

# FisMatEcol Boletín

Agosto 2022

Dr. Oliver López Corona  
Dra. Elvia Ramírez Carrillo



# Eventos

WELCOME TO

**SysBio<sup>MX</sup>**  
**4<sup>th</sup> International**  
**Summer Symposium**  
**on Systems Biology**



**INMEGEN**



**RAI** Red de  
Apoyo a la  
Investigación

Participa en el curso:

# Biología del Envejecimiento

## ● Unidad 1: Introducción a la Biología del Envejecimiento

- 1.1 Introducción
- 1.2 Conceptos generales
- 1.3 Teorías y modelos biológicos
- 1.4 Bases epigenéticas
- 1.5 Bases genéticas
- 1.6 Biología de sistemas
- 1.7 Sistemas complejos y regulación fisiológica

## ● Unidad 2: Bases celulares y moleculares del envejecimiento

- 2.1 Comunicación sináptica
- 2.2 Estrés oxidante
- 2.3 Apoptosis
- 2.4 Degradoación de proteínas y autofagia
- 2.5 Senescencia celular
- 2.6 Neuroprotección y neuroplasticidad

## ● Unidad 3: Cambios sistémicos asociados con el envejecimiento

- 3.1 Sistema músculo esquelético
- 3.2 Sistema cardiovascular
- 3.3 Sistema inmune
- 3.4 Fragilidad
- 3.5 Osteoporosis y remodelación ósea
- 3.6 Sistema nervioso



Del  
8 de agosto al  
25 de noviembre  
de 2022

Lunes y  
miércoles  
10:00 a 12:00  
horas

Link de registro  
en la descripción

Curso virtual en plataforma  
Google Meet o Zoom.



más información al correo:  
[envejecimientounaminger@gmail.com](mailto:envejecimientounaminger@gmail.com)

Se otorgará constancia de asistencia solo  
a quienes cubran el 80% de asistencia.

Coordinado por:

Dra. Hilda Martínez Coria

Dr. Héctor E. López Caldez  
(Facultad de Medicina)

Dra. Isabel Arrieta Cruz  
(Instituto Nacional de Geriatría)



**SALUD**  
SECRETARÍA DE SALUD



INSTITUTO  
NACIONAL  
DE GERIATRÍA

# Oportunidades



**Colorado State University**

**Position Location**

Fort Collins, CO

**Posting Number:** 202200246F

**Proposed Annual Salary Range**

\$42,000 - 45,000 (prorated for part-time)

**Employee Benefits**

Colorado State University (CSU) is committed to providing employees with a strong and competitive benefits package that supports you, your health, and your family. Visit CSU's Human Resources website for detailed benefit plan information for permanent full-time and part-time faculty and administrative professional employees in the following University benefit areas: <https://hr.colostate.edu/hr-community-and-supervisors/benefits/benefits-eligibility/> and <https://hr.colostate.edu/prospective-employees/our-perks/>.

**Position Type:** Faculty

**Description of Work Unit**

The Department of Forest and Rangeland Stewardship at Colorado State University is interdisciplinary with programs of emphasis in forestry, fire science, fire management, natural resource policy/planning, rangeland ecology, and restoration ecology. The Department's faculty support the Warner College of Natural Resources and the University in fulfilling the Land Grant Mission in these programmatic areas. The Department offers undergraduate majors in Forestry, Rangeland Ecology, and Natural Resources Management in addition to master of science and doctor of philosophy degrees.

# Conceptos



# CURSOS



## Ordenamiento ecológico

+ Información

X

Autora: Mtra. María José Solares Millán

Instituto de Ecología

Descripción: Este curso tiene como objetivo ofrecer a los participantes las herramientas teóricas y prácticas que permitan ampliar su conocimiento sobre el tema de Ordenamiento ecológico (OE).

Tiempo estimado de estudio: 6 horas

No pudiste ir?  
Disponible en línea, grabado!!!

