



DIPARTIMENTO DI SCIENZE
MATEMATICHE E INFORMATICHE,
SCIENZE FISICHE E SCIENZE DELLA TERRA

Dottorato di Ricerca in Fisica

Dott.ssa Angela Garozzo
U. OP. Cooperazione Internazionale

Dott.ssa Angelina Venezia
U. OP. Dottorati di Ricerca

p.c.

Dott.ssa Maria Pia Mangano
U. ORG. Servizi alla Ricerca

Oggetto: Richiesta attivazione procedura co-tutela di tesi in uscita (outgoing) dottorando XXXVIII ciclo - Dottorato di Ricerca in Fisica – David CABO ALMEIDA

Si trasmette estratto del verbale della riunione del Collegio dei Docenti del Dottorato di Ricerca in Fisica del 23 febbraio 2024, relativo alla richiesta in oggetto.

Il Coordinatore
del Corso di Dottorato di Ricerca in Fisica
(Prof.ssa Vincenza Crupi)



Firmato digitalmente
da Vincenza Crupi
Data: 25.02.2024
10:18:10 CET
Organizzazione:
UNIVERSITA' DEGLI
STUDI DI
MESSINA/80004070
837

Messina, lì 23 febbraio 2024

Dipartimento MIFT

*Coordinatore del Dottorato di Ricerca in Fisica Prof.ssa V. Crupi – vcrupi@unime.it – 0906765004
Responsabile Unita' di Staff Didattica Dott.ssa P. Donato – pdonato@unime.it – 0906765448*



DIPARTIMENTO DI SCIENZE
MATEMATICHE E INFORMATICHE,
SCIENZE FISICHE E SCIENZE DELLA TERRA
Dottorato di Ricerca in Fisica

**VERBALE DELLA RIUNIONE DEL COLLEGIO DEI DOCENTI
DOTTORATO DI RICERCA IN FISICA
UNIVERSITÀ DEGLI STUDI DI MESSINA
23 febbraio 2024**

Il giorno 23 febbraio 2024 alle ore 09.30, si è riunito il Collegio dei Docenti del Corso di Dottorato di Ricerca in Fisica dell'Università degli Studi di Messina, a norma del Regolamento di Dottorato, presso l'Aula B-1-2, edificio B I piano (di fronte mensa), per discutere e deliberare sul seguente ordine del giorno:

- 1) Comunicazioni;
- 2) Richiesta co-tutela di tesi in uscita dottorando XXXVIII ciclo;
- 3) Richiesta afferenza Collegio di Dottorato di Ricerca in Fisica;
- 4) Assegnazione supervisor e co-supervisor dottorandi XXXIX ciclo;
- 5) Adempimenti fine III anno XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023 - fine attività 31 gennaio 2024): **Assegnazione CFU attività formative**;
- 6) Adempimenti finali del corso di dottorato XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023- fine attività 31 gennaio 2024): **Nomina della Commissione giudicatrice (art. 27 Regolamento del Dottorato di Ricerca - Università degli Studi di Messina: DR 834-2022, Prot. n. 0039784 del 25/03/2022), data, ora e sede per la discussione pubblica (esame finale)**;
- 7) Adempimenti finali del corso di dottorato XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023- fine attività 31 gennaio 2024): **presentazione delle attività formative e dell'attività di ricerca svolta nel triennio per l'ammissione alla discussione pubblica (esame finale) con relativa valutazione.**

Partecipano i Professori: Giorgio Arcadi, Carmelo Corsaro, Dino Costa, Mariapompea Cutroneo, Giovanna D'Angelo, Omar Di Stefano, Barbara Fazio, Enza Fazio, Salvatore Magazù, Gianmarco Munaò, Fortunato Neri, Barbara Orecchio, Salvatore Patanè, Alessandro Pilloni, Debora Presti, Santi Prestipino Giarritta, Rosaria Anna Puglisi, Franz Saija, Salvatore Savasta, Alessandro Sergi, Letteria Silipigni, Lorenzo Torrisi, Claudia Triolo, Valentina Villari.

Partecipa **per le parti non deliberative** la rappresentante dei dottorandi, la dott.ssa Sonia Marrara.

Risultano assenti non giustificati i dott. Michele Calabretta, Maria Cristina Curatolo, Onofrio Maragò, Sebastiano Trusso, i proff. Caterina Branca, Rosalba Saija, Valentina Venuti, Ulderico Wanderlingh e il rappresentante dei dottorandi dott. Sebastiano Ettore Spoto.

