

3-Day Workshop on
Design Optimization & Introduction to MDO
18, 19 & 20, January, 2017,
2-Day Meeting of the Special Interest Group on MDO
21 & 22, January, 2017



Organised & Hosted by IIST. Co-hosted by VSSC, ISRO and CASDE, IIT Bombay



Formal optimization in design of engineering systems is a mature enabling technology and must form the backbone of any engineering design process. Multi-disciplinary Design Optimization (MDO) is a fast maturing technology for the design of complex engineering systems.

The two events are hosted by Indian Institute of Space Science & Technology, Trivandrum and co-hosted by Vikram Sarabhai Space Centre, Trivandrum on behalf of the ARDB Centre for Aerospace Systems Design & Engineering (CASDE).

Organisers:

- 1) Prof Devendra Ghatе, Visiting Faculty, Dept of Aerospace Engineering, IIST
- 2) Dr Pankaj Priyadarshi, Head ADSD, Aero Entity, VSSC, ISRO
- 3) Dr Indira N, MSRSAS, Bangalore
- 4) Dr AS Shaja, Bangalore
- 5) Prof K Sudhakar, IIT Bombay (Retired)

Patrons:

- 1) Dr Kota Harinarayana, DRDO (Retired)
- 2) Prof. PM Mujumdar, Dept of Aerospace Engineering, IIT Bombay, Mumbai
- 3) Prof Hemendra Arya, ARDB CASDE, IIT Bombay, Mumbai.
- 4) Prof Kurien Isaac, Senior Professor, Dept of Aerospace Engineering, IIST
- 5) Shri. S Pandian, Deputy Director, AERO, VSSC, ISRO
- 6) Dr. V Ashok, Group Director, ADTG, VSSC, ISRO

Contact details:

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For SIG-MDO related queries : sig-mdo@casde.iitb.ac.in

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3-Day Workshop on
Design Optimization & Introduction to MDO
18, 19 & 20, January, 2017

Organisers

Indian Institute of Space Science & Technology (IIST), Trivandrum
Vikram Sarabhai Space Centre (VSSC), Trivandrum

Venue

ATF, VSSC, Trivandrum

The Workshop is conceived, designed and delivered jointly by researchers from academia and professionals from the industry.

Who should attend?

- Young engineers who are involved in the design of engineering systems.
- Middle level designers who do not have any formal exposure to design optimization

Attendee shall be reasonably tech-savvy in using computers and in using new applications and shall report for the workshop with a laptop or can share a laptop with one other delegate.

Outcome

The workshop shall be outcome oriented as opposed to content driven. A delegate who undergoes this 3-Day workshop shall be able to do the following:

- 1) See the design problem (s)he is working on as an Optimization Problem
- 2) Cast the design problem (s)he is working on as an Optimization Problem
- 3) Use an open-source Optimization frame work to pose and solve his/her design problem.
- 4) Present results of his design exercise for the benefit general community.
- 5) Appreciate how 'his/her design' is just an element of a larger system and the need for optimizing the system rather than the element.
- 6) Appreciate a few main issues/complexities involved in System Design through MDO

Schedule

The 3-Day Workshop shall devote 2 days to address items 1 to 4 above and cover

- a) motivation for using optimization in design,
- b) basic concepts & theoretical background of Optimization,
- c) numerical optimization techniques like NLP and evolutionary methods,
- d) meta modelling or surrogate modelling,
- e) Real life examples of design optimization, and
- f) Hands on sessions using open-source software are also planned.

Third day of the workshop will focus on items 5 & 6 above and shall introduce motivation and importance of using MDO in the design of complex engineering systems.

Registration

Registration fee is Rs 5,000 for those working for government or Non-Profit organisations.

Registration fee is Rs 25,000 for those working for For-profit organisations.

Registration fee includes lecture material (Soft copy of slides used in presentation after removing slides that may contain propriety information).

Registration fee does not include lodging/boarding charges and local conveyance (pick-up/drop from airport/railway station etc.).

Registered delegates to the 3-Day Workshop are strongly encouraged to attend the 2-Day SIG-MDO Meeting on ensuing 2 days at no extra registration fee.

Accommodation

Limited guest house accommodation is available on payment basis on a first come first served basis.

Meeting of Special Interest Group on MDO 21 & 22 January, 2017

Special Interest Group on MDO (SIG-MDO) is a group of people drawn from various organizations in India and whose activities are coordinated by ARDB Centre for Aerospace Systems Design & Engineering, IIT Bombay, Mumbai. SIG-MDO meets frequently (once in a year or in two years) to offer a platform for professionals to talk about MDO problems that they have tackled or are tackling or even formulating.

Who should attend

- Technology heads, Project Directors
- Researchers in the area of Design Optimization

Benefits

- Listen to technology heads, project directors on how they have posed complex design problems and exploited optimization to solve them
- Listen to researchers on research problems they are tackling
- Listen to design service providers on their capability

Registration

There is no registration fee for those working for Government or Non-profit organisations.

Registration fee for those working for For-Profit organisations is Rs 25,000.

Registration fee does not include lodging/boarding charges and local conveyance (pick-up/drop from airport/railway station etc.).

<p align="center">Registration Form</p> <p align="center">3-Day Workshop on Design Optimization & Introduction to MDO</p> <p align="center">2-Day Meeting of Special Interest Group on MDO</p>	
Delegate details:	
Given name	
Other names	
Affiliation (Organisation)	
Affiliation (Group name)	
Designation	
Email id (Official)	
Email id (Personal)	
Mobile #	
Admin details	
Attending 3-Day Workshop	YES / NO
Attending 2-Day SIG-MDO	YES / NO
Registration Fee Payable	
Demand draft (Number/date)	

Registration fee may kindly be remitted by Demand Draft drawn in favour of “**Registrar, IIST**” payable at **Trivandrum**.

Mailing Address:

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