COBEM 2025

Program Book

COBEM 2025

28th International Congress of Mechanical Engineering

9th - 14th November 2025
CURITIBA | PR | BRAZIL

COBEM 2025

Program in a glance

PUCPR GRUPO MARISTA

UFPR UNIVERSIDADE FEDERAL DO PARANÁ

UTFPR

ABCM 50 ANOS Associação Brasileira de Engenharia e Ciências Mecânicas

Program Overview

Saturday, Nov 8, 2025 – PITCH DAY

8:00 am	Reception of visitors and instructions for presenters
8:30 am – 10:30 am	Evaluation of projects by the panels
10:30 am – 11:00 am	Selection of finalists in each category
11:00 am – 11:30 am	Final pitch by the finalists
12:00 pm	Announcement of results and awards ceremony
12:00 pm – 8:00 pm	Celebration with rock band performances, food trucks, and cultural presentations

Program Overview

Sunday, Nov 9, 2025

3:00 pm – 7:45 pm	Registration
6:00 pm	Opening Ceremony – UFPR Rectory auditorium
6:05 pm – 6:25 pm	UFPR President's speech – Prof. Marcos Sfair Sunye – UFPR Rectory auditorium
6:25 pm – 6:45 pm	UTFPR President's speech – Prof. Everton Ricardi Lozano da Silva – UFPR Rectory auditorium
6:45 pm – 7:05 pm	PUCPR President's speech – Ir. Rogério Renato Mateucci – UFPR Rectory auditorium
7:05 pm – 7:45 pm	Keynote Lecture 1 – Prof. Álvaro Toubes Prata, Federal University of Santa Catarina, UFSC, Florianópolis, Brazil – "Scientific Research and Entrepreneurship" – UFPR Rectory auditorium
7:45 pm	Cocktail Reception – UFPR Rectory auditorium

Program Overview

Monday, Nov 10, 2025

8:00 am – 6:00 pm	Registration
7:30 am – 8:30 am	Short Course 1 – Lecture 1 – Sustainable Manufacturing – Prof Navneet Khanna, Institute of Infrastructure, Technology, Research and Management, IITRAM – Ahmedabad, Gujarat, India
7:30 am – 8:30 am	Short Course 4 – Lecture 1 – Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering – Prof Americo Cunha Jr, National Laboratory for Scientific Computing, LNCC
7:30 am – 9:30 am	Short Course 5 (ONLINE) – Lecture 1 – Introduction to Modern Computational Fluid Dynamics, CFD – Prof Akshai Runchal, Analytic & Computational Research Inc. (ACRi – CFD Innovators), USA
8:00 am – 9:30 am	Oral presentations
9:30 am – 10:00 am	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
10:00 am – 10:40 am	Keynote lecture 2 – Prof. Hervé Panetto, University of Lorraine, Nancy, France – "The future of Artificial Intelligence: Challenges, Trends and Opportunities" – Technology Sector Auditorium
10:40 am – 12:00 pm	Oral presentations
12:00 pm – 1:30 pm	Lunch
1:30 pm – 2:10 pm	Keynote lecture 3 – Prof. Ibrahim Dincer, Ontario Tech. University, Oshawa, Canada – "Integrated Energy Systems for Sustainable Future" – Technology Sector Auditorium
2:10 pm – 3:30 pm	Oral presentations
3:30 pm – 4:00 pm	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
4:00 pm – 4:40 pm	Keynote lecture 4 – Prof. Juan Carlos Ordonez, Florida State University, FSU, Tallahassee, FL, USA – "Towards Zero-Emission Air Transport" – Technology Sector Auditorium
4:40 pm – 5:20 pm	Keynote lecture 5 – Prof. C. Nataraj, Villanova University, Villanova, PA, USA – "Integration of Nonlinear Dynamics & Machine Learning" – Technology Sector Auditorium
5:20 pm – 7:00 pm	ABCM Awards (ABCM-Springer, ABCM-PIPELINEBRAZIL, Prof. Leonardo Goldstein Jr.)
7:00 pm – 9:00 pm	Bodebrown: Beer and Networking

