipudi@gmail.com) or through the conference website on or before July 20, 2018. Plagiarism check will be made and the similarity content should not be more than 15%.

- **Last date for submitting the camera-ready full papers: July 20, 2018** (status of acceptance of the paper will be informed within 2 to 3 weeks from the date of submission)
- **Last date for registration (and also for submitting the revised manuscript): July 25, 2018**

Selected papers will be published in the Proceedings (in Springer Book Series on Advances in Intelligent Systems and Computing). In addition, extended versions of the high quality papers may be considered for probable publication in the special issues of the following international journals (Scopus indexed).

- International Journal of Industrial Engineering Computations (Growing Science, Canada)

- [International Journal of Decision Science Letters \(Growing Science, Canada\)](#)
- [International Journal of Applied Evolutionary Computation \(IGI Global, USA\)](#)
- [International Journal of Design Engineering \(Inderscience, UK\)](#)
- [International Journal of Engineering Project, Production Management, NUS Singapore](#)
- [International Journal of Advanced Manufacturing Systems \(World Scientific, USA\)](#)

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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. The participants may book their accommodation for the days of the conference. Also, a no. of hotels at rates ranging from Rs.500-Rs.3500 per day are available in Surat city (<https://www.makemytrip.com/hotels/surat-hotels.html>).

### **Salient Features of the Conference**

- Proceedings to be published by Springer
- Special issues to be published by Scopus indexed journals
- Special lectures on advanced optimization techniques
- Keynote speeches by eminent persons from India and Abroad
- Interdisciplinary applications of the advanced optimization techniques

**REGISTRATION FORM IS GIVEN ON THE NEXT PAGE.....**

**International Conference**  
**On**  
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**03-05 August 2018**

**REGISTRATION FORM**

**Full Name :**

**Designation :**

**Institution with address:**

**Phone (Mobile):**

**E-mail :**

**Paper title:**

**Registration Details:**

**Amount:**

**DD No.:**

**Date:**

**Bank:**

(DD in favor of "Director, SVNIT-CCE, Surat" Payable at Surat, India)

**Accommodation required: Yes / No**

I will attend the conference and present the paper personally. I am aware that my paper may be considered for inclusion in Springer proceedings or special issues only after personal presentation.

**Signature of the participant:**

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**Correspondence Address**

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For more details visit: [www.svnit.ac.in](http://www.svnit.ac.in)