CURRÍCULUM VÍTAE NORMALIZADO

Mattia Tommaso Coccolo Bosio

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GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

FECYT INNOVACIÓN

Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

IN MY JUDGMENT, THE MOST RELEVANT MERITS OF MY CURRICULUM ARE:
WORK EXPERIENCE IN ITALY, AS A TEACHER IN PRIVATE INSTITUTIONS,
AS WELL AS AT THE POLYTECNICO DI TORINO WITH PROF. DARIO DAGHERO HTTPS://WWW.RESEARCHGATE.NET/PROFILE/DARIO_DAGHERO
I HAVE COLLABORATED DURING THE COMPLETION OF MY UNIVERSITY FINAL THESIS WITH THE PROFESSOR OF THE POLITECNICO DI TORINO FRANCO PORCELLI, HTTPS://WWW.RESEARCHGATE.NET/PROFILE/F_PORCELLI, DIRECTOR OF THE BURNING PLASMA GROUP, AN INTERNATIONALLY RECOGNIZED SCIENTIST
I HAVE OBTAINED MY BACHELOR'S DEGREE IN PHYSICS AT THE UNIVERSITA DEGLI STUDI DI TORINO ONE OF THE MOST IMPORTANT IN ITALY
1 SCHOLARSHIP FOR MOBILITY FOR A STAY OF RESEARCH, WITHIN THE OWN PLAN OF THE REY JUAN CARLOS UNIVERSITY, FOR COLLABORATING WITH THE LUBLIN UNIVERSITY PROFESSOR OF TECHNOLOGY, GRZEGORZ LITAK, HTTPS://WWW.RESEARCHGATE.NET/PROFILE/GRZEGORZ_LITAK, INTERNATIONALLY RECOGNIZED SCIENTIST
POSTDOCTORAL EXPERIENCE:
IN ADDITION TO PUBLISHING MY RESULTS IN HIGH IMPACT JCR MAGAZINES DURING MY PHD, THEN I HAVE PUBLISHED SEVERAL ARTICLES IN COLLABORATION WITH RECOGGNIZED PROFESSOR OF OTHER UNIVESRSITY SUCH AS PROF. G. LITAK, PROF. SANZ-SERNA, PROF. S. RAJASEKAR, PROF. J YANG AND PROF. S. LENCI.
I HAVE PRESENTED PAPERS, BEFORE AND AFTER THE DOCTORATE, IN MANY NATIONAL AND INTERNATIONAL CONFERENCES OF RELEVANCE WITHIN MY FIELD OF RESEARCH AND I HAVE GOT A PRIZE IN PHYSCON 2011 FOR MY RESEARCH WORK.
I HAVE BEEN INVITED AT UNIVERSITÁ POLITECINCA DELLE MARCHE AS VISITANT PROFESSOR FOR 6 MONTH AND COLLABORATED WITH PROF. SETFANO LENCI, A RECOGNISED RESEARCHER. (https://scholar.google.com/citations?user=B1And7AAAAAJ&hl=en&oi=ao)
I HAVE TAUGHT SEMINARS DURING AND AFTER THE MASTER'S DOCTORAL DEGREE AND VARIOUS OTHER EVENTS. I HAVE BEEN INVITED AS A SPEAKER AT A SEMINAR BY NEWMAN COLLEGE IN KERALA, INDIA
I HAVE PARTICIPATED IN 5 NATIONAL RESEARCH PROJECTS
I AM A RESPONSIBLE TEACHER OF VARIOUS SUBJECTS OF VARIOUS GRADES AND MASTER, WITHIN THE AREA OF APPLIED PHYSICS OF THE REY JUAN CARLOS UNIVERSITY AND I HAVE OBTAINED IN THE SURVEYS CONDUCTED BY THE UNIVERSITY ON TEACHING QUALITY A HIGH SCORE IN EACH ONE OF THEM.
I HAVE TAUGHT 2 UNITS OF THE URJC ONLINE ZERO COURSE
FAVORABLE EVALUATION IN THE DOCENTIA PROGRAM