Risultano assenti giustificati: i proff. Domenico Majolino, Giuseppe Mandaglio, Antonio Trifirò, Marina Trimarchi, la dott.ssa Maria Antonia Iatì.

Constatato il raggiungimento del numero legale, il Coordinatore del Collegio dei Docenti del Corso di Dottorato di Ricerca in Fisica, Prof.ssa Vincenza Crupi, dichiara aperta la seduta.

Il Dott. Giorgio Arcadi svolge il ruolo di segretario verbalizzante.

Punto 1) O.d.G.

Comunicazioni:

*** OMISSIS ***

Punto 2) O.d.G.

Richiesta co-tutela di tesi in uscita dottorando XXXVIII ciclo;

Il Coordinatore informa il Collegio dei Docenti, che il dott. **David Cabo Almeida** dottorando del II anno XXXVIII ciclo, beneficiario di borsa UNIME/MUR, tutor Prof. Giorgio Arcadi, ha avviato, come da nota Prot. n. 0083305 del 19/06/2023, la richiesta di attivazione per la procedura di co-tutela di tesi in uscita (outgoing) tra l'Università degli Studi di Messina (Home Institution) e l'Università di Barcelona - Spagna (Host Institution), Corso di Dottorato di ricerca in Física, al fine di potere realizzare la tesi di ricerca in cotutela dal titolo: "*Probing the Dark sector of the Universe with Particle Detectors*".

Dipartimento MIFT

Coordinatore del Dottorato di Ricerca in Fisica Prof.ssa V. Crupi – vcrupi@unime.it – 0906765004
Responsabile Unità di Staff Didattica Dott.ssa P. Donato – pdonato@unime.it – 0906765448



Considerato l'Art. 32 - **Dottorati di ricerca in cotutela di tesi** del Regolamento del Dottorato di Ricerca - Università degli Studi di Messina (DR 834-2022. Prot. n. 0039784 del 25/03/2022), considerato l'estratto del verbale del Collegio dei Docenti del Dottorato del 13 novembre 2023 (Prot. n. 0145628 del 15/11/2023) e visto che tutte le condizioni necessarie per l'attivazione della procedura (accordo quadro già firmato con il Paese in cui si trova l'Università partner, nel presente caso l'Università di Barcelona - Spagna) sono già state accertate dall'Ufficio preposto dell'U.OP. Dottorati, si allegano al presente verbale:

- lettera di disponibilità da parte del **prof. Javier Virto Iñigo, Professor agregat (professore associato) presso il Departament de Física Quàntica i Astrofísica**, supervisore della Host Institution;
- sintesi del progetto di ricerca;
- bozza della Convenzione nominativa con il dottorando interessato alla cotutela di tesi che dovrà essere in seguito approvata dagli organi accademici, una volta che il Collegio di Dottorato ha deliberato favorevolmente.

Pertanto, essendo state soddisfatte tutte le condizioni necessarie per l'attivazione della co-tutela in uscita (outgoing), essendo stata fornita la documentazione completa richiesta e considerato infine che l'Ateneo di Messina favorisce ed incoraggia la realizzazione di questo genere di programmi di co-tutela di tesi, **il Collegio delibera favorevolmente sull'attivazione del programma di co-tutela approvando all'unanimità con la sola astensione degli assenti alla seduta.**

Punto 3) O.d.G.

Richiesta afferenza Collegio di Dottorato di Ricerca in Fisica;

*** OMISSIS ***

Punto 4) O.d.G

Assegnazione supervisor e co-supervisor dottorandi XXXIX ciclo;

*** OMISSIS ***

Punto 5) O.d.G.

Adempimenti fine III anno XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023 - fine attività 31 gennaio 2024): **Assegnazione CFU attività formative**;

*** OMISSIS ***

Punto 6) O.d.G.

Adempimenti finali del corso di dottorato XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023- fine attività 31 gennaio 2024): **Nomina della Commissione giudicatrice (art. 27 Regolamento del Dottorato di Ricerca - Università degli Studi di Messina: DR 834-2022, Prot. n. 0039784 del 25/03/2022), data, ora e sede per la discussione pubblica (esame finale)**;

*** OMISSIS ***

Punto 7) O.d.G.