Program Overview

Tuesday, Nov 11, 2025

8:00 am – 6:00 pm	Registration
7:30 am – 8:30 am	Short Course 1 – Lecture 2 – Sustainable Manufacturing – Prof Navneet Khanna, Institute of Infrastructure, Technology, Research and Management (IITRAM) – Ahmedabad, Gujarat, India
7:30 am – 8:30 am	Short Course 4 – Lecture 2 – Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering – Prof Americo Cunha Jr, National Laboratory for Scientific Computing, LNCC
7:30 am – 9:30 am	Short Course 5 (ONLINE) – Lecture 2 – Introduction to Modern Computational Fluid Dynamics, CFD – Prof Akshai Runchal, Analytic & Computational Research Inc. (ACRi – CFD Innovators), USA
8:00 am – 9:30 am	Oral presentations
9:30 am – 10:00 am	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
10:00 am – 10:40 am	Keynote lecture 6 – Prof. Sylvie Lorente, Villanova University, USA – "Hierarchical Flow Architectures in Heat Transfer" – Technology Sector Auditorium
10:40 am – 12:00 pm	Round Table "Artificial Intelligence for a Sustainable Tomorrow" – Technology Sector Auditorium; Mediators: Prof. José Vargas and Prof. Américo Cunha Jr. – Panelists: Prof. Hervé Panetto, University of Lorraine, Nancy, France; Prof. Ibrahim Dincer, Ontario Tech. University, Oshawa, Canada; Prof. C. Nataraj, Villanova University, Villanova, PA, USA, and Prof. Américo Scotti, Federal University of Uberlândia, UFU, Uberlândia, MG, Brazil.
12:00 pm – 1:30 pm	Lunch
1:30 pm – 2:10 pm	Keynote lecture 7 – Prof. Marco Cecarelli, University of Roma, Rome, Italy – "Challenges in Mechanism Design for Robotics" – Technology Sector Auditorium
2:10 pm – 3:30 pm	Oral presentations
3:30 pm – 4:00 pm	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
4:00 pm – 4:40 pm	Special Keynote lecture – CNPq New Research Productivity Grant Criteria Explanation, Prof. Katia Luchese Cavalca, UNICAMP – CA/EM/CNPq Mechanical Engineering Advisory Committee
4:40 pm – 5:20 pm	Keynote lecture 9 – Prof. Daniil Yurchenko, ISVR, Southampton, England, United Kingdom – "Unravelling the Complexity of Vibroimpact Systems" – Technology Sector Auditorium
5:20 pm – 7:00 pm	ABCM committee meetings
7:00 pm – 11:00 pm	Bodebrown: Beer and Networking

Program Overview

Wednesday, Nov 12, 2025

8:00 am – 6:00 pm	Registration
7:30 am – 8:30 am	Short Course 4 – Lecture 3 – Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering – Prof Americo Cunha Jr, National Laboratory for Scientific Computing, LNCC
7:30 am – 9:30 am	Short Course 2 – Lecture 1 – Introduction to Composite Materials and Micromechanics – Prof Sandro Campos Amico, Federal University of Rio Grande do Sul, UFRGS, Porto Alegre, RS, Brazil
7:30 am – 9:30 am	Short Course 5 (ONLINE) – Lecture 3 – Introduction to Modern Computational Fluid Dynamics, CFD – Prof Akshai Runchal, Analytic & Computational Research Inc. (ACRi – CFD Innovators), USA
8:00 am – 9:30 am	Oral presentations
9:30 am – 10:00 am	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
10:00 am – 10:40 am	Keynote lecture 10 – Prof. Joseph Shepherd, Caltech, USA – "Dynamics of Self-Heating and Hot Surface Ignition" – Technology Sector Auditorium
10:40 am – 12:00 pm	Round Table "How Mechanical Engineering Can Contribute to a Sustainable Tomorrow" – Technology Sector Auditorium; Mediators: Prof. Cassia Ugaya and Prof. Alisson Rocha – Panelists: Prof. Ibrahim Dincer, Ontario Tech. University, Oshawa, Canada; Prof Navneet Khanna, Institute of Infrastructure, Technology, Research and Management (IITRAM) – Ahmedabad, Gujarat, India.
12:00 pm – 1:30 pm	Lunch
1:30 pm – 2:10 pm	Keynote lecture 11 – Prof. Norman Fleck, International Union of Theoretical and Applied Mechanics, IUTAM, and University of Cambridge, UK – "Chemo-mechanics: from delamination of adhesive joints to failure of Li ion batteries" – Technology Sector Auditorium
2:10 pm – 3:30 pm	Oral presentations
3:30 pm – 4:00 pm	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
4:00 pm – 4:40 pm	Keynote lecture 12 – Prof. Américo Scotti, Federal University of Uberlândia, UFU, Uberlândia, MG, Brazil – "From Natural to Artificial Intelligence: how to use them to achieve sustainable manufacturing" – Technology Sector Auditorium
4:40 pm – 5:20 pm	Prof. Norman Fleck (IUTAM); Prof. Marco Cecarelli (IFToMM) – Technology Sector Auditorium
5:20 pm – 7:00 pm	ABCM Plennary
7:00 pm – 11:00 pm	Bodebrown: Beer and Networking