I ACTIVELY COLLABORATE WITHIN MY DEPARTMENT AT REY UNIVERSITY JUAN CARLOS: PAU, TFG AND TFM DEFENSE COURTS, ELECTORAL BOARD
FROM THE ESCET (URJC), SUBSTITUTE ON THE SCHOOL BOARD, I HAVE DIRECTED SEVERAL TFG AND TFM, EXPERT FOR CONVALIDATION APPLICATIONS.
I HAVE TAKEN SEVERAL COURSES IN DIDACTIC INNOVATION ITINERARIES
THE RECOGNITION OF A SEXENIUM OF RESEARCH BY THE SPANISH STATE AND TWO OF SENIORITY BY THE URJC
REFEREE IN SEVERAL JOURNALS AMONG WHICH THERE ARE CNSNS, NONLINEAR DYNAMICS AND CHAOS, WHICH THEY FOUND IN THE 1ST DECIL IN THEIR FIELDS ACCORDING TO THE JCR.

General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

IN MY JUDGMENT, THE MOST RELEVANT MERITS OF RESEARCH IN MY CURRICULUM ARE:

I HAVE COLLABORATED DURING THE COMPLETION OF MY UNIVERSITY FINAL THESIS WITH THE PROFESSOR OF THE POLITECNICO DI TORINO FRANCO PORCELLI, HTTPS://WWW.RESEARCHGATE.NET/PROFILE/F_PORCELLI, DIRECTOR OF THE BURNING PLASMA GROUP, AN INTERNATIONALLY RECOGNIZED SCIENTIST.

1 SCHOLARSHIP FOR MOBILITY FOR A STAY OF RESEARCH, WITHIN THE OWN PLAN OF THE REY JUAN CARLOS UNIVERSITY, FOR COLLABORATING WITH THE LUBLIN UNIVERSITY PROFESSOR OF TECHNOLOGY, GRZEGORZ LITAK, HTTPS://WWW.RESEARCHGATE.NET/PROFILE/GRZEGORZ_LITAK, INTERNATIONALLY RECOGNIZED SCIENTIST

POSTDOCTORAL EXPERIENCE:

IN ADDITION TO PUBLISHING MY RESULTS IN HIGH IMPACT JCR MAGAZINES DURING MY PHD, THEN I HAVE PUBLISHED SEVERAL ARTICLES IN COLLABORATION WITH RECOGGNIZED PROFESSOR OF OTHER UNIVESRSITY SUCH AS PROF. G. LITAK, PROF. SANZ-SERNA, PROF. S. RAJASEKAR, PROF. J YANG AND PROF. S. LENCI.

I HAVE PRESENTED PAPERS, BEFORE AND AFTER THE DOCTORATE, IN MANY NATIONAL AND INTERNATIONAL CONFERENCES OF RELEVANCE WITHIN MY FIELD OF RESEARCH AND I HAVE GOT A PRIZE IN PHYSCON 2011 FOR MY RESEARCH WORK.

I HAVE BEEN INVITED AT UNIVERSITÁ POLITECINCA DELLE MARCHE AS VISITANT PROFESSOR FOR 6 MONTH AND COLLABORATED WITH PROF. SETFANO LENCI, A RECOGNISED RESEARCHER. (https://scholar.google.com/citations?user=B1And7AAAAAJ&hl=en&oi=ao).

I HAVE PARTICIPATED IN 5 NATIONAL RESEARCH PROJECTS.

THE RECOGNITION OF A SEXENIUM OF RESEARCH BY THE SPANISH STATE AND TWO OF SENIORITY BY THE URJC

I AM REFEREE IN SEVERAL JOURNALS AMONG WHICH THERE ARE CNSNS, NONLINEAR DYNAMICS AND CHAOS, WHICH THEY FOUND IN THE 1ST DECIL IN THEIR FIELDS ACCORDING TO THE JCR.