Adempimenti finali del corso di dottorato XXXVI ciclo (conclusione effettiva del triennio di dottorato oltre il 31 ottobre 2023- fine attività 31 gennaio 2024): **presentazione delle attività formative e dell'attività di ricerca svolta nel triennio per l'ammissione alla discussione pubblica (esame finale) con relativa valutazione.**

*** OMISSIS ***

Dipartimento MIFT

*Coordinatore del Dottorato di Ricerca in Fisica Prof.ssa V. Crupi – vcrupi@unime.it – 0906765004
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Dottorato di Ricerca in Fisica

Non essendo presenti altri punti all'O.d.G., il Coordinatore ringrazia tutti i colleghi che hanno partecipato alla riunione del Collegio e chiude la seduta alle ore 11.45 con l'approvazione del presente verbale.

Il Segretario
(Dott. Giorgio Arcadi)

Il Coordinatore del
Corso di Dottorato di Ricerca in Fisica
(Prof.ssa Vincenza Crupi)

Messina, lì 23 febbraio 2024

È COPIA CONFORME ALL'ORIGINALE
Il Coordinatore
del Corso di Dottorato di Ricerca in Fisica
(Prof.ssa Vincenza Crupi)



Firmato digitalmente
da Vincenza Crupi
Data: 24.02.2024
19:24:42 CET
Organizzazione:
UNIVERSITA' DEGLI
STUDI DI
MESSINA/80004070
837



Agreement of Joint Thesis Supervision

Pr Giovanna Spatari Rector of Università degli Studi di Messina (University of Messina, Home institution), by virtue of appointment under Ministerial Decree n. 0001582 del 12.12.2023, and legal representative of this institution by virtue of the powers transferred under the UNIME Statute, approved by Rectoral Decree 1244/2012 of 14 May 2012, (Official Bulletin. – Serie Generale n. 116 of 19 May 2012) and Rectoral Decree 3429/ 2014, (Official Bulletin. – Serie Generale n. 8 of 12 January 2015)

And

Dr Joan Guàrdia Olmos, Rector of the University of Barcelona (hereinafter, "UB" Host Institution) by virtue of appointment under Decree 4/2024, of 3 January (Official Bulletin of the Government of Catalonia, no. 9073, of 5 January), and legal representative of this institution, with registered address at Gran Via de les Corts Catalanes, 585, 08007 Barcelona, and with fiscal id. NIF Q-0818001-J, by virtue of the powers transferred under the UB Statute, approved by Decree 246/2003, of 8 October (Official Bulletin of the Government of Catalonia, no. 3993, of 22 October).

in which the aforementioned parties are jointly referred to as ‘the parties’,

Having regard to Joint Declaration by the Italian and the Spanish Rectors' Conferences (June 1998)

Having regard for UNIME (Italy)

- the art. 4 of the Italian Law n. 210 of 03/07/1998, as modified by the Law n. 240/2010;
- the Italian Ministry of Education, University and Research Regulation concerning PhD programmes, issued with D.M. n. 226/2021;
- the University of Messina Regulation concerning Research Doctorate course issued with the Rector's Decree n. 834/2022;
- the approval of the Board of professors of student's request

For UB (Spain)

- Regulations governing doctoral studies under Royal Decree 99/2011, approved by the Minister Council of the Spain Government on 28 January 2011 and last amended by Royal Decree 576/2023, on 4 July.
- Normativa Escola de Doctorat UB, approved by Government Council on 16 March 2012 and last amended on 7 October

The following has been agreed

Article 1– JOIN THESIS SUPERVISION

The partner institutions hereby agree that they shall assume joint responsibility for the supervision of the doctoral student's doctoral research project. The two Institutions, animated by the will to promote the exchange of PhD students between them and to strengthen, thus, scientific and university cooperation, decide by mutual agreement, within the framework of the legislations in force in their respective countries, to use the procedure of co-supervision of thesis in favor of the Doctoral Student:

- Name and surname of the student: **David Cabo Almeida**
- Born in Barcelona
- Address in Italy: Viale Ferdinando Stagno d'Alcontres, 17, 98166 Messina ME
- Address of partner country: Universitat de Barcelona
- E-mail: davidcaboalmeida@gmail.com
- Telephone number: +34617042326
- Bachelor's degree: Física (University of Barcelona)
- Master Degree: Astrofísica, Física de Partícules i Cosmologia (Universitat de Barcelona)

Article 2 – SUPERVISION OF THE DOCTORAL STUDENT

In each of the institutions concerned, the doctoral student will carry out the research work under the direction and responsibility of the following thesis supervisors:

- At UNIME (Home Institution):
Name: Giorgio Arcadi
Department: Dipartimento di Scienze matematiche e informatiche, scienze fisiche e scienze della terra
- At UB (Host Institution):
Name: Javier Virto Iñigo
Department: Departament de Física Quàntica i Astrofísica
Position : Professor agregat

Both thesis Supervisors undertake to fully exercise, jointly with the doctoral student, the responsibilities attributed to them by the regulations in force and the academic traditions in their respective countries. They shall also undertake, in their respective establishments, to ensure the implementation of the provisions of this Agreement.

