



12TH WORKSHOP ON

BIOSYSTEMS ENGINEERING

GLOBAL CHALLENGES:
GEOPOLITICAL UNCERTAINTIES, FOOD
SECURITY,
AND CLIMATE IMPACTS

NOVEMBER 18 - 19, 2026

uff Universidade
Federal
Fluminense

PGEB
PROGRAMA DE PÓS-GRADUAÇÃO EM
ENGENHARIA DE BIOSISTEMAS

PROPPi
PRÓ-REITORIA DE PESQUISA, PÓS-GRADUAÇÃO E INOVAÇÃO
Universidade Federal Fluminense

CAPES

PRELIMINARY PROGRAM

12th Workshop on Biosystems Engineering | WEB 12.0

NOVEMBER 18 - 19, 2026

Short courses on November 16, 18-19, and 23-24



MORNING

8:30 - 9:00 a.m. OPENING

OPENING OF WEB 12.0

9:00 - 10:00 a.m. LECTURE I

Using climate scenarios to design urban futures

Prof. Dr. Luis Dias - University of Lisbon

10:00 - 11:00 a.m. LECTURE II

Agriculture in the Age of Artificial Intelligence

Prof. Dr. Gabriel Araújo e Silva Ferraz (UFLA)

11:00 a.m. - 12:00 p.m. LECTURE III

Food Insecurity and Novel Foods

Dr. Rafaella R. Alves Peixoto

12:00 - 1:30 p.m. BREAK

Lunch break

AFTERNOON

1:30 - 2:30 p.m. LECTURE IV

Use of Kappaphycus alvarezii in the Production of Inputs for Agriculture and Livestock

Dr. David Villas Boas de Campos (Embrapa Solos)

2:30 - 4:00 p.m. ROUNDTABLE I

External and Internal Challenges Related to Fertilizers in Brazilian Agriculture and Livestock

Moderator: Prof. Dr. Guilherme Kangussu Donagemma (Embrapa Solos)

Dr. José Carlos Polidoro (Embrapa Solos)

External and internal challenges related to fertilizers in Brazilian agriculture and livestock: Challenges and Opportunities

Dr. Marcos Antônio de Almeida Leal (Embrapa Agrobiologia)

Use of agricultural and livestock residues as substitutes or complements to mineral fertilizers? Challenges and opportunities.

Prof. Dr. Fabio Lopes Olivares (UENF)

Bioinputs in agriculture and livestock: as substitutes for mineral fertilizers or as a complement? Challenges and opportunities



MORNING

9:00 - 10:00 a.m. LECTURE V

Fertmovel - a success story and its importance as a Mobile Soil Fertility Laboratory.

Prof. Dr. Jose Ronaldo de Macedo

10:00 a.m. - 12:30 p.m. ROUNDTABLE II

Global Conflicts and Intolerance and Their Impacts on Climate

Moderator: Prof. Dr. Geraldo Ferreira (UFF)

Prof. Dr. Márcio Cataldi (UFF)

Balancing cleaner energy and geopolitical interests in Europe's complex power mix transition: from Fukushima to the war in Ukraine

"Impact of wars on the environment and global climate change"

Dr. Leonardo Ricciardi Pereira (UFF)

Does the Far Right "Right" the Climate?

Dr. Carlos Sampaio (CAPES)

Education for Good Living: anticipating adaptation and mitigation

12:00 - 1:30 p.m.

BREAK

Lunch break

AFTERNOON

1:30 - 2:30 p.m. LECTURE VI

From Research to Publication: How to Choose the Right Journal

2:45 - 3:45 p.m. LECTURE VII

Sustainable Uses of Extractive Resources in the Amazon

Josineide Malheiros (ATAIC)

3:45 - 4:15 p.m. SCIENTIFIC SESSION

Poster Presentations

4:30 - 6:00 p.m. CLOSING

Awards Ceremony and Event Closing



1

SHORT COURSE

Sustainable Entrepreneurship: Opportunities and Business Model Structuring

Prof. Elaine Sigette

November 16

6:00 p.m. - 9:00 p.m.

2

SHORT COURSE

From Chaos to Clarity: Intelligent Bibliometrics and Scientometrics with Bibliometrix

Prof. Renan Carriço Payer

November 16

2:00 p.m. - 5:00 p.m.

3

SHORT COURSE

From Zero to DOI: Ethical High-Performance Writing with AI

Dr. Leonardo Ricciardi

November 18 and 19

7:00 p.m. - 9:00 p.m.

4

SHORT COURSE

Climate Scenarios, Public Policies, and Urban Adaptation: A Comparative Brazil-Europe Analysis

Prof. Luis Dias

November 23 and 24

9:00 a.m. - 11:00 a.m.