Program Overview

Thursday, Nov 13, 2025

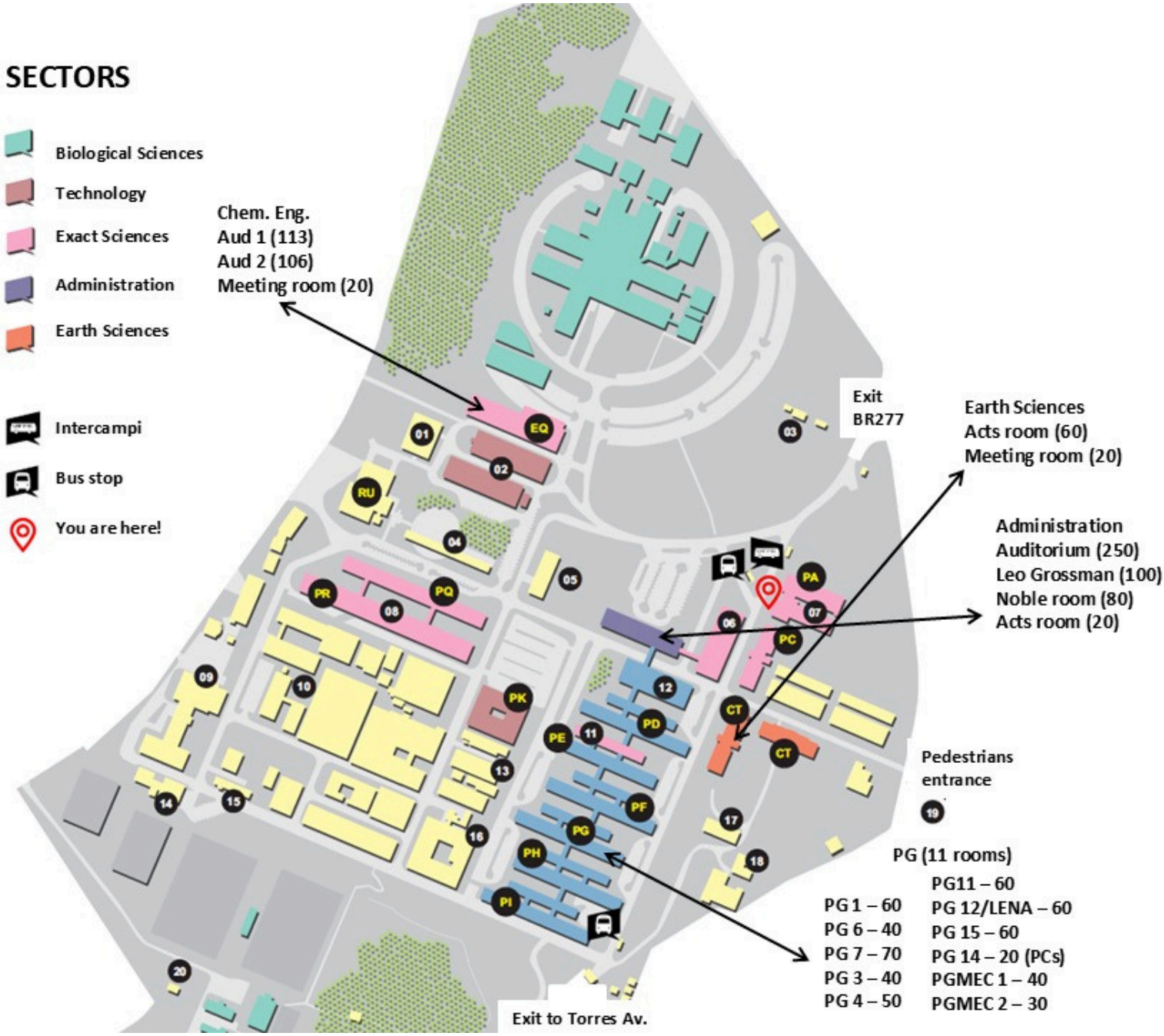
8:00 am – 6:00 pm	Registration
7:30 am – 8:30 am	Short Course 3 – Lecture 1 – Scientific writing: expressing the objectives of theses and dissertations using the approach of research questions and hypotheses – Prof. Américo Scotti, Federal University of Uberlândia, UFU Uberlândia, MG, Brazil
7:30 am – 8:30 am	Short Course 4 – Lecture 4 – Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering – Prof Americo Cunha Jr, National Laboratory for Scientific Computing, LNCC
8:00 am – 9:30 am	Oral presentations
9:30 am – 10:00 am	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
10:00 am – 12:00 pm	Oral presentations
12:00 pm – 1:30 pm	Lunch
1:30 pm – 2:10 pm	Keynote lecture 14 – Prof Navneet Khanna, Ph.D., Institute of Infrastructure, Technology, Research and Management (IITRAM), India – "Sustainable Manufacturing" – Technology Sector Auditorium
2:10 pm – 3:30 pm	Oral presentations
3:30 pm – 4:00 pm	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
4:00 pm – 4:40 pm	Keynote lecture 8 – Prof. Emilia Villani, Technological Institute of Aeronautics, ITA, São José dos Campos, SP, Brazil – "From Automation to Autonomy: New Challenges of Aerospace Industry" – Technology Sector Auditorium
4:00 pm – 4:40 pm	Keynote lecture 13 – Prof. Gherhardt Ribatski, University of São Paulo, USP/SC, Brazil – "Flow Boiling Heat Transfer Under High Reduced Pressures: Applications, Experimental Data, and a New Mechanistic Model" – Chemical Engineering Auditorium 1
4:00 pm – 4:40 pm	Keynote lecture 15 – Prof Sandro Campos Amico, Federal University of Rio Grande do Sul, UFRGS, Porto Alegre, RS, Brazil – "Composite Overwrapped Pressure Vessels Type IV in Brazil – Scenario and Recent Developments" – Chemical Engineering Auditorium 2
4:40 pm – 5:40 pm	Building a Representative Future: Diversity in Mechanical Engineering
8:00 pm - 11pm	Conference dinner – 50th ABCM anniversary – Award cerimonies