Mattia Tommaso Coccolo Bosio

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ResearcherID:	**F-4086-2016**
Date of birth:	**21/01/1978**
Gender:	**Male**
Nationality:	**Italy**
Country of birth:	**Italy**
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City of birth:	**turin**
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Current professional situation

Employing entity: Universidad Rey Juan Carlos **Type of entity:** University
Department: Biología e geología, física y química inorgánica, Escuela Superior de Ciencias Experimentales y Tecnología
Professional category: Contratado doctor
Start date: 27/03/2023
Type of contract: Permanent employment contract **Dedication regime:** Full time
Primary (UNESCO code): 220000 - Physics
Secondary (UNESCO code): 220000 - Physics
Tertiary (UNESCO code): 220000 - Physics
Performed tasks: Docencia e investigación
Identify key words: Physics chemical and mathematical

Employing entity: Universidad Rey Juan Carlos
Department: de biología y geología, física y química inórganica, Escuela Superior de Ciencias Experimentales y Tecnología
Professional category: contratado doctor interino
Start date: 18/12/2020
Type of contract: Permanent employment contract **Dedication regime:** Full time
Tertiary (UNESCO code): 220000 - Physics

Performed tasks: En la universidad desempeño trrabajo academico dando clases de Física de primero en cursos de ciencias e ingenieria, además doy cursos en el máster universitario oficial en Dinámica No Lineal y Sistemas Complejos. Junto con mi trabajo docente desempeño mi trabajo de investigador en el Grupo de dinámica no lineal, teoría del caos y sistemas complejos del área de física aplicada de la escuela ESCET de la Universidad Rey Juan Carlos. La particiàción a dicho grupo de investigación me ha permitido publicar muchos articulos en revistas de alto impacto en el campo de la dinamica no lineal, además de participar a numerosos congresos internacionale y de colaborar en varios proyectos competitivos.
Identify key words: Physics chemical and mathematical; Natural sciences and health sciences

Previous positions and activities

	Employing entity	Professional category	Start date
	politecnico di torino	becario	14/04/2008

Employing entity: politecnico di torino
Type of entity: University
Professional category: becario
Start-End date: 14/04/2008 - 20/06/2008
Duration: 2 months - 6 days

Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Higher degree
Name of qualification: LICENCIADO EN FISICA
Degree awarding entity: UNIVERSITÁ DEGLI STUDI DI TORINO **Type of entity:** University
Date of qualification: 24/07/2007

Doctorates

Doctorate programme: Doctor en Programa Oficial de Posgrado en Física y Matemáticas
Degree awarding entity: Universidad Rey Juan Carlos **Type of entity:** University
Date of degree: 05/11/2015

Other postgraduate university studies

Postgraduate qualification: Máster Universitario en Modelización y Física de Sistemas Complejos
Degree awarding entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología
Date of qualification: 02/2011

Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

1 **Title of course/seminar:** Iniciación al método ABN en Primaria
Goals of the course/seminar: aprender el metodo de enseñanza de la matematicas ABN
Organising entity: Cálculo ABN **Type of entity:** Associations and Groups
Duration in hours: 80 hours
Start-End date: 06/10/2020 - 30/11/2020

2 **Title of course/seminar:** evaluacion por competencias
Goals of the course/seminar: evaluar competencias
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Duration in hours: 5 hours
Start-End date: 05/06/2017 - 12/06/2017

3 **Title of course/seminar:** metodologias de trabajo en equipo, en online o semipresenciales
Goals of the course/seminar: coordinar el trabajo en equipo
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Duration in hours: 5 hours
Start-End date: 15/05/2017 - 22/05/2017

4 **Title of course/seminar:** Técnicas de imagen y sonido para la grabación de vídeos educativos con el sistema Blackboard Collaborate Ultra
Goals of the course/seminar: usar la herramienta blackbord collaborate
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Duration in hours: 5 hours
Start-End date: 08/05/2017 - 15/05/2017

5 **Title of course/seminar:** como realizar una programacion eficaz
Goals of the course/seminar: programar un curso
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Duration in hours: 5 hours
Start-End date: 24/04/2017 - 03/05/2017

6 **Title of course/seminar:** tecnicas para la elaboracion de documentos educativos con word
Goals of the course/seminar: usar word con finalidad didactica
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Duration in hours: 5 hours
Start-End date: 27/03/2017 - 03/04/2017

7 **Title of course/seminar:** metodos de enseñanza activos
Goals of the course/seminar: comprender los diferentes metodos de enseñanza
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Start-End date: 20/03/2017 - 27/03/2017

8 **Title of course/seminar:** buenas practicas en el uso de materiales
Goals of the course/seminar: usar bien los materiales de aula
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Centro de Innovación en Educación Digital
Duration in hours: 5 hours
Start-End date: 13/03/2017 - 21/03/2017

