

# AUA Online Education Conference

05 July 2019

## Online Education Initiatives at IIT Bombay

Sridhar Iyer

Indian Institute of Technology Bombay, India  
Professor, Dept of Computer Science  
Convener, IDP on Educational Technology



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# Indian Institute of Technology Bombay



- A premier technical university located in the financial capital of India,
- ~95% of the community lives in a residential campus with a small hill, two natural lakes and occasional visits by **leopards and crocodiles**.



# IIT Bombay at a glance

## Teaching and Research

~10100 students on roll  
3283 Bachelors, 895 DD, 3006 Masters, 3300 PhD

135+ Post-doctoral fellows ; 1400+ Project staff (Technical)

27 Academic Units; 23 Research Centres

~640 full-time faculty ; ~150 part time (adjunct & visiting)



# Academic Units @ IIT Bombay



## Sciences

Biosciences and Bioengineering  
Earth Sciences  
Chemistry  
Mathematics  
Physics

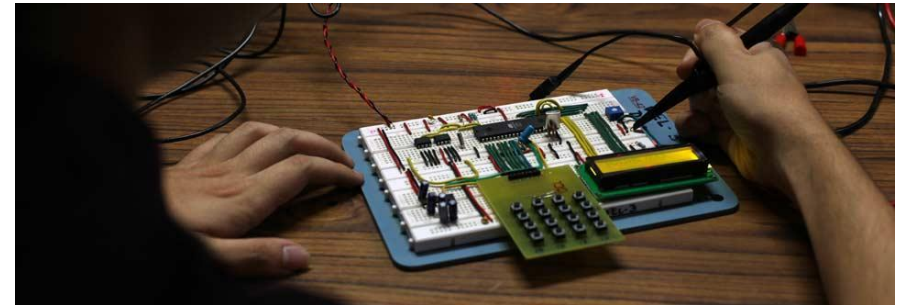
## Humanities, Design, Management

Humanities & Social Science  
Industrial Design Centre  
Shailesh J. Mehta School of Management



## Engineering

Aerospace Engineering  
Chemical Engineering  
Civil Engineering  
Computer Science & Engineering  
Electrical Engineering  
Energy Science and Engineering  
Environmental Science and Engineering (CESE)  
Mechanical Engineering  
Metallurgical Engineering & Materials Science



## Interdisciplinary Programs

Climate Studies  
Educational Technology  
Industrial Engineering and Operations Research  
Systems and Control Engineering



# Educational Technology @ IIT Bombay



Interdisciplinary Programme in Educational Technology  
Indian Institute of Technology Bombay

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## Welcome to EdTech @ IIT Bombay

The Interdisciplinary Programme in Educational Technology at IIT Bombay is actively involved in research and education in the area of technologies to promote the learning-teaching process. The IDP is composed of [faculty members](#) from various departments in the Institute. The thrust areas of [research](#) of the IDP-ET are:

- Technology-enhanced learning environments for pan-domain cognitive abilities.
- Frameworks for teacher use of educational technology tools and strategies.
- Using technologies such as GSR, EEG and eye tracking to understand teaching-learning processes

The IDP offers a Ph.D. programme in Educational Technology. The programme consists of coursework, projects and a dissertation. To apply please visit the [ET Admissions page](#) or the [IIT Bombay Ph.D. admissions page](#).

