

**YOUR JOURNEY TOWARDS THE FRONTIERS OF
KNOWLEDGE STARTS HERE**



ASTROPHYSICS ITINERARY

COORD. YAGO ASCASIBAR

MASTER'S IN

THEORETICAL PHYSICS

UNIVERSIDAD AUTÓNOMA DE MADRID

**WELCOME,
STUDENTS!**



Instituto de
Física
Teórica



Universidad Autónoma
de Madrid

STRUCTURE OF THE MSC

Partícles

Compulsory

QUANTUM FIELD THEORY
STANDARD MODEL

Optional

ADVANCED MATHEMATICS
ADVANCED GRAVITATION
ADVANCED QUANTUM FIELD THEORY
OPEN PROBLEMS IN THE SM
EXPERIMENTAL PARTICLE PHYSICS
QUANTUM ENTANGLEMENT AND INFORMATION

Astrophysics

Compulsory

RADIATIVE PROCESSES IN ASTROPHYSICS
OBSERVATIONAL TECHNIQUES IN
ASTROPHYSICS
STELLAR STRUCTURE AND EVOLUTION

Optional

COMPUTATIONAL ASTROPHYSICS
GALAXY FORMATION AND EVOLUTION

Compulsory common

GRAVITATION
COSMOLOGY

Optional common

ASTROPARTICLE PHYSICS
ADVANCE COSMOLOGY
ADVANCE GRAVITATION

THE MASTER CONSISTS OF 60 ECTS:

30 ECTS

Compulsory courses

**Radiative Processes in Astrophysics
Observational Techniques
Stellar Structure & Evolution
Cosmology
Gravitation
MSc Thesis**

**PRA
TOA
EEE
COSMO
GRA
TFM**

30 ECTS

Optional courses

**Galaxy Formation & Evolution
Computational Astrophysics
Advance Cosmology
Astroparticle Physics**

**FEG
ACO
COAv
ASP**

**Special
courses**

**Introduction to the Virtual Observatory
+
Courses from Particles**

The MSc Thesis

SUPERVISORS

UAM



External



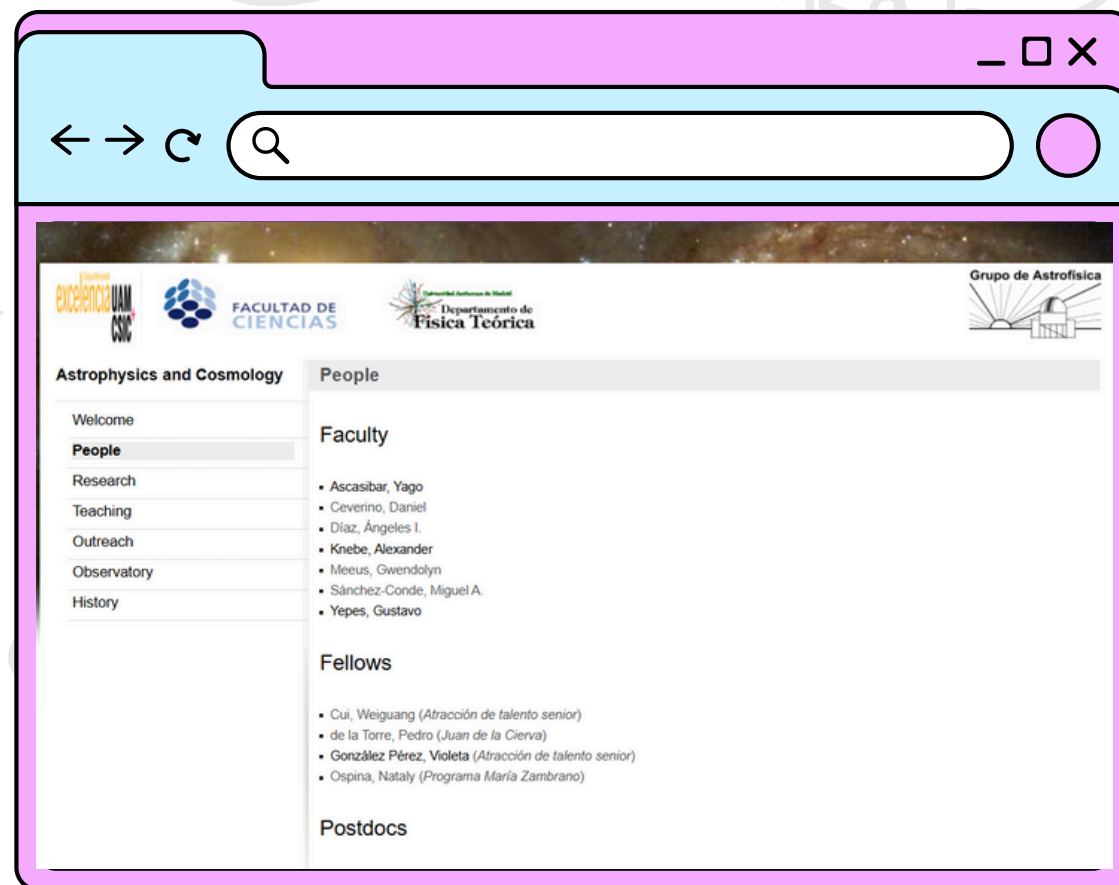
Ciemat
Centro de Investigaciones
Energéticas, Medioambientales
y Tecnológicas