9 **Title of course/seminar:** Foundations of Teaching for Learning 1: Introduction
Goals of the course/seminar: entender el aprendizaje
Organising entity: Commonwealth Education Trust
Duration in hours: 16 hours
Start-End date: 25/02/2017 - 17/03/2017

10 **Title of course/seminar:** proceso, estilos y estrategia de aprendizaje
Goals of the course/seminar: comprender mejor el aprendizajede los alumnos
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: centro de inovacion en educacion digital

Duration in hours: 5 hours
Start-End date: 06/03/2017 - 13/03/2017

11 **Title of course/seminar:** curso basico en el uso didactico de Moodle
Goals of the course/seminar: aprender a usar moodle
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: centro de inovacion en educacion digital
Duration in hours: 5 hours
Start-End date: 07/11/2016 - 14/11/2016

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Spanish	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2
Italian	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

1 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 02/2021 **End date:** 06/2021
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

2 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 10/2020 **End date:** 01/2021
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

3 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 10/2020 **End date:** 01/2021
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

4 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2020 **End date:** 06/2020
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

5 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 09/2019 **End date:** 12/2019
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

6 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2019 **End date:** 12/2019
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

7 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2019 **End date:** 06/2019
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

8 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 01/2019 **End date:** 06/2019
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

9 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2018 **End date:** 12/2018
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

10 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2018 **End date:** 06/2018
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

11 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2017 **End date:** 12/2017
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

12 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2017 **End date:** 06/2017
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

13 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 01/2017 **End date:** 06/2017

Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

14 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2016 **End date:** 12/2016
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

15 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2016 **End date:** 06/2016
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

16 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 01/2016 **End date:** 06/2016
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

17 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 09/2015 **End date:** 12/2015
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

18 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2015 **End date:** 12/2015
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

19 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería de Materiales
Start date: 01/2015 **End date:** 06/2015
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

20 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 09/2014 **End date:** 12/2014
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

21 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 09/2014 **End date:** 12/2014
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

22 **Name of the course:** fisica
University degree: Graduado o Graduada en Ingeniería en Organización Industrial
Start date: 01/2014 **End date:** 06/2014
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

23 **Name of the course:** física
University degree: ciencias y tecnologia de los alimentos
Start date: 01/2014 **End date:** 06/2014
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Faculty, institute or centre: Escuela Superior de Ciencias Experimentales y Tecnología

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Dinámica del sistema de Hénon-Heiles perturbado
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Student: Irene gonzalez peralta
Date of reading: 22/10/2020

2 **Project title:** resonance in a nonlinear system with delay
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Student: julia cantisan
Date of reading: 25/02/2019

3 **Project title:** Resonancia vibracional y optimización de energía en sistemas no lineales
Entity: Universidad Rey Juan Carlos **Type of entity:** University
Student: FELIX ANTONIO DIAZ GARCIA
Date of reading: 16/07/2018

Teaching experience in courses and seminars for university teacher training

1 **Type of event:** Seminar
Name of the event: seminar on classical and quantum modeling
Organising entity: newman college **Type of entity:** University
Hours of teaching: 0,5
Teaching date: 04/07/2017

2 **Type of event:** Seminar
Name of the event: jornada de presentación de resultados de tesis del programa de doctorado en ciencias URJC
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 0,25
Teaching date: 02/06/2015

3 **Type of event:** Seminar
Name of the event: kinetic energy harvesting systems
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 0,5
Teaching date: 05/2015

4 **Type of event:** Seminar
Name of the event: kinetic energy harvesting systems
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 05/2015

5 **Type of event:** Seminar
Name of the event: partial control of escape in chaotic scattering
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 05/2015

6 **Type of event:** Seminar
Name of the event: Kinetic energy harvesting systems
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 0,5
Teaching date: 04/2015

7 **Type of event:** Seminar
Name of the event: Controlling complex dynamics in chaotic scattering
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 0,5
Teaching date: 05/2014

8 **Type of event:** Seminar
Name of the event: controlling chaotic dynamics in chaotic scattering
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 04/2014