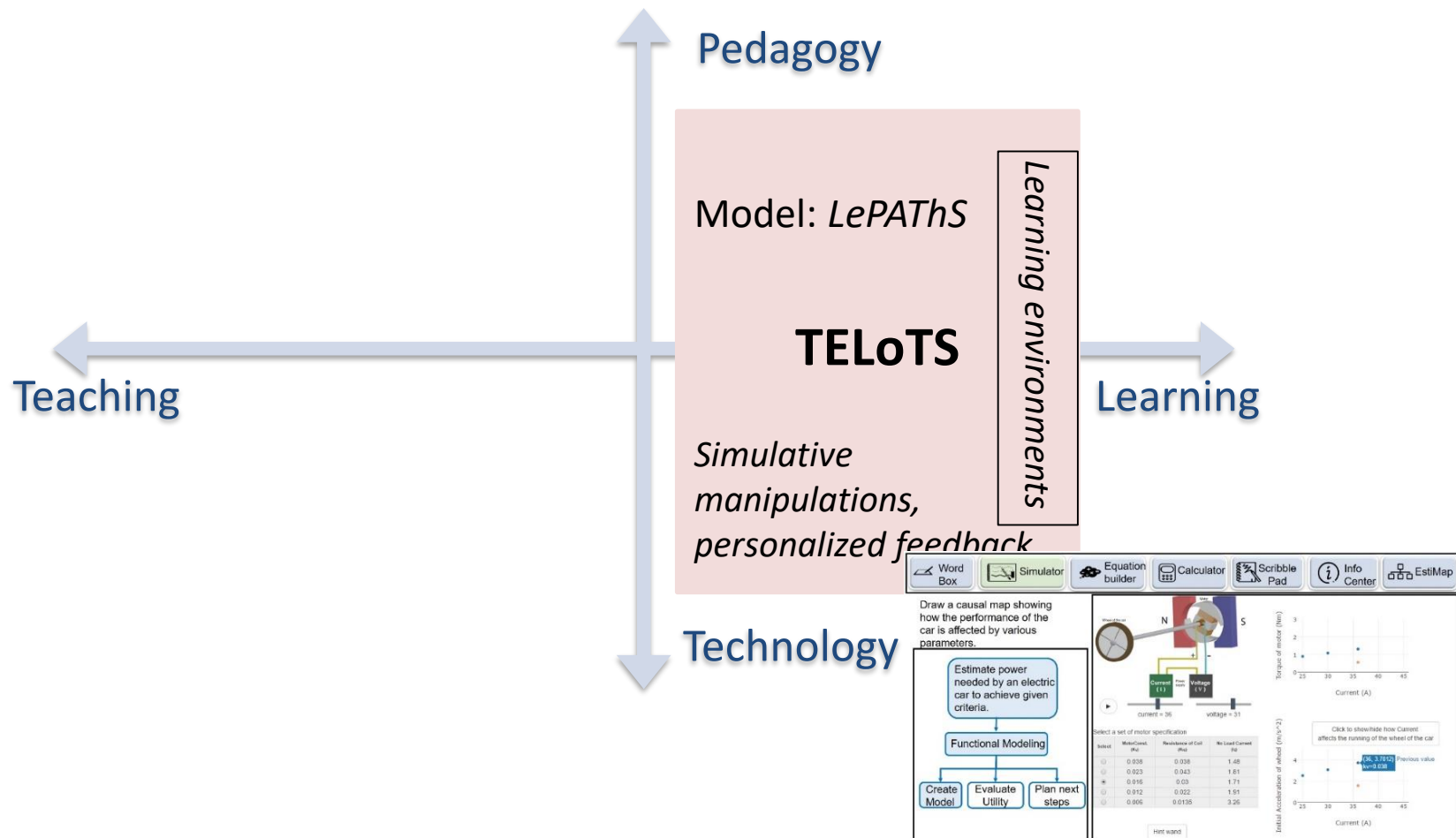
## Tweets by @edtechIITB

- et** Educational Technology, IIT Bombay  
@edtechIITB
- Call for Papers: The 10th IEEE International #Conference on Technology for Education (T4E) 2019 will be held at Goa University, Goa, India, from December 9 - 12, 2019.  
Deadline: Submit your paper by July 18, 2019.  
More here: [t4e2019.unigoa.ac.in](http://t4e2019.unigoa.ac.in)