OAN

icmm



CENTRO DE ASTROBIOLOGÍA · CAB
ASOCIADO AL NASA ASTROBIOLOGY PROGRAM

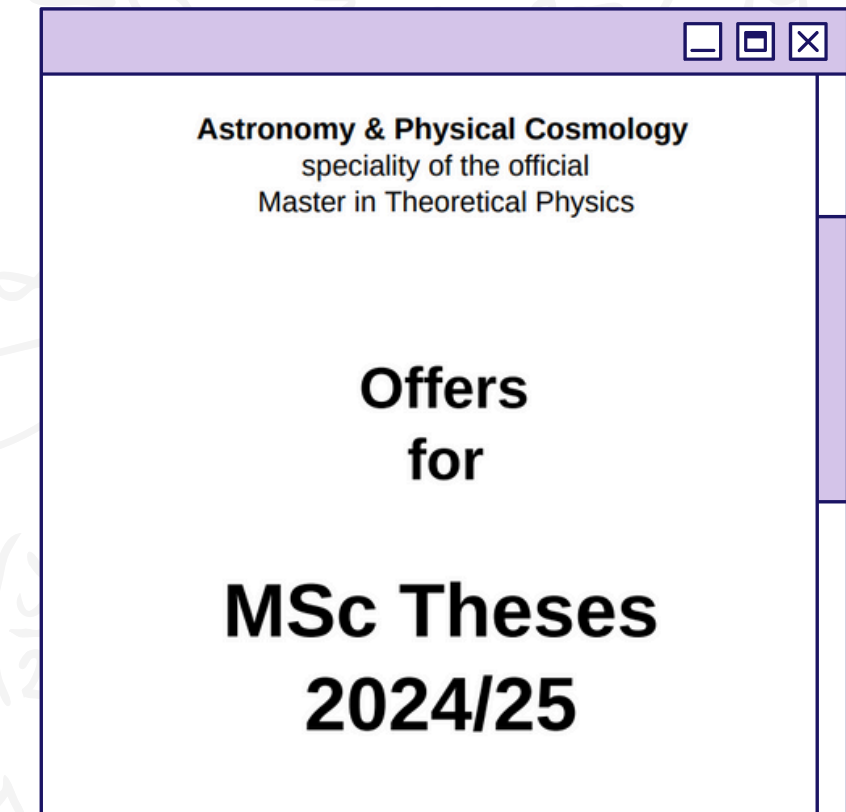


The MSc Thesis

TOPIC

Formation of Stars, Stellar Evolution and Exoplanets (CAB, ESAC, UAM)
Formation and Evolution of Galaxies (CAB, CIEMAT, UAM)
Galactic Starbursts and its influence on Galaxy Evolution (CIEMAT, UAM)
Large-scale Structure of the Universe (CIEMAT, UAM)
Astroparticle Physics and Dark Matter (UAM)
Space Astronomy, Telescopes and related Science (CAB, ESAC)
Molecular Astrophysics (CAB, OAN) Radioastronomy (CAB, OAN)
Infrared, X-ray, and Gamma-ray Astronomy (ESAC, OAN, UAM)

This list is not exhaustive!