9 **Type of event:** Seminar
Name of the event: partial control of escape in chaotic scattering
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 04/2014

10 **Type of event:** Seminar
Name of the event: vibrational resonance response of an energy harvester
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 04/2013

11 **Type of event:** Seminar
Name of the event: Control of non lineal dynamics
Organising entity: Marie Curie University **Type of entity:** University
Hours of teaching: 1
Teaching date: 05/2012

12 **Type of event:** Seminar
Name of the event: Dynamics through the basins
Organising entity: university of Rzeszów **Type of entity:** University

Hours of teaching: 1
Teaching date: 05/2012

13 **Type of event:** Seminar
Name of the event: controlling chaotic dynamics in chaotic scattering
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
Hours of teaching: 1
Teaching date: 03/2012

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 **Name of the project:** New challenges in nonlinear dynamics of complex systems
Entity where project took place: Universidad Rey Juan Carlos **Type of entity:** University
City of entity: MOSTOLES, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): MIGUEL ANGEL FERNANDEZ SANJUAN
Nº of researchers: 11
Start-End date: 01/06/2020 - 31/05/2023
Total amount: 84.700 €

2 **Name of the project:** Dinámica, Control e Impredecibilidad: Nuevas Perspectivas en Sistemas Físicos y Biofísicos
Entity where project took place: Universidad Rey Juan Carlos **Type of entity:** University
City of entity: MOSTOLES, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): MIGUEL ANGEL FERNANDEZ SANJUAN
Start-End date: 01/01/2017 - 31/12/2018
Total amount: 80.000 €

3 **Name of the project:** Dinámica No Lineal de Sistemas Complejos
Entity where project took place: Universidad Rey Juan Carlos **Type of entity:** University
City of entity: MÓSTOLES, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): MIGUEL ANGEL FERNANDEZ SANJUAN
Start-End date: 01/01/2014 - 31/12/2016
Total amount: 54.000 €

4 **Name of the project:** Dinámica No Lineal de Sistemas Complejos y Aplicaciones Interdisciplinares
Entity where project took place: Universidad Rey Juan Carlos **Type of entity:** University
City of entity: MÓSTOLES, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): MIGUEL ANGEL FERNANDEZ SANJUAN
Start-End date: 01/01/2010 - 31/03/2013
Total amount: 194.000 €

5 **Name of the project:** Dinámica No Lineal de Sistemas Complejos y Aplicaciones
Entity where project took place: Universidad Rey Juan Carlos **Type of entity:** University
City of entity: Móstoles, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): MIGUEL ANGEL FERNANDEZ SANJUAN
Start-End date: 01/10/2006 - 31/03/2010
Total amount: 135.520 €

Scientific and technological activities

Scientific production

H index: 7
Fuente de Indice H: GOOGLE SCHOLAR

Publications, scientific and technical documents

1 Coccolo; Sanjuán. Nonlinear delayed forcing drives a non-delayed Duffing oscillator. Communications in Nonlinear Science and Numerical Simulation. 128, pp. 107635. ScienceDirect, 01/01/2024.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

2 MIGUEL ANGEL SANJUAN; MATTIA COCCOLO; ANTONIO VALIDO. Time-delayed Duffing oscillator in an active bath. Physical Review E. 108 - 6, pp. 064205. American Physical Society, 14/12/2023.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No

3 Miguel Ángel Sanjuán; Ruben Capeans; Mattia Coccolo; Jennifer López. Controlling the bursting size in the two-dimensional Rulkov model. Communications in Nonlinear Science and Numerical Simulation. 120, pp. 107184. ScienceDirect, 01/06/2023.
Type of production: Scientific paper **Format:** Journal

4 Miguel Ángel Sanjuán; Stefanl Lenci; Seoane; Mattia Coccolo. Fractional damping effects on the transient dynamics of the Duffing oscillator. Communications in Nonlinear Science and Numerical Simulation. 117, pp. 106959. ScienceDirect, 01/02/2023.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

5 JESUS SEOANE; MATTIA COCCOLO; JIANHUA YANG; ADOLFO ORTIZ; MIGUEL ANGEL SANJUAN. Fractional damping enhances chaos in the nonlinear Helmholtz oscillator. Nonlinear Dynamics. 102, pp. 2323 - 2337. springer, 23/11/2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

