

# SĀDHANĀ

*The Lead Journal in Engineering Sciences since 1978*

**Volume 43 ■ Number 6 ■ June 2018**

- 81 **Amit Kumar Yadav • S S Chandel**  
Formulation of new correlations in terms of extraterrestrial radiation by optimization of tilt angle for installation of solar photovoltaic systems for maximum power generation: case study of 26 cities in India
- 82 **B G Prashantha • M S Govinde Gowda • S Seetharamu • G S V L Narasimham**  
Design and analysis of acoustically-driven 50 W thermoacoustic refrigerators
- 83 **Fulya Zarali • Harun Resit Yazgan • Yilmaz Delice**  
A new solution method of ant colony-based logistic center area layout problem
- 84 **Masoud Mohammadi Sardouei • Hamid Morteza pour • Kazem Jafari Naeimi**  
Temperature distribution and efficiency assessment of different PVT water collector designs
- 85 **Himanshu Misra • Amit Kumar Jain**  
Harmonics reduction in standalone DFIG-DC system by shunt active filter controlled in stator flux reference frame
- 86 **V Balaprakash • P Gowrisankar • R Rajkumar • S Sudha**  
Preparation and characterization of aluminum doped zinc oxide (AZO) nanorods
- 87 **Vaibhav Agarwal • Parteek Kumar**  
UNLization of Punjabi text for natural language processing applications
- 88 **Chandrakantha Bekal • Ranjan Shetty • Satish Shenoy**  
Numerical investigation of influence of number of stent cells and type of link on expansion and haemodynamic behaviour of balloon-expandable coronary stent
- 89 **Balu L Parne • Shubham Gupta • Narendra S Chaudhari**  
ESAP: Efficient and secure authentication protocol for roaming user in mobile communication networks
- 90 **Sundeep Singh • Ramjee Repaka**  
Numerical investigation of convective cooling in minimizing skin burns during radiofrequency ablation of breast tumor

*(continued on inside back cover)*

Indexed in: Current Contents

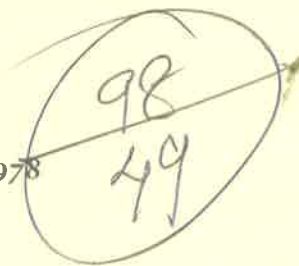
---

Edited and published by Amitabh Joshi for the Indian Academy of Sciences, Bengaluru 560 080.  
Printed at Brilliant Printers Pvt. Ltd, Bengaluru 560 094.

Registered with Registrar of Newspapers in India, vide Regn No. 13242/57

# SĀDHANĀ

The Lead Journal in Engineering Sciences since 1978



Volume 43 ■ Number 5 ■ May 2018

- 65 **Akhilesh Kumar Gupta • Deepak Kumar • Paulson Samuel**  
A meta-heuristic cuckoo search and eigen permutation approach  
for model order reduction
- 66 **Ravi Kumar Mandava • Pandu R Vundavilli**  
Implementation of modified chaotic invasive weed optimization algorithm  
for optimizing the PID controller of the biped robot
- 67 **Chandrasekharan Nataraj • Sheroz Khan • Mohamed Hadi Habaebi**  
Coil geometry models for power loss analysis and hybrid inductive link  
for wireless power transfer applications
- 68 **Mustafa Cem Kasapbaşı • Wisam Elmasry**  
New LSB-based colour image steganography method to enhance the efficiency  
in payload capacity, security and integrity check
- 69 **H Farshbaf Aghajani**  
The effect of embedded gypsum streaks on the dissolution of dam foundation:  
a case study in Iran
- 70 **Marin Gostimirovic • Pavel Kovac • Milenko Sekulic**  
An inverse optimal control problem in the electrical discharge machining
- 71 **J Divya Navamani • R Jegatheesan • K Vijayakumar**  
Reliability study of high gain DC-DC converters based on RRPP I-IIA  
configuration for shipboard power system
- 72 **G Senthilkumar • N R Panchapakesan**  
Effect of flapping kinematics on aerodynamic force of a flapping  
two-dimensional flat plate
- 73 **Rameshchandra P Shimpi • Rajesh A Shetty • Anirban Guha**  
A single variable shear deformable nonlocal theory for transversely loaded  
micro- and nano-scale rectangular beams
- 74 **Jetson A Ronald • Arun Menon • Anumolu Meher Prasad • Devdas Menon • Guido Magenes**  
Modelling and analysis of South Indian temple structures under earthquake  
loading

(continued on inside back cover)

Indexed in: Current Contents

Edited and published by Amitabh Joshi for the Indian Academy of Sciences, Bengaluru 560 080.  
Printed at Brilliant Printers Pvt. Ltd, Bengaluru 560 094.

Registered with Registrar of Newspapers in India, vide Regn No. 13242/57