Program Overview

Friday, Nov 14, 2025

8:00 am – 6:00 pm	Registration
7:30 am – 8:30 am	Short Course 3 – Lecture 2 – Scientific writing: expressing the objectives of theses and dissertations using the approach of research questions and hypotheses – Prof. Américo Scotti, Federal University of Uberlândia, UFU, Uberlândia, MG, Brazil
8:00 am – 9:30 am	Oral presentations
9:30 am – 10:00 am	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
10:00 am – 10:40 am	Keynote lecture 16 – Prof. Paul Woafo, University of Yaoundé I, Yaoundé, Cameroon – "Dynamics of micro/macro electromechanical systems without/with heredity powered by bio-inspired electronic oscillators" – Technology Sector Auditorium
10:40 am - 12 pm	Oral presentations
12:00 pm – 1:30 pm	Lunch
1:30 pm – 2:10 pm	Invited lecture – Dr. James C. Lyke, The U.S. Air Force Office of Scientific Research (AFOSR) – USA
2:10 pm – 3:30 pm	Oral presentations
3:30 pm – 4:00 pm	Coffee break, Poster presentations and Exhibition of the Industrial Park of Paraná (COBEM EXPO)
4:00 pm – 4:30 pm	Closing session and farewell coffee

Rooms map


SECTORS
Biological Sciences
Technology
Exact Sciences
Administration
Earth Sciences
Intercampi
Bus stop
You are here!
Chem. Eng.
Aud 1 (113)
Aud 2 (106)
Meeting room (20)
Exit
BR277
Earth Sciences
Acts room (60)
Meeting room (20)
Administration
Auditorium (250)
Leo Grossman (100)
Noble room (80)
Acts room (20)
Pedestrians
entrance
19
PG (11 rooms)
PG 1 – 60
PG 6 – 40
PG 7 – 70
PG 3 – 40
PG 4 – 50
PG11 – 60
PG 12/LENA – 60
PG 15 – 60
PG 14 – 20 (PCs)
PGMEC 1 – 40
PGMEC 2 – 30
Exit to Torres Av.
EQ
RU
PR
PQ
PK
PE
PD
PF
PG
PH
PI
PA
PC
CT
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
20

Welcome to Curitiba

Curitiba is the capital of the state of Paraná, located in southern Brazil. The city sits on a plateau about 900 meters above sea level, which gives it one of the mildest climates among Brazilian capitals. Founded in 1693, Curitiba grew from a small village into one of the most modern and sustainable cities in Latin America.

Curitiba has a humid subtropical climate with well-defined seasons. Winters can be quite cold by Brazilian standards, with occasional frosts, while summers are warm and pleasant. Relative humidity remains high throughout the year. In early December, average temperatures range from 15 °C to 25 °C, often with clear skies and refreshing breezes. A light jacket and an umbrella might both come in handy.

The city is famous for its innovative urban planning, public transportation system, and green spaces. There are over 30 parks and forests, including the iconic Botanical Garden, with its glass greenhouse inspired by London's Crystal Palace; Barigui Park, a favorite spot for locals; and Tanguá Park, with panoramic views and walking trails through reclaimed quarries. Curitiba's historical center, known as the Largo da Ordem, preserves colonial buildings, artisan markets, and lively cafés.

Curitiba's population is known for its cultural diversity and hospitality. The city received large waves of European immigration—especially from Italy, Germany, Poland, and Ukraine—which shaped its architecture, cuisine, and traditions. Visitors can enjoy local dishes like barreado and pierogi, or explore cultural institutions such as the Oscar Niemeyer Museum, one of the largest art museums in South America.

But Curitiba is not only about culture and nature. The city is also a major innovation hub in southern Brazil. In recent years, it has gained recognition for its strong startup ecosystem, sustainable initiatives, and high quality of life. In 2023, Curitiba ranked among the top Brazilian cities for entrepreneurship and human development.

Come and experience Curitiba's balance between innovation, nature, and tradition. We are sure you will enjoy your visit.

Venue

Universidade Federal do Paraná - Centro Politécnico

Av. Cel. Francisco H. dos Santos, 100 - Jardim das Américas, Curitiba - PR

Google maps link: https://share.google/EBe6mXQcRCATw6rOM

Opening Ceremony – UFPR Rectory auditorium

R. XV de Novembro, 1299 - Centro, Curitiba - PR

Google maps link: https://share.google/7htN7QJ3WqbGEAR7n

Conference dinner – Família Madalosso

Av. Manoel Ribas, 5875 - Santa Felicidade, Curitiba - PR

Google maps link: https://share.google/7htN7QJ3WqbGEAR7n

Beer and Networking – Bodebrown

R. Carlos de Laet, 1015 - Hauer, Curitiba - PR

Google maps link: https://share.google/7htN7QJ3WqbGEAR7n

Organizing Committee

Prof. José Viriato Coelho Vargas, UFPR

Chairman

Prof. Álisson Rocha Machado, PUCPR

Co-Chair

Prof. Diogo Berta Pitz, UFPR

Treasurer

Profa. Cássia Maria Lie Ugaya, UTFPR

Scientific Editor

Profa. Giuliana Sardi Venter, UFPR

Vice-Scientific Editor

Prof. Luís Mauro Moura, PUCPR

Executive Director (Logistics)

Prof. André Bellin Mariano, UFPR

Director of Scientific Outreach

KEYNOTE LECTURES AND ROUND TABLES

Prof. Alvaro T. Prata
EMBRAPII – Brazilian Company for Industrial Research and Innovation
Florianopolis, SC, Brazil
Scientific Research and Entrepreneurship

Prof. Hervé Panetto
Enterprise Information Systems University of Lorraine, France
The future of Artificial Intelligence: Challenges, Trends and Opportunities