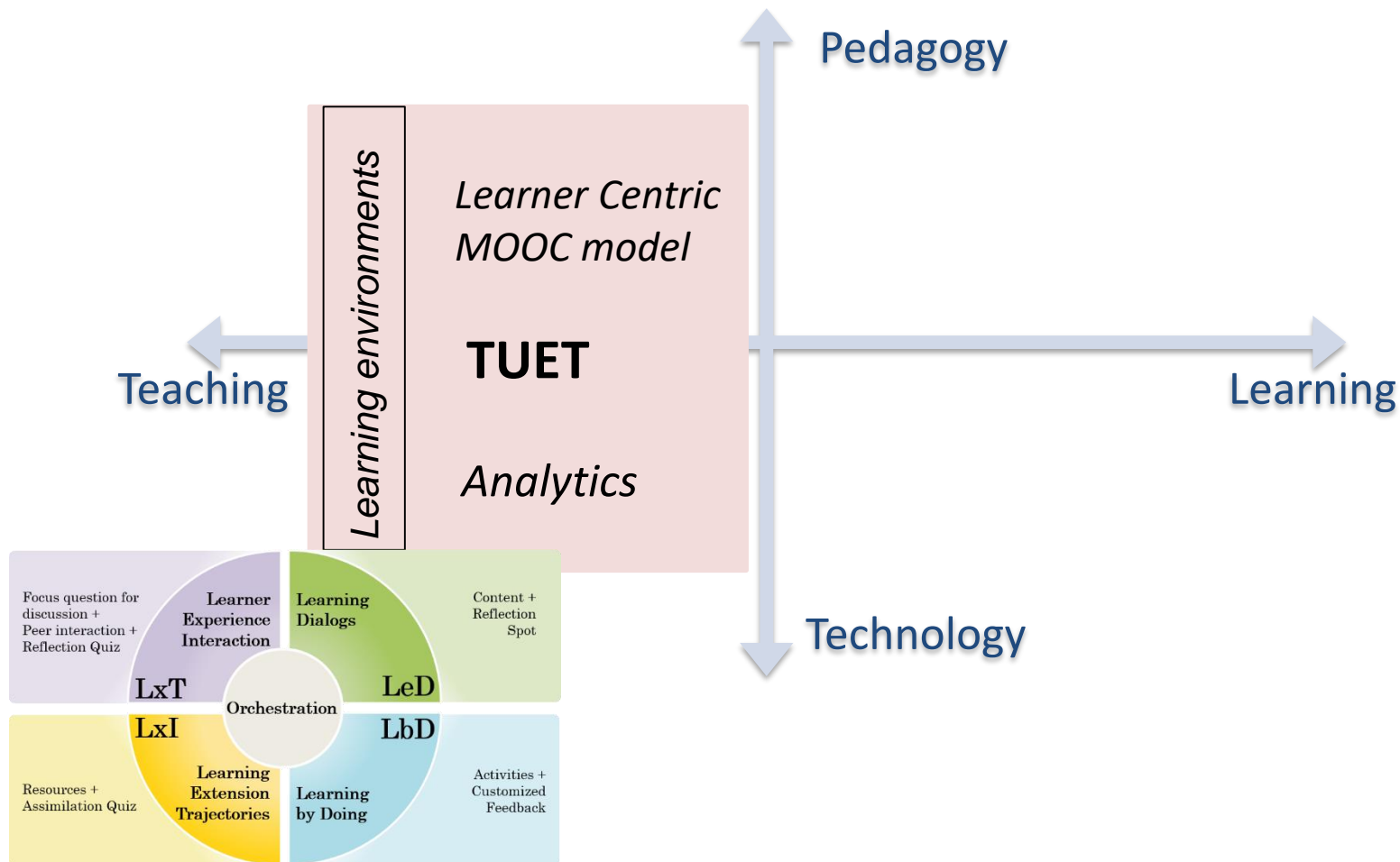


# Research Area 1: Technology enhanced learning of thinking skills





# Research area 2: Teacher Use of Educational Technology



# National Mission on Education Through ICT

- Policy: Government of India is committed to supporting education through effective use of ICT.
- [www.sakshat.ac.in](http://www.sakshat.ac.in) ; [mhrd.gov.in/nep-new](http://mhrd.gov.in/nep-new)
- National Mission launched in 2009.
- 100+ projects, 20+ institutions, Rs 6000crore (~1 billion USD)
- All content under Open Education Resources
- Technology developed under FOSS
- Research in Technology for Education



# T10KT

Teach 10000 Teachers – [www.it.iitb.ac.in/nmeict](http://www.it.iitb.ac.in/nmeict)



A screenshot of the National Mission on Education Through ICT (NMEICT) website. The header features the logo and the text "National Mission on Education Through ICT" and "Empowerment of Students and Teachers through Synchronous &amp; Asynchronous Instruction". The navigation menu includes "Home", "About T10KT", "Announcements", "Moodle", "FAQ", "Downloads", and "W". The main content area is titled "Workshop Announcements" and lists three workshops: "IIT BombayX course on Educational Technology for Engineering Teachers - ET601Tx", "Two-Week ISTE STTP on Engineering Physics", and "Two-Week ISTE STTP on Technical Communication". Each workshop has a "(Details)" link next to it.

- 300+ remote centers
- 2-4 week long teacher training workshops in Engg
- 68 workshops – About 150,000 teachers trained
- Blended mode – Live lectures and interactions, with remote / online labs and assignments

# IITBombayX

MOOCs - [www.iitbombayx.in](http://www.iitbombayx.in)



ABOUT

COURSES

HOW IT WORKS

Search Courses



LOGIN

REGISTER

## Courses

IITBombayX offers numerous interactive courses listed below, including ongoing, upcoming and archived courses. Each of these courses are categorized under EduMOOCs, LifeMOOCs, SkillMOOCs and TeachMOOCs for various learning needs.