The doctoral student shall follow the activities of the doctoral programs during his staying at UNIME and UB as agreed by the two Supervisors, according with the regulations of both the PhD courses involved.

In case of a change in the direction of the doctoral thesis, the procedure established at the University where the thesis will be defended will be followed. The change of supervision must be communicated to the other university.

Article 3 – ADMISSION TO DOCTORAL STUDIES AND DOCTORAL THESIS SUBJECT

At University of Messina (Home Institution) the doctoral student is registered at the second year of academic year 2023/2024 of the doctoral course in Fisica XXXVIII Cycle.

The doctoral program lasts three years and will end on September 30th, 2025.

At UB (Host Institution), the doctoral student is registered for this procedure at the second year of the academic year 2023/2024 at PhD program in “Física” until the defense of the thesis takes place.

The two Universities agree that joint thesis supervision lasts three years and will end on September 30th, 2025, according to the rules in force at each institution.

The initial subject of the thesis submitted by the doctoral student is “***Probing the Dark sector of the Universe with Particle Detectors***”

The research plan entitled “*Probing the Dark sector of the Universe with Particle Detectors*” has been admitted to both universities, in accordance with the regulations applicable in each of the universities.

In case of substantial modification of the plan, the procedure established at the University where the thesis will be defended will be followed. The change of supervision must be communicated to the other university.

Article 4 – ENROLLMENT AND STUDENT SERVICE FEE

The doctoral student must be enrolled in both institutions. He must pay the registration fees at UNIME (home institution) and must follow the rules for registration at the University of Barcelona (host institution). In accordance with UB regulations, in order to apply the procedure for joint research, the student will have to register at the UB each year and will pay the concept of direction, supervision and continuous evaluation of the thesis coinciding with the academic years of stay at the UB in accordance with article 7 of this agreement.

Article 5 – AWARD OF THE DEGREE

If the doctoral student has passed the joint doctoral examination successfully, she shall be separately awarded a degree by the partner institutions as follows:

- Dottore di ricerca (Ph.D) in Fisica (UNIME)
- Doctor per la Universitat de Barcelona, dins del Programa de Doctorat en Física (UB)

Article 6 – INSURANCE COVER

Before starting mobility periods abroad, the doctoral student takes all necessary steps in order to arrange health insurance, insurance cover against physical injuries and third party liability, insurance covering repatriation in case of accident or illness. During his stay in the host country, conditions to access the social security cover, will be in accordance with the legislation and the Universities regulation in force. University of Messina guarantee third party liability and accident insurance within the limits established by the legislation and regulation in force.

Article 7 – RESEARCH AT PARTNER INSTITUTION

The research work is carried out alternately in both institutions. The doctoral student should spend alternate or consecutive research equivalent periods at both partner institutions. The research work will be carried out at the two universities according to the following schedule prepared with the favorable opinion of the two directors of thesis:

2022/2023 (First academic year) at UNIME 12 months

2023/2024 (Second academic year) at UNIME 8 months and at UB 4 months. The period at UB will be from May 2024 to August 2024 included.

2024/2025 (Third academic year) at UNIME 8 months and at UB 4 months. The period at UB will be from March 2025 to June 2025 included.