Prof. Ibrahim Dincer
Ontario Tech. University, Oshawa, Canada
Integrated Energy Systems for Sustainable Future

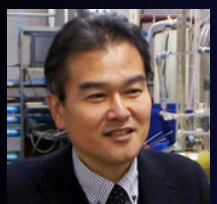
Prof. Juan Carlos Ordonez
Department of Mechanical Engineering, FAMU-FSU College of Engineering, Center for Advanced Power Systems, and Energy and Sustainability Center, Florida State University, FSU Tallahassee, FL, USA
Towards Zero-Emission Air Transport

Prof. C. Nataraj
Mortiz Endowed Chair Professor of Engineered Systems Director, Villanova Center for Analytics of Dynamic Systems Villanova University, Villanova, PA, USA
Integrated Energy Systems for Sustainable Future

Prof. Sylvie Lorente
William M. Brown endowed Chair Professor in Mechanical Engineering Villanova University Villanova, PA, USA
Hierarchical Flow Architectures in Heat Transfer

Prof. Marco Ceccarelli
LARM2: Laboratory of Robot Mechatronics, Dept of Industrial Engineering, University of Roma Tor Vergata, Rome, Italy
Challenges in Mechanism Design for Robotics

Prof. Emilia Villani
Technological Institute of Aeronautics, ITA, São José dos Campos, SP, Brazil
From Automation to Autonomy: New Challenges of Aerospace Industry



Prof. Yasuyuki Ikegami
Institute of Ocean Energy, Saga University, Japan
How Mechanical Engineering Can Contribute to a Sustainable Tomorrow

KEYNOTE LECTURES AND ROUND TABLES

Prof. Daniil Yurchenko
ISVR, Southampton, England, United Kingdom
Unravelling the Complexity of Vibroimpact Systems

Prof. Joe Shepherd
California Institute of Technology Pasadena, CA, USA
Dynamics of Self-Heating and Hot Surface Ignition

Prof. Norman A. Fleck
Cambridge University Engineering Dept., Cambridge, UK
Chemo-mechanics: from delamination of adhesive joints to failure of Li ion batteries

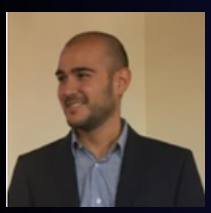
Prof. Américo Scotti
Federal University of Uberlandia, UFU Uberlandia, MG, Brazi
From Natural to Artificial Intelligence: how to use them to achieve sustainable manufacturing

Prof. Gherhardt Ribatski
University of São Paulo, USP/SC São Carlos, SP, Brazil
Flow Boiling Heat Transfer Under High Reduced Pressures: Applications, Experimental Data, and a New Mechanistic Model

Prof. Navneet Khanna
Institute of Infrastructure, Technology, Research and Management (IITRAM) Ahmedabad, Gujarat, India
Sustainable Manufacturing

Prof. Sandro Campos Amico
Federal University of Rio Grande do Sul, UFRGS Porto Alegre, RS, Brazil
Composite Overwrapped Pressure Vessels Type IV in Brazil – Scenario and Recent developments

Prof. Paul Woafo
University of Yaoundé I Yaoundé, Cameroon
Dynamics of micro/macro electromechanical systems without/with heredity powered by bio-inspired electronic oscillators



Prof. Alberto Di Matteo
Department of Engineering University of Palermo - Italy
Combining Tuned Liquid Column Device and dielectric elastomers for wave energy harvesting

Prof. Jean-Pierre Bédécarrats
University of Pau (UPPA, France)
Advancing the energy transition through thermal energy storage