### Refine Your Search

#### Timeline

- Archived (93)
- Launching Soon (1)
- Ongoing (5)

#### Types of MOOC

- EduMOOC (43)
- LifeMOOC (1)
- SkillMOOC (25)
- TeachMOOC (25)

#### Domain

- Animation (5)
- Communication (16)
- Computer Science (23)

### Course Search

Apply



**C2CIT1x**

Effective Use of IT in Professional Career

Launching Soon  
Starts : Jun 11, 2019



**C2CFL1x**

Financial Literacy

Ongoing  
Starts : May 14, 2019



**SSA101x**

Hands-on training on Solar Study Lamp Assembly

Ongoing  
Starts : May 01, 2019



# NPTEL

[nptel.ac.in](http://nptel.ac.in)



A Project funded by  
MHRD, Govt. of India

[About us](#) [Courses](#) [Resources](#) [Acknowledgements](#) [FAQ](#) [Feedback](#) [NPTEL+](#) [Careers](#)

## List By Discipline

- Aerospace Engineering
- Agriculture
- Architecture
- Atmospheric Science
- Basic courses(Sem 1 and 2)
- Biotechnology

## List By content type

- Video Course
- Web Course

## List By Institutions

- IISc Bangalore
- IIT Bombay
- IIT Delhi
- IIT Guwahati

Search for CourseName,Professor,Institute



## Results

Prev **1** 2 3 4 5 Next

VIDEO

*Introduction to Film Studies*

Course Content

Humanities and Social Science...

VIDEO

*Researching Anglo-Indians in India and the Diaspora*

Course Content

VIDEO

*Organic Chemistry Lab Certification*

Course Content

VIDEO

*DRAVIDIAN TEMPLE ARCHITECTURE & CONSTRUCTION TECHNIQUES*

Course Content

VIDEO

*Theory Of Mechanism*

Course Content

VIDEO

*NOC:Statistical Inference*

Course Content

# NPTEL LOCAL CHAPTERS (SINCE APRIL 2015 )

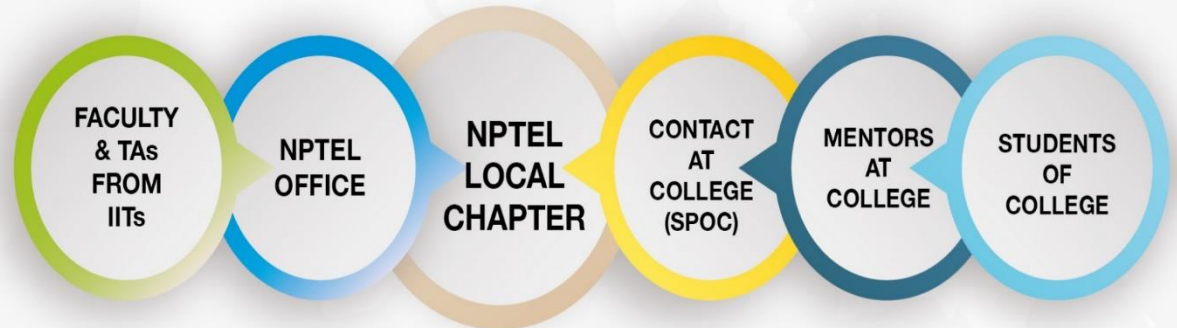
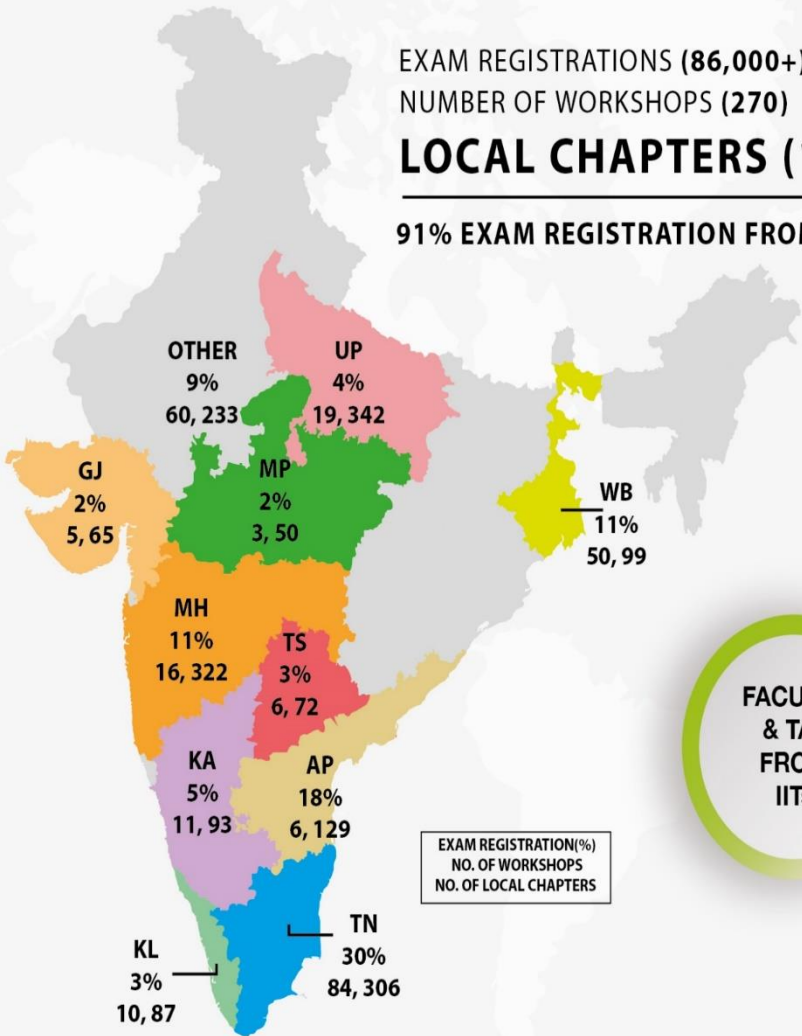
EXAM REGISTRATIONS (86,000+)  
NUMBER OF WORKSHOPS (270)