At UNIME the student

During the second year David will work on several research projects under the direct supervision of the local supervisor Giorgio Arcadi. A first research project will consist into the building and the phenomenological study of a model dubbed DMEFT in which one considers the general coupling of a Dark Matter with two mediator fields. The model is then completed with all the possible gauge invariant effective operators up to a fixed energy dimension. The second project will rely on the study of Dark Matter production in cosmological scenario with very low reheating temperatures, below the mass of the Dark Matter. The third year at UNIME will be devoted to the completion of a third project, relative to higher order corrections to the decay width of the 125 GeV Higgs in the 2HDM+a model, and to write the PHD thesis. In addition David will participate to the compulsory activities, like for example attending to seminars, planned for the PhD program at UNIME

At UB the student

During the second year David will work under the supervision of prof. Javier Virto on a project consisting into determining the loop induced scattering cross-section for a scalar DM candidate charged under SU(2) and coupled with a t-channel mediator charged under color. During the third year David will work on a project relying on matching conditions to the Heavy DM EFT for direct detection arising from specific renormalizable models. More specifically then cases of heavy scalar or fermionic Dark Matter particles coupled to the SM in a general way will be considered. For this purpose, one will consider the complete EFT for Dark Matter developed in Ref [2104.14443], valid above the EW scale, and perform a matching calculation to the Heavy DM EFT below the EW scale. This will allow to revisit the constraints from direct detection experiments and confront them to indirect detection, invisible Higgs decays, and collider constraints.

In every case the period of the stay at each institution cannot be less than six months.

Article 8 – ADMISSION AT THE ONLY FINAL EXAMINATION AND THESIS DEFENCE COMMITTEE

The partners agree that the deadline for the submission of the final thesis could be until September 30th, 2025.

According to Italian rules, to obtain the admission at the single final examination, the thesis will be evaluated by two external reviewers named by the Board of Professors that don't participate in the final examination. If the evaluation of the reviewers and of the Italian Board

of professors is positive and they don't ask for modifications of the thesis, the final examination could be taken until January 2026. If the evaluation of the reviewers and the Italian Board of professors is positive, but they ask for modifications of the thesis, the final examination could be postponed until maximum six months and could be taken until June 2026. The only Examination Board shall be comprised of maximum six members. In accordance with regulations in force, the Defense Committee is made up of a balanced number of members appointed by the two Establishments and includes at least two members external to both universities.

The members of examining court will be communicated to the other university.

Article 9 – DOCTORAL THESIS DEFENCE (PUBLIC DISCUSSION)

The thesis will lead to a single defense at University of Messina

For theses not defended at the Ub, the thesis defence reports and minutes must be duly completed and signed, in accordance with the grading system of Spanish legislation (Suspenso, Aprobado, Notable, Excelente), with the grading system of Italian legislation and according to this conversion table:

Universitat de Barcelona	UNIME
Suspenso	Thesis rejected (Tesi respinta)
Aprobado	Sufficient (Sufficiente)
Notable	Good (Buono)
Excelente	Ottimo (Excellent)
Excelente <i>Cum Laude</i>	Ottimo con lode (Excellent with Honours)

If the thesis obtains a grade of Excellent, the procedure for the awarding of the "Cum Laude" mention established at the UB will be enabled.

Article 10 – LANGUAGE OF THESIS

The doctoral thesis and the conclusions of the research shall be written in English. The written thesis will be in English.

An abstract of the doctoral thesis at least 3000 words shall be supplied, one in English and another one in Catalan.

Article 11 – INTELLECTUAL PROPERTY RIGHTS

Intellectual property ownership will be based on the principle of inventor owns in accordance with the respective policies of each of the partner institutions.

Therefore, the protection of the research results arising from the doctoral research project, as well as any matter related to filing them, making them accessible, their publication and exploitation shall be discussed and agreed by the partner institutions and be in accordance with the national and institutional regulations in force.

The conditions of deposit, copyright and reproduction of the theses will be, for Spain, those established by current legislation and regulations on intellectual property.

The protection of the confidentiality of the data contained in the doctoral thesis will be that established in the current legislation, and, in particular, in article 38 of the regulations governing doctoral theses under RD 99/2011, approved by the CdG on 16 March 2012, and amended on 7 October 2022, without prejudice to the provisions applicable to the University.

Article 12 –PROCESSING OF PERSONAL DATA

The processing of personal data related to this agreement is carried out by the Universities in accordance with the European General Regulation No. 679/2016 for the protection of personal data and the Code regarding the protection of personal data, Legislative Decree No. 196/2003 and subsequent amendments and additions and with the conforming Regulation in force in both universities. The controllers of the personal data collected in this Agreement (both the data of the representatives and the data of the contact persons necessary for the execution of this Agreement) are the signatory Parties.

The contact information for the data controllers is as follows.