KEYNOTE LECTURES

Day	Hour	Room	Name
Sunday	19:05 - 19:45	UFPR Rectory Auditorium	Prof. Álvaro Toubes Prata, Federal University of Santa Catarina, UFSC, Florianópolis, Brazil – “Scientific Research and Entrepreneurship”
Monday	10:00 - 10:40	Adm. Auditorium	Prof. Hervé Panetto, University of Lorraine, Nancy, France – “The future of Artificial Intelligence: Challenges, Trends and Opportunities”
Monday	13:30 - 14:10	Adm. Auditorium	Prof. Ibrahim Dincer, Ontario Tech. University, Oshawa, Canada – “Integrated Energy Systems for Sustainable Future”
Monday	16:00 - 16:40	Adm. Auditorium	Prof. Juan Carlos Ordonez, Florida State University, FSU, Tallahassee, FL, USA – “Towards Zero-Emission Air Transport”
Monday	16:40 - 17:20	Adm. Auditorium	Prof. C. Nataraj, Villanova University, Villanova, PA, USA – “Integration of Nonlinear Dynamics & Machine Learning”
Monday	17:20 - 19:00	Adm. Auditorium	ABCM Awards (ABCM-Springer, ABCM-PIPELINEBRAZIL, Prof. Leonardo Goldstein Jr.)
Tuesday	10:00 - 10:40	Adm. Auditorium	Prof. Sylvie Lorente, Villanova University, USA – “Hierarchical Flow Architectures in Heat Transfer”
Tuesday	10:40 - 12:00	Adm. Auditorium	Round Table on Artificial Intelligence (AI)
Tuesday	13:30 - 14:10	Adm. Auditorium	Prof. Marco Cecarelli, University of Roma, Rome, Italy – “Challenges in Mechanism Design for Robotics”
Tuesday	16:00 - 16:40	Adm. Auditorium	CNPq New Research Productivity Grant Criteria Explanation, Prof. Katia Luchese Cavalca, UNICAMP – CA/EM/CNPq Mechanical Engineering Advisory Committee
Tuesday	16:00 - 16:40	Chem. Eng. - Aud 1	Keynote Smart Materials Keynote Smart Materials Dr. Alberto Di Matteo - "Combining Tuned Liquid Column Device and Dielectric Elastomers for Wave Energy Harvesting" - University of Palermo - Italy
Tuesday	16:00 - 16:40	PG6	Keynote Energy Keynote Heat and Mass Prof. Jean-Pierre Bédécarrats, UPPA, France: "Advancing the energy transition through thermal energy storage"
Tuesday	16:40 - 17:20	Adm. Auditorium	Prof. Daniil Yurchenko, ISVR, Southampton, England, United Kingdom – “Unravelling the Complexity of Vibroimpact Systems”
Wednesday	10:00 - 10:40	Adm. Auditorium	Prof. Joseph Shepherd, Caltech, USA – “Dynamics of Self-Heating and Hot Surface Ignition”

KEYNOTE LECTURES

Day	Hour	Room	Name
Wednesday	10:00 - 10:40	Adm. Auditorium	Prof. Joseph Shepherd, Caltech, USA – “Dynamics of Self-Heating and Hot Surface Ignition”
Wednesday	10:40 - 12:00	Adm. Auditorium	Round Table on Sustainability
Wednesday	13:30 - 14:10	Adm. Auditorium	Prof. Norman Fleck, International Union of Theoretical and Applied Mechanics, IUTAM, and University of Cambridge, UK – “Chemo-mechanics: from delamination of adhesive joints to failure of Li ion batteries”
Wednesday	16:00 - 16:40	Adm. Auditorium	Prof. Américo Scotti, Federal University of Uberlândia, UFU, Uberlândia, MG, Brazil – “From Natural to Artificial Intelligence: how to use them to achieve sustainable manufacturing”
Wednesday	16:40 - 17:40	Adm. Auditorium	Prof. Norman Fleck (IUTAM); Prof. Marco Cecarelli (IFToMM)
Wednesday	17:40 - 19:00	Adm. Auditorium	ABCM Plennary
Thursday	13:30 - 14:10	Adm. Auditorium	Prof Navneet Khanna, Ph.D., Institute of Infrastructure, Technology, Research and Management (IITRAM), India – “Sustainable Manufacturing”
Thursday	16:00 - 16:40	Adm. Auditorium	Prof. Emilia Villani, Technological Institute of Aeronautics, ITA, São José dos Campos, SP, Brazil – “From Automation to Autonomy: New Challenges of Aerospace Industry”
Thursday	16:00 - 16:40	Chem. Eng. - Aud 1	Prof. Gherhardt Ribatski, University of São Paulo, USP/SC, Brazil – “Flow Boiling Heat Transfer Under High Reduced Pressures: Applications, Experimental Data, and a New Mechanistic Model”
Thursday	16:00 - 16:40	Chem. Eng. - Aud 2	Prof Sandro Campos Amico, Federal University of Rio Grande do Sul, UFRGS, Porto Alegre, RS, Brazil – “Composite Overwrapped Pressure Vessels Type IV in Brazil – Scenario and Recent Developments”
Thursday	16:40 - 17:40	Adm. Auditorium	Round Table - Building a Representative Future: Diversity in Mechanical Engineering
Friday	10:00 - 10:40	Adm. Auditorium	Prof. Paul Woafo, University of Yaoundé I, Yaoundé, Cameroon – “Dynamics of micro/macro electromechanical systems without/with heredity powered by bio-inspired electronic oscillators”
Friday	13:30 - 14:10	Adm. Auditorium	Invited lecture – Dr. James C. Lyke, The U.S. Air Force Office of Scientific Research (AFOSR) – USA
Friday	16:00 - 16:30	Adm. Auditorium	Closing session and farewell coffee

