



SRI VENKATESWARA COLLEGE OF ENGINEERING

(An Autonomous Institution –Affiliated to Anna University, Chennai)
Pennalur, Sriperumbudur taluk-602117, Tamil Nadu

Department of Applied Physics

International Webinar Series on “Advanced Materials for Biomedical Devices: Challenges and Progress”
(24th of June 2020)

An International Webinar Series on “Advanced Materials for Biomedical Devices: Challenges and Progress” was organized by The Department of Applied Physics using Zoom Platform on 24th of June 2020. An astonishing response shown towards this webinar by the participants from different countries like USA, Nepal, Nigeria, Cameroon, South Africa, Bakrun, Pakistan, Ethiopia, and Oman. A total of 477 participants attended the webinar.

The Programme started with Presidential address given by **Dr.A.Bhaskaran** Professor and Head department of Applied Physics, followed by introduction of chief guest was given by Dr.N.R.Sheela Organising secretary of this program. Then the programme host Dr.N.R.Sheela handed over the session to the Speaker, **Dr. Mathew Associate Professor at University of Illinois(UIC) Bioengineering Rockford Biomedical Sciences, USA.**

He explained how titanium alloy based Biomedical Implants are commonly used in clinical management and medical practices, to replace or repair malfunctioned or failed body parts or joints. Further, the challenge of a clinician is to have an implant which satisfies the functional requirements of the patients, and it should have minimum side effects on the patient's body. How metal microstructure is helpful researchers in Material science. His talk address the basics and recent progress in the tribocorrosion (sliding/fretting) studies on the biomedical implant in vitro simulations, as a function of mechanical, biochemical and biological variables. Last 10 years, the research from his own lab, on corrosion, tribology and tribocorrosion aspects of biomedical implants (minimizing and early predictions) was discussed and summarized.

After the chief guest talk the floor was opened for Question and Answer session (Q and A).

The speaker answered to the participants queries and the Vote of thanks was delivered by Dr.N.R.Sheela Assistant Professor, Department of Applied Physics, indeed Organiser of the event. Participants gave Excellent feedback about the event during their Q and A session and also through email. After the feedback form was successfully submitted by the participants, E-certificates were sent to them through their registered email.

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DEPARTMENT OF APPLIED PHYSICS
 Organizes an International Webinar Series
 ON
**" ADVANCED MATERIALS FOR BIOMEDICAL DEVICES :
 CHALLENGES AND PROGRESS "**


SPEAKER

Mathew T Mathew PhD
 Associate Professor at UIC Bioengineering
 Cedric W. Blazer Endowed Professor,
 University of Illinois College of Medicine Rockford,
 Biomedical Sciences.

JUNE 24 2020

5:00 PM to 6:30 PM(IST)
6:30 AM to 8:00 AM(CST)

Scan to Explore



<https://forms.gle/dCRvMlbg5ad003yPA>

Convener
Prof. A.Bhaskaran,
 HoD - Applied Physics.

Organizing Secretary
Dr.N.R.Sheela,
 Asst. Prof - Applied Physics.

Coordinators
Dr. S.Sampath Krishnan , Prof - APH.
Dr. A.Ananda Vadivel , ASP - APH.
Ms. G.Bharathy , AP - APH.

E - Certificate will be provided

During the International Webniar Series session on "International Webinar Series on "Advanced Materials for Biomedical Devices: Challenges and Progress" by Dr. Mathew Associate Professor at University of Illinois(UIC) Bioengineering Rockford Biomedical Sciences, USA.

Comparing system with automobile

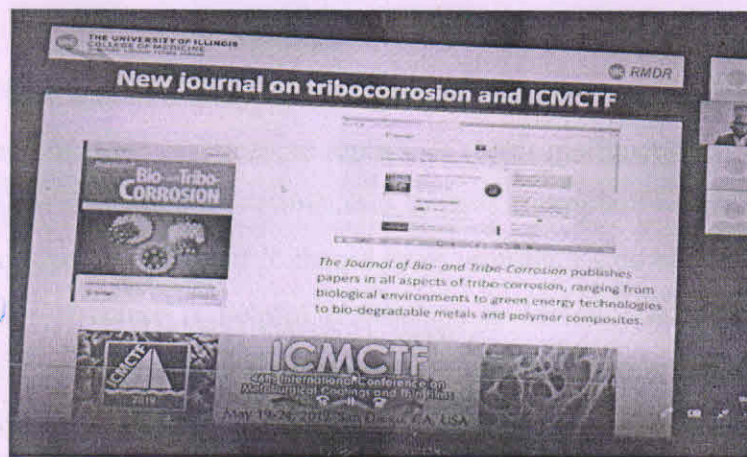
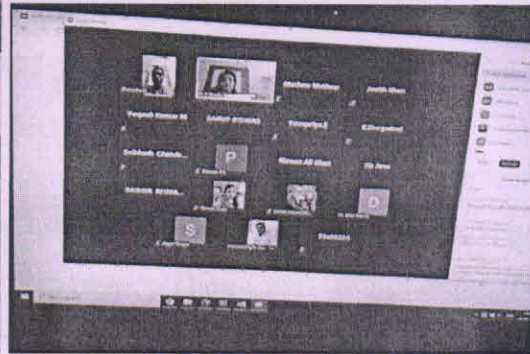
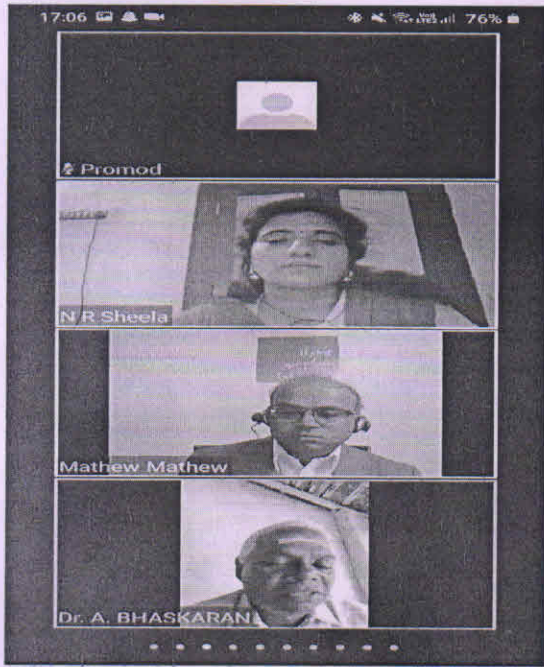
Car system-1890

Car system-2018

- Lot of improvements: safety and performance
- Material is changed
- Surface treatment is changed
- Sensor system is improved (around 200 sensors)
- Microprocessors- around 50

The role of microstructure on fretting-corrosion

The slide displays a schematic of a mechanical joint and several graphs showing the relationship between microstructure and fretting-corrosion. The graphs include plots of fretting corrosion rate versus microstructure parameters and fretting corrosion rate versus time for different microstructures.



Sincerely With Thanks and Regards
 Organising Secretary for the International Webinar Series Programme
Dr. N.R. Sheela *Faculty Coordinator of the event*
 Assistant Professor
 Department of Applied Physics
 Sri Venkateswara College of Engineering

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