

PUBLICATIONS

Collapse transition in epidemic spreading subject to detection with limited resources, Santiago Lamata Otín, **Adriana Reyna-Lara**, David Soriano-Paños, Vito Latora, Jesús Gómez-Gardeñes, *Physical Review E*, 2023.

A metapopulation approach to identify targets for Wolbachia-based Dengue control, **Adriana Reyna-Lara**, David Soriano-Paños, Juddy Heliana Arias-Castro, Hector J Martínez, Jesús Gómez-Gardeñes, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 2022.

The interconnection between independent reactive control policies drives the stringency of local containment, **Adriana Reyna-Lara**, David Soriano-Paños, Alex Arenas, Jesús Gómez-Gardeñes, *Chaos, Solitons & Fractals*, 2022.

Virus spread versus contact tracing: two competing contagion processes, **Adriana Reyna-Lara**, David Soriano-Paños, Sergio Gómez, Clara Granell, Joan T. Matamalas, Benjamin Steinegger, Alex Arenas, Jesús Gómez-Gardeñes, *Physical Review Research*, 2021.

Vector-borne epidemics driven by human mobility, David Soriano-Paños, Juddy Heliana Arias-Castro, **Adriana Reyna-Lara**, Hector J Martínez, Sandro Meloni, Jesús Gómez-Gardeñes, *Physical Review Research*, 2020.

EDUCATION

Nov. 11th, 2022 University of Zaragoza, Spain

PhD in Physics · *cum laude*

Thesis: *Control of the diffusion of infectious diseases in complex networks*

Supervisor: Prof. Dr. Jesús Gómez Gardeñes

PhD scholarship from CONACYT

2018 National Autonomous University of Mexico, Mexico

MSc in Physics

Thesis: *DNA photo-denaturation by dissipation of UV-C light excitation*

Supervisor: Prof. Dr. Karo Michaelian

MSc scholarship from CONACYT

2012 Autonomous University of Zacatecas, Mexico

BSc in Physics

Thesis: *Decision Making In Cortical Circuits*

Supervisors: Prof. Dr. Agustin Enciso Muñoz, Prof. Dr. Nestor Parga*

***Autonomous University of Madrid**, Spain

Partially financed by COZCYT

TEACHING & ACADEMIC EXPERIENCE

Lecturer

Tecnológico de Monterrey, Mexico

February 2023- Present

Supervision of MSc in Physics thesis

University of Zaragoza

2021-2022

Supervision of BSc in Physics thesis

University of Zaragoza

2021-2022

Supervision of BSc in Physics thesis

University of Zaragoza

2020-2021

Introduction to complex networks

Consejo Zacatecano de Ciencia y Tecnología

Summer course, 2019

Thermodynamics

Teaching assistant in the MSc in Physics

Institute of Physics

National Autonomous University of Mexico

August, 2016 – January, 2017

COMMUNICATION IN SCIENCE

European Researchers' Night

Complex networks and its models

University of Zaragoza

Spain, November, 2020

International Day of Women and Girls in Science

Doing Research to Improve the World: Nanoscience and Complex Networks

IES ÉLAIOS, Zaragoza

Spain, February, 2020

Open day (Jornadas de puertas abiertas)

University of Zaragoza

Spain, 2019-2020

Stars' night (Noche de las Estrellas)

Astronomical Society of Zacatecas

Mexico, 2011

Annual Program of Science Communication

Science Museum

Autonomous University of Zacatecas

Mexico, 2011

ORAL PRESENTATIONS

NetSciX

Porto, Portugal, 2022

Multiscale reactive control policies to manage epidemic outbreaks in complex metapopulations

The 10th International Conference on Complex Networks and Their Applications

Madrid, Spain, 2021

Reactive control policies to epidemic outbreaks in complex metapopulations

Networks 2021: A Joint Sunbelt and NetSci

ONLINE, 2021

Virus spread versus contact tracing: two competing contagion processes

X National Conference BIFI

Zaragoza, Spain, 2021

Virus spread versus contact tracing: two competing contagion processes

POSTERS

COMPLENET 2021 (ONLINE)

Adaptive mobility restrictions on metapopulations strengthen by daily confirmed cases

Awarded a mention of the panel

May, University of Exeter, England.

Latin American Conference on Complex Networks 2019

*Non-linear effects in random walks**

Awarded as the best poster

August, Cartagena, Colombia.

COMPLENET 2019

Explosive behavior in nonlinear random walks on complex networks

March, Tarragona, Spain.

Conference on Complex Systems 2017

Emergency of DNA reproduction by dissipation of UV-C light

September, Cancun, Mexico.

Light in Science, Light in Life - LiSci 2015

Molecular dynamics study of UV-C induced DNA denaturing at the origin of life.

August, Tequisquiapan, Queretaro, Mexico.

RESEARCH STAYS

Summer *Summer Stay* · Telecommunications Institute

2016 **University of Lisbon, Portugal**

Supervisor: Prof. Dr. Yasser Omar

2012–2013 *Research technician* · Donnelly Centre for Cellular and Molecular Research

University of Toronto, Canada

Supervisor: Prof. Dr. William Ryu

February– *BSc in Physics thesis* · Theoretical Physics Department

July 2011 **Autonomous University of Madrid, Spain**

Supervisor: Prof. Dr. Nestor Parga

Summer *Advanced Summer School in Physics* · Physics Department

2010 **CINVESTAV, Mexico**

Summer *Summer stay*

2009 **Center for Research in Optics A.C., Mexico**

Supervisor: Prof. Dr. J. Apolinar Muñoz Rodríguez

EDITORIAL ACTIVITY (PEER-REVIEWER PROFILE)

Physical Review Letters

Physical Review Research

Physical Review E

Chaos, Solitons & Fractals

Physica A

Nature Communications

Scientific Reports

Physical Biology

PLOS Computational Biology

LANGUAGES

Spanish Native

English Fluent

French Basic

Italian Basic

PROGRAMMING & COMPUTATIONAL TOOLS

C

Phyton

MATLAB

Gephi