



## **Mattia Tommaso Coccolo Bosio**

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## 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](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](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](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 RECOGNIZED 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 UNIVERSITÀ 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](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](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 RECOGNIZED 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

Surname(s): **Coccolo Bosio**  
 Name: **Mattia Tommaso**  
 NIE: **Y0628204L**  
 ORCID: **0000-0002-4600-8206**  
 ResearcherID: **F-4086-2016**  
 Date of birth: **21/01/1978**  
 Gender: **Male**  
 Nationality: **Italy**  
 Country of birth: **Italy**  
 Aut. region/reg. of birth: **Piemonte**  
 Contact province: **Madrid**  
 City of birth: **turin**  
 Contact address: **calle tulipan s/n, departamental 2**  
 Rest of contact address: **calle tulipan s/n, departamental 2**  
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 Contact aut. region/reg.: **Community of Madrid**  
 Contact city: **mostoles**  
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 Email: **mattiatommaso.coccolo@urjc.es**  
 Mobile phone: **(+34) 635245991**  
 Personal web page: **<https://mattispin.wixsite.com/mattia-coccolo>**

### 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 trabajo 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 participación 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 internacionales y de colaborar en varios proyectos competitivos.

**Identify key words:** Physics chemical and mathematical; Natural sciences and health sciences

**Previous positions and activities**

	<b>Employing entity</b>	<b>Professional category</b>	<b>Start date</b>
	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:** UNIVERSITÀ 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

- 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
- 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:** metodologías 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 programación 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:** técnicas para la elaboración de documentos educativos con word  
**Goals of the course/seminar:** usar word con finalidad didáctica  
**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:** métodos de enseñanza activos  
**Goals of the course/seminar:** comprender los diferentes métodos 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 prácticas 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 aprendizaje de los alumnos  
**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:** 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:** física  
**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 tecnología 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:** física  
**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:** física  
**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 tecnología 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:** física  
**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 tecnología 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:** física  
**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:** física  
**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 tecnología 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:** física  
**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:** física  
**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:** física  
**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 tecnología 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:** física  
**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:** física  
**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 tecnología 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:** física  
**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 tecnología 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 Índice 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 committee of the 5th international physics and control conference

**City awarding entity:** leon, Castile and León, Spain

**Conferral date:** 05/09/2011