Curso-taller intensivo

# PSICOBIOTICOS Y ALIMENTOS PSICOLOGICOS

Alimentación para la salud mental

16 y 17 de Julio  
9 a 13 hrs

8 hrs valor curricular  
Constancia avalada

contacto@otrasenda.org  
5562433168

Disponible en línea, grabado!!!

Cultura



Artículo



Ricard Solé @ricard\_sole · 27 jun.

What are the challenges and intervention scenarios for biodiversity towards the 2050 horizon? "Ecological complexity and the biosphere: the next 30 years", our paper in @RSocPublishing Phil Trans B with @sfiscience Simon Levin is freely available at [royalsocietypublishing.org/doi/10.1098/rs...](https://royalsocietypublishing.org/doi/10.1098/rs...)

...

## PHILOSOPHICAL TRANSACTIONS B

[royalsocietypublishing.org/journal/rstb](https://royalsocietypublishing.org/journal/rstb)

### Introduction



Check for updates

Cite this article: Solé R, Levin S. 2022 Ecological complexity and the biosphere: the next 30 years. *Phil. Trans. R. Soc. B* **377**: 20210376. <https://doi.org/10.1098/rstb.2021.0376>

Received: 1 June 2022

Accepted: 1 June 2022

One contribution of 15 to a theme issue 'Ecological complexity and the biosphere: the next 30 years.'

#### Subject Areas:

bioengineering, ecology, environmental science, synthetic biology, systems biology, theoretical biology

## Ecological complexity and the biosphere: the next 30 years

Ricard Solé<sup>1,2,3</sup> and Simon Levin<sup>3,4</sup>

<sup>1</sup>ICREA-Complex Systems Lab, Universitat Pompeu Fabra, Dr Aiguader 80, Barcelona 08003, Spain

<sup>2</sup>Institut de Biología Evolutiva, CSIC-UPF, Pg Martínez de la Barceloneta 37, Barcelona 08003, Spain

<sup>3</sup>Santa Fe Institute, 1399 Hyde Park Road, Santa Fe, NM 87501, USA

<sup>4</sup>Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544, USA

RS, 0000-0001-6974-1008

Global warming, habitat loss and overexploitation of limited resources are leading to alarming biodiversity declines. Ecosystems are complex adaptive systems that display multiple alternative states and can shift from one to another in abrupt ways. Some of these tipping points have been identified and predicted by mathematical and computational models. Moreover, multiple scales are involved and potential mitigation or intervention scenarios are tied to particular levels of complexity, from cells to human-environment coupled systems. In dealing with a biosphere where humans are part of a complex, endangered ecological network, novel theoretical and engineering approaches need to be considered. At the centre of most research efforts is biodiversity, which is essential to maintain community resilience and ecosystem services. What can be done to mitigate, counterbalance or prevent tipping points? Using a 30-year window, we explore recent approaches to sense, preserve and restore ecosystem resilience as well as a number of proposed interventions (from afforestation to bioengineering) directed to mitigate or reverse ecosystem collapse. The year 2050 is taken as a representative future horizon that combines a time scale where deep ecological changes will occur and proposed solutions might be effective.

This article is part of the theme issue 'Ecological complexity and the biosphere: the next 30 years'.

# Videos

DIPLOMADO  
**EN NEUROSCIENCIAS, ARTE Y CULTURA**  
Hacia la experiencia transdisciplinar  
**EDICIÓN 2021-2022**

COORDINADORES:  
Dra. Ximena González Brandon  
Dr. Jesús Ramírez-Bermúdez



Transmisión por YouTube  
Canal Programa ACT

ACT\_MX  
artescienciasytecnologias

**Neurotalk  
Matemáticas, biología y complejidad:  
no somos un árbol, somos un bosque**  
con Alejandro Frank

**2 de febrero de 2022**  
**17:30 h (CDMX)**

TOI,  
Tecnología  
y  
Cultura





Libros

A SCIENTIST'S GUIDE TO  
LIFE'S BIGGEST QUESTIONS

# EXISTENTIAL PHYSICS



SABINE  
HOSSENFELDER