## LOCAL CHAPTERS (1900+)

91% EXAM REGISTRATION FROM 10 STATES

## SWAYAM - NPTEL LOCAL CHAPTERS

NPTEL partners with colleges across India as Local Chapters. A coordinator at the college helps take the initiative forward.





# SpokenTutorials

[www.spoken-tutorial.org](http://www.spoken-tutorial.org)



Spoken Tutorial

Software Training ▾

Creation ▾

News ▾

Academics ▾

About ▾

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-- All Courses --

Aakash Business Tool (11)

Advance C (3)

Advanced Cpp (10)

Android app using Kotlin (6)

Applications of GeoGebra (15)

Apps On Physics (3)

Arduino (14)

ASCEND (6)

Avogadro (8)

BASH (23)

Biogas Plant (11)

Biopython (5)

Blender (15)

BOSS Linux (17)

C and Cpp (20)

CellDesigner (7)

ChemCollective Virtual Labs (12)

Digital Divide (17)

-- All Languages -- ▾

Search

Keyword Search

Nomination for  
Mumbai Awards 2015

Reimagine Education  
Award

# Spoken Tutorial

An initiative of National Mission on Education through  
ICT, MHRD, Govt. of India, to promote IT literacy through

## Open Source Software.

Learn more about this **free service** using our

## audio-video tutorials



# FOSSEE

[www.fossee.in](http://www.fossee.in)



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[Newsletter](#)

[Fellowship](#)

[Recruitment 2019](#)

## Resources



### Resources

<a href="#">Scilab</a>	<a href="#">eSim</a>
<a href="#">OpenFOAM</a>	<a href="#">OR Tools</a>
<a href="#">Osdag</a>	<a href="#">DWSIM</a>
<a href="#">R</a>	<a href="#">OpenModelica</a>
<a href="#">Python</a>	<a href="#">FOSSEE-Laptop</a>
<a href="#">Anuduino</a>	<a href="#">Sandhi</a>
<a href="#">OpenPLC</a>	<a href="#">Scilab-Arduino</a>
<a href="#">SBHS</a>	

Index of /fossee/

../



# Virtual Labs

[vlabs.iitb.ac.in](http://vlabs.iitb.ac.in)



Intro

Labs

About Us

Vlabs Dev

Outreach

Workshops

**BootCamp**

Welcome to Virtual Labs

# OSCAR

[oscar.iitb.ac.in](http://oscar.iitb.ac.in)



## Project OSCAR

Open Source Courseware Animations Repository

Enter your mailid here

.....