- University of Barcelona (General Secretary's Office):
 - Gran Via de les Corts Catalanes, 585, 08007 Barcelona
 - secretaria.general@ub.edu
- Università degli Studi di Messina
 - Piazza Pugliatti 1, 98125 Messina.
 - rettorato@unime.it

The purpose of the processing of personal data is the management, monitoring and execution of this agreement. The legal basis for the processing of personal data, in accordance with article 19 of the LOPDGDD, is the fulfilment of a mission carried out in the public interest in the case of those responsible for processing under article 77.1 of the LOPDGDD, or the satisfaction of a legitimate interest of the data controller in other cases. Personal data will be kept for the time necessary to fulfil the purpose for which they have been collected and to determine any possible liabilities that may arise. No provision is made for the transfer of data to third parties, except where this is a legal obligation.

Data subjects have the right to access and request rectification, erasure, opposition, portability or restriction of their data by writing to the data controllers at the addresses indicated above. If they feel that their rights have not been adequately addressed, they can communicate this to the data protection officer of the signatory Parties.

- University of Barcelona:
 - Gran Via de les Corts Catalanes, 585, 08007 Barcelona
 - protecciodedades@ub.edu
- Università degli Studi di Messina
 - Piazza Pugliatti 1, 98122 Messina
 - rpd@unime.it

Data subjects may also lodge a complaint with the competent data protection supervisory authority. The Parties undertake to provide the content of this clause to the contact people involved in the implementation of this Agreement.

Article 13 – DEPOSIT COPY AND PUBLICATION OF THE PHD THESIS

Details regarding the deposit copy, authorial information and printing the PhD thesis are set out in the applicable regulations of each higher education institution.

The publication of the PhD thesis is guaranteed by both higher education institutions in accordance with their applicable regulations.

Article 14 – COMMENCEMENT AND VALIDITY OF THE AGREEMENT

This agreement has a duration of 4 years, but ceases to be effective on the date of achievement of the final doctoral degree in co-supervision by the doctoral student, if prior to the aforementioned deadline

This Agreement will be terminated by written communication for the following reasons:

- a) Its period of validity expires.
- b) The doctoral student is awarded a doctoral degree.
- c) The doctoral student fails the annual assessment at either university.
- d) The maximum established term for submitting the doctoral thesis is exhausted (including extensions, if applicable) at either of the undersigned universities.
- e) The Parties mutually agree to terminate the Agreement prior to expiry of the period of validity by written communication.
- f) The unforeseen impossibility, legal or material, of fulfilling the purpose of this Agreement.
- g) Either Party repeatedly fails to comply with any of the stipulations of the Agreement. In this case, either of the Parties may send a request to the non-complying Party asking it to comply with its obligations.
- h) One of the Parties withdraws through express written notification to the other Party.
- i) A legal decision renders the Agreement null and void.
- j) Any other grounds provided for in current applicable regulations.

This Agreement constitutes the complete agreement of the Parties in relation to its purpose and may only be modified in writing with the prior consent of the Parties.

In the event that a new regulation on the awarding and granting of doctoral degrees is adopted that is contrary to the provisions of this Agreement, the new regulation shall automatically apply in all matters that modify this Agreement.

Article 15 - SETTLEMENTS OF DISPUTES

The stipulations of this agreement may not conflict with the provisions of the regulations at of the two Institutions. Disputes must be resolved amicably through friendly bilateral consultations before recourse to the competent legal authorities.

Modifications to this agreement shall be effective only if they are in writing and signed by the authorized representatives of the contracting parties.

Any other circumstances not stipulated in this Agreement will be governed by the provisions of the regulation of the two universities.

The PhD supervisors of each university will form the Monitoring Committee of this agreement. This committee will evaluate and coordinate the activities and relations between the two institutions and will ensure the correct development of the content of the agreement.

Article 16– TRANSPARENCY PORTAL

The agreement signed may be made available to citizens on the corresponding Transparency Portal in application of the provisions of Law 19/2024 of 29 December, on Transparency, Access and Good Governance and the rest of the regulations implementing it.

Signatures

And in witness whereof, three copies of this document are signed in English language, at the place and on the date specified below.

Date : Date and signature of the President Universitat de Barcelona	Date : Date and signature of the Università degli Studi di Messina
Prof. Joan Guàrdia Olmos	Prof.ssa Giovanna Spatari

The Supervisor

Prof. Javier Virto Iñigo

The Coordinator of the Doctoral Course

Prof. Assumpta Parreño

The Supervisor

Prof. Giorgio Arcadi

The Coordinator of the Doctoral Course

Prof.ssa Vincenza Crupi

For acceptance

The doctoral student

David Cabo Almeida