Short courses

 **Prof. Navneet Khanna** Sustainable Manufacturing	**Sustainable Manufacturing** Monday and Tuesday 7:30 am - 8:30 am Room: PG4
 **Prof. Sandro C. Amico** Introduction to Composite Materials and Micromechanics	**Introduction to Composite Materials and Micromechanics** Wednesday 7:30 am - 9:30 am Room: PG4
 **Prof. Americo Scotti** Scientific writing: expressing the objectives of theses and dissertations using the approach of research questions and hypotheses	**Scientific writing: expressing the objectives of theses and dissertations using the approach of research questions and hypotheses** Thursday and Friday 7:30 am - 8:30 am Room: PG4
 **Prof. Americo Cunha Jr.** Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering	**Artificial Intelligence and Machine Learning Essentials for Mechanical Engineering** Monday, Tuesday, Wednesday and Thursday 7:30 am - 8:30 am Room: LENA
 **Prof. Akshai Runchal** Introduction to Modern Computational Fluid Dynamics, CFD	**Introduction to Modern Computational Fluid Dynamics** Monday, Tuesday and Wednesday 7:30 am - 9:30 am Room: ONLINE

ABCM MEETINGS

Day	Hour	Meetings	Room
Tuesday	17:20 - 19:00	Bioengineering	PG4
Tuesday	17:20 - 19:00	Thermal Sciences - Energy and Thermal Systems Subcommittee	Chem. Eng. - Aud 1
Tuesday	17:20 - 19:00	Thermal Sciences - Heat and Mass Transfer Subcommittee	Chem. Eng. - Aud 1
Tuesday	17:20 - 19:00	Combustion	PG15
Tuesday	17:20 - 19:00	Dynamics	EC - Acts Room
Tuesday	17:20 - 19:00	Aerospace Engineering	Adm - Leo Grossman
Tuesday	17:20 - 19:00	Manufacturing Engineering	Chem. Eng. - Aud 2
Tuesday	17:20 - 19:00	Offshore and Petroleum Engineering	PG3
Tuesday	17:20 - 19:00	Project Engineering	PG11
Tuesday	17:20 - 19:00	Nuclear Engineering	EC - Meetings
Tuesday	17:20 - 19:00	Non-Linear and Chaotic Phenomena	Adm - Noble Room
Tuesday	17:20 - 19:00	Smart Materials and Structures	PGMEC1
Tuesday	17:20 - 19:00	Fracture Mechanics, Fatigue and Structural Integrity	PG6
Tuesday	17:20 - 19:00	Fluid Mechanics	Adm - Auditorium
Tuesday	17:20 - 19:00	Solid Mechanics	PG1
Tuesday	17:20 - 19:00	Mechatronics	PG7
Tuesday	17:20 - 19:00	Nano and Microfluidics and Micro-Systems	Chem. Eng. - Meeting room
Tuesday	17:20 - 19:00	Uncertainty Quantification and Stochastic Modeling	Chem. Eng. - Meeting room
Tuesday	17:20 - 19:00	Refrigeration, Air Conditioning, Heating and Ventilation	PGMEC2
Tuesday	17:20 - 19:00	Pipes and Pressure Vessels	Adm - Acts Room

COBEM 2025

Check out the preliminary technical program at:

https://shorturl.at/4HeG4