6 JULIA CANTISAN; MATTIA COCCOLO; JESUS SEOANE; MIGUEL ANGEL SANJUAN. Delay-Induced Resonance in the Time-Delayed Duffing Oscillator. International Journal of Bifurcation and Chaos. world scientific, 2019.
Type of production: Scientific paper **Format:** Journal

Corresponding author: No

7 MATTIA COCCOLO; BEIBEI ZHU; MIGUEL ANGEL SANJUAN; JESUS SANZ-SERNA. Bogdanov-Takens resonance in time-delayed systems. Nonlinear Dynamics. 91 - 3, pp. 1939 - 1947. Springer, 2018.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

8 MATTIA COCCOLO; GRZEGORZ LITAK; JESUS SEOANE; MIGUEL ANGEL SANJUAN. Optimizing the Electrical Power in an Energy Harvesting System. International Journal of Bifurcation and Chaos. 25 - 12, pp. 1550171. World Sscientific, 2015.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

9 MATTIA COCCOLO; GRZEGORZ LITAK; JESUS SEOANE; MIGUEL ANGEL SANJUAN. Energy harvesting enhancement by vibrational resonance. Internationa Journal of Bifurcation and Chaos. 24 - 6, pp. 1430019. world scientific, 2014.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

10 MATTIA COCCOLO; JESUS SEOANE; MIGUEL ANGEL SANJUAN. Controlling unpredictability in the randomly driven Hénon-Heiles system. Communication in Nonlinear Science Numerical Simulation. 18 - 12, pp. 3449 - 3457. elsevier, 2013.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

11 MATTIA COCCOLO; JESUS SEOANE; GRZEGORZ LITAK; MIGUEL ANGEL SANJUAN. PHASE CONTROL IN THE MASS-SPRING MODEL WITH NONSMOOTH STIFFNESS AND EXTERNAL EXCITATION. International Journal of Bifurcation and Chaos. 23 - 12, pp. 1330042. world scientific, 2013.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

12 MATTIA COCCOLO; JESUS SEOANE; SAMUEL ZAMBRANO; MIGUEL ANGEL SANJUAN. Partial Control of Escapes in Chaotic Scatering. International Journal of Bifurcation and Chaos. 23 - 1, pp. 135008. world scientific, 2013.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

13 GRZEGORZ LITAK; MATTIA COCCOLO; MICHAEL FRISWELL; SHAIK ALI; SONDIPON ADHIKARI; ARTHUR LEES; ONUR BILGE. nonlinear oscillations of an elastic inverted pendulum. 4th IEEE International Conference on nonlinear science and complexity. NSC2012, 08/2012.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No

14 Delay-induced resonance suppresses damping-induced unpredictability. Philosophical transaction of the royal society a. Royal society publishing,
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

Works submitted to national or international conferences

1 **Title of the work:** Fractional damping term in the Helmholtz and Duffing nonlinear oscillators.
Name of the conference: Nodycon 2023
Corresponding author: Yes
City of event: Roma, Italy
Date of event: 18/06/2023
Organising entity: Nonlinear dynamics
City organizing entity: Roma, Italy
Mattia Coccolo. "Nodycon book of abstract".

2 **Title of the work:** Bogdanov-Takens Resonance in Time-Delayed Systems
Name of the conference: siam conference on applications of dynamical systems
Corresponding author: Yes
City of event: snowbird, United States of America
Date of event: 19/05/2019
End date: 23/05/2019
Organising entity: society for industrial and applied mathematics
City organizing entity: philadelphia, United States of America
mattia coccolo. "siam 2019 book of abstracts".

3 **Title of the work:** a new type of resonance: the bogdanov-takens resonance in time-delayed systems
Name of the conference: AIMS 2018
Corresponding author: Yes
City of event: taipei, Taiwan
Date of event: 05/07/2018
End date: 09/07/2018
Organising entity: american institute of mathematical sciences
City organizing entity: United States of America
mattia coccolo. "aims 2018 book of abstracts".