Login

New User

HOME

ABOUT US

LOs / ANIMATIONS

BLENDER ACTIVITIES

SEARCH

DOWNLOAD

TEACH & LEARN

RESEARCH

PARTICIPATE

**Search the repository**

Type keywords here

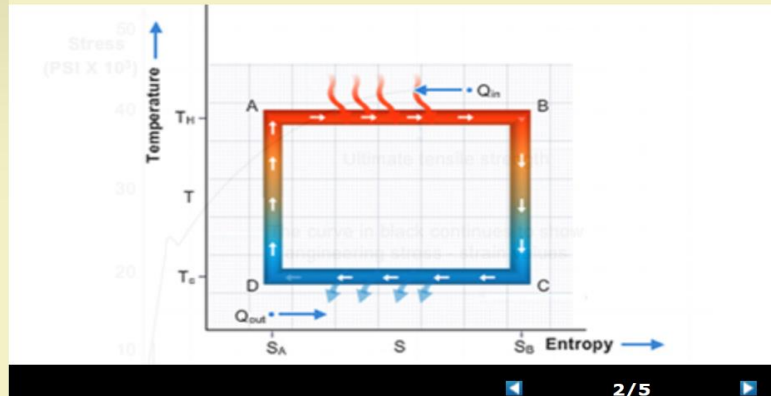
All

GO

**Browse the repository**

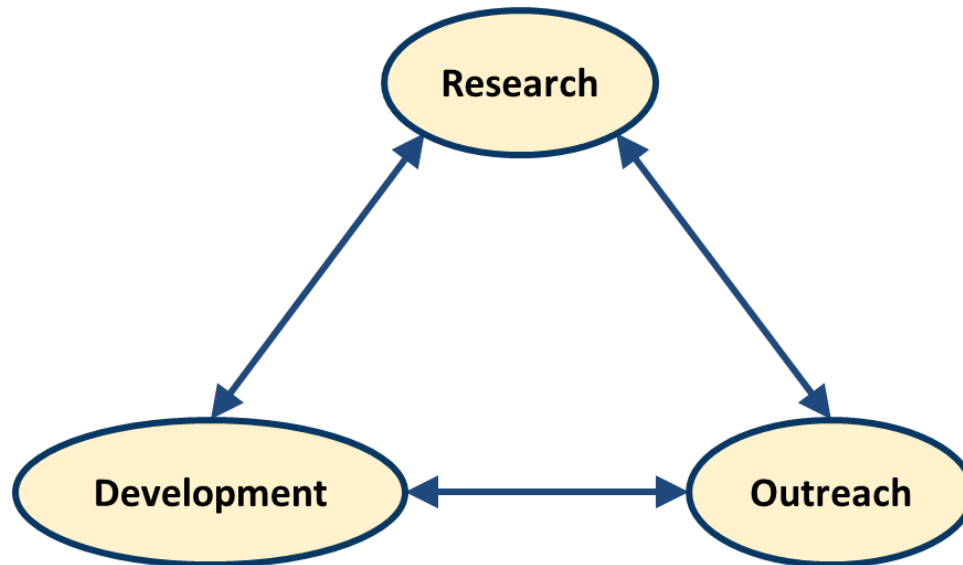
GO

Project OSCAR (Open Source Courseware Animations Repository) provides a repository of web-based interactive animations and simulations, that we refer to as **learning objects (LOs)**. These learning objects span topics in science and engineering at the college level, and maths and science at the school level. Students and teachers can view, run and download these learning objects.



# Learnings

- **To scale:**
  - Do blended mode, use sound pedagogy, facilitated by technology.
- **To be effective at scale:**
  - Maintain learner-centricity, focus on immersivity and pertinency.
- **To sustain at scale:**
  - Promote early shift of ownership, enhance communities of practice.



# T4E Conferences

THE TENTH INTERNATIONAL CONFERENCE ON  
TECHNOLOGY FOR EDUCATION (T4E) 2019

**Dec 9 - 11, 2019, Goa, India**

<http://t4e2019.unigoa.ac.in>

Paper submission deadline - July 18th

Themes:

- Pedagogical Strategies and Interventions for Technology-Enhanced Learning
- Technologies to Improve Access to Education
- Development of Technologies to Support Education

# Visit Us



Educational Technology IIT Bombay

Openings:

Faculty - Short & long-term visits

Students – PhD / Post-doc in ET

Contact information:

Sridhar Iyer

[sri@iitb.ac.in](mailto:sri@iitb.ac.in)