Presentation: 30/09 – 02/10 (tentative)

The MSc Thesis

PROCEDURE



Format

LaTeX template

Limit of 25 Pages

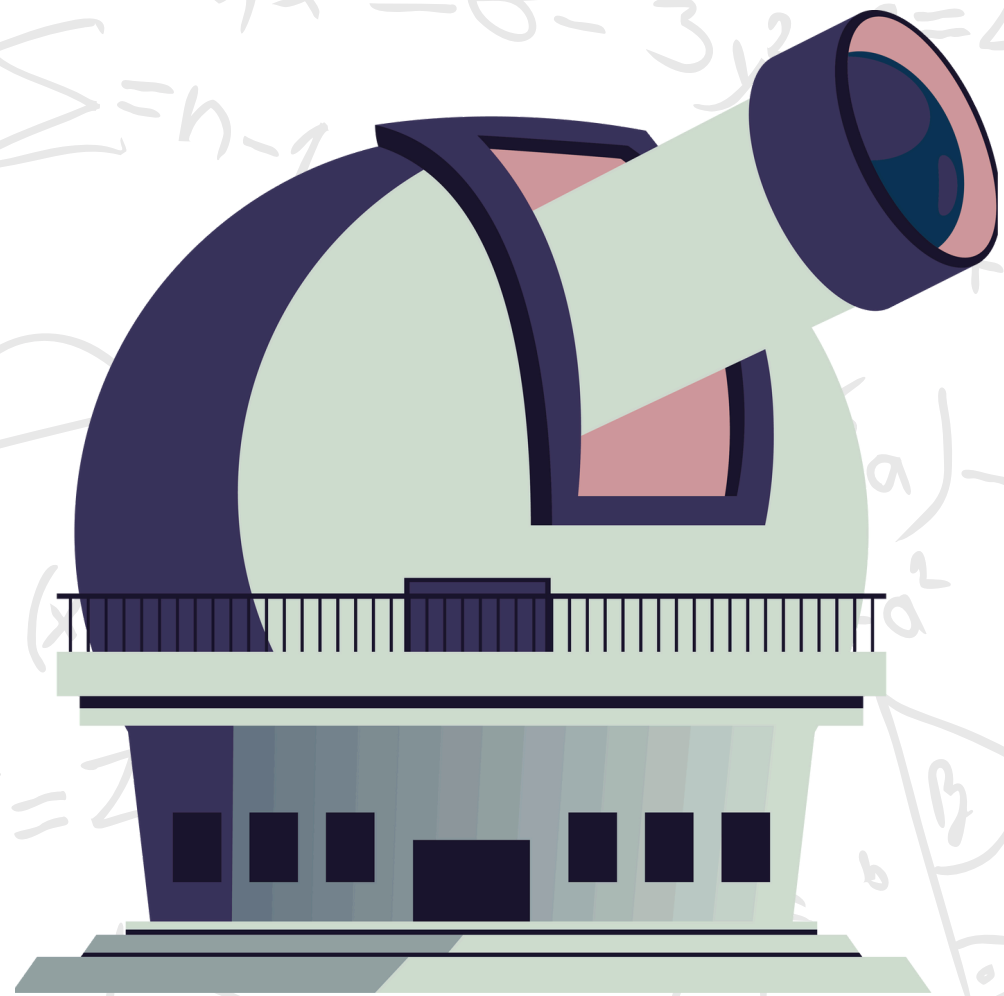


Two Calls

**July or
September**

SUBMISSION

SCIENTIFIC ACTIVITIES



“Pint of Cosmology”



Journal Clubs (Cosmology, gravity, pheno, ...)



Seminar talks



Virtual Observatory School

COMMUNICATIONS



alumnos-masterastrofisica-ft-l@uam.es




WhatsApp groups



yago.ascasibar@uam.es


ESCUELA DE DOCTORADO



Astrophysics

General information | Líneas de Investigación | Acceso | Admisión | Planificación Específica | Aseguramiento calidad | Resultados

Descripción del Programa



En la actualidad estamos asistiendo a una revolución en la comprensión de los fenómenos astrofísicos, propiciada por varios factores: el enorme desarrollo científico, tanto en las Ciencias Físicas como en Matemáticas, el espectacular desarrollo tecnológico de la instrumentación científica para la observación desde la Tierra y en el espacio, el tratamiento de datos científicos en lo que se refiere a su procesamiento, almacenamiento y transmisión, y el desarrollo de...

Basic data of the title

Coordinating University:
Universidad Autónoma de Madrid

RUCT code:
5600885

ISCED Codes:
440 Ciencias Físicas, químicas, geológicas;
441 Física

Implementation academic course:
2013-2014

SEMINARS AND COLLOQUIA

You can also attend the seminar series at the IFT and/or DFT:

IFT Seminars