4 **Title of the work:** vibrational resonance in energy harvesting systems
Name of the conference: chaos 2017
Corresponding author: Yes
City of event: barcelona, Catalonia, Spain
Date of event: 30/05/2017
End date: 02/06/2017
Organising entity: Universitat de Barcelona **Type of entity:** University
City organizing entity: barcelona, Catalonia, Spain
mattia coccolo; jesus seoane; miguel angel sanjuan. "chaos book of abstract".

5 **Title of the work:** multiple solutions and their basins of attraction for energy harvesting systems
Name of the conference: Effects of nonlinearities in energy harvesting
Corresponding author: Yes
City of event: lublin, Poland
Date of event: 06/06/2012
End date: 06/06/2012
Organising entity: lublin university of technology
City organizing entity: lublin, Poland

mattia coccolo.

6 **Title of the work:** controlling escape in the henon heiles system
Name of the conference: Physcon 2011: International physics and control society conference
Corresponding author: Yes
City of event: leon, Castile and León, Spain
Date of event: 05/09/2011
End date: 08/09/2011
Organising entity: Universidad de León **Type of entity:** University
City organizing entity: leon, Castile and León, Spain
mattia coccolo. "physcon book of abstracts".

7 **Title of the work:** controlling escape in the henon heiles system
Name of the conference: nonlinear dynamics and complexity: theory, methods and applications
Corresponding author: Yes
City of event: thessaloniki, Greece
Date of event: 12/07/2010
End date: 16/07/2010
Organising entity: aristotele university of thessaloniki
City organizing entity: thessaloniki, Greece
mattia coccolo.

8 **Title of the work:** controlling escape in the henon heiles system
Name of the conference: Astromath
Corresponding author: Yes
City of event: madrid, Community of Madrid, Spain
Date of event: 23/11/2009
End date: 27/11/2009
Organising entity: CSIC **Type of entity:** State agency
City organizing entity: MADRID, Community of Madrid, Spain
mattia coccolo. "controlling escape in the henon heiles system".

9 **Title of the work:** Control del caos en el sistema de henon heiles en presencia de ruido
Name of the conference: Complejidad 2009
Corresponding author: Yes
City of event: Móstoles, Community of Madrid, Spain
Date of event: 12/11/2009
End date: 12/11/2009
Organising entity: Universidad Rey Juan Carlos **Type of entity:** University
City organizing entity: Alcorcon, Spain
Mattia Coccolo. "Control del caos en el sistema de henon heiles en presencia de ruido".

10 **Title of the work:** partial control of the Duffing oscillator with fractal basins
Name of the conference: 3re international conference on complex systems and applications
Corresponding author: No
City of event: Le Havre, France
Date of event: 29/06/2009
End date: 02/07/2009
Organising entity: université du havre
City organizing entity: Le Havre, France

mattia coccolo; samuel zambrano; miguel angel sanjuan. "3re international conference on complex systems and applications".

Other dissemination activities

Title of the work: storia di una piccolo farfalla ovvero sulla teoria del caos
Type of event: actividad cultural
Corresponding author: Yes
City of event: turin, Italy
Date of event: 15/11/2016
Organising entity: Logos
Type of entity: Foundation
City organizing entity: turin, Italy
mattia tommaso coccolo bosio.

Other achievements

Stays in public or private R&D centres

Entity: lublin university of technology
Type of entity: University
City of entity: lublin, Poland
Start-End date: 21/04/2012 - 21/07/2012
Duration: 3 months
Goals of the stay: Doctorate
Provable tasks: investigación

Obtained grants and scholarships

1 **Name of the grant:** programa propio de estancias de movilidad
Aims: Pre-doctoral
Awarding entity: Universidad Rey Juan Carlos
Type of entity: University
Conferral date: 08/05/2012
Duration: 3 months
End date: 21/07/2012
Entity where activity was carried out: lublin university of technology

2 **Name of the grant:** grant for tutor in laboratory
Aims: Pre-doctoral
Awarding entity: politecnico di torino
Type of entity: University
Conferral date: 2007
Duration: 6 months
End date: 2007
Entity where activity was carried out: politecnico di torino

Prizes, mentions and distinctions

Description: fellowship of the Physcon 2011
Awarding entity: scientific commitee of the 5th international physics and control conference
City awarding entity: leon, Castile and León, Spain
Conferral date: 05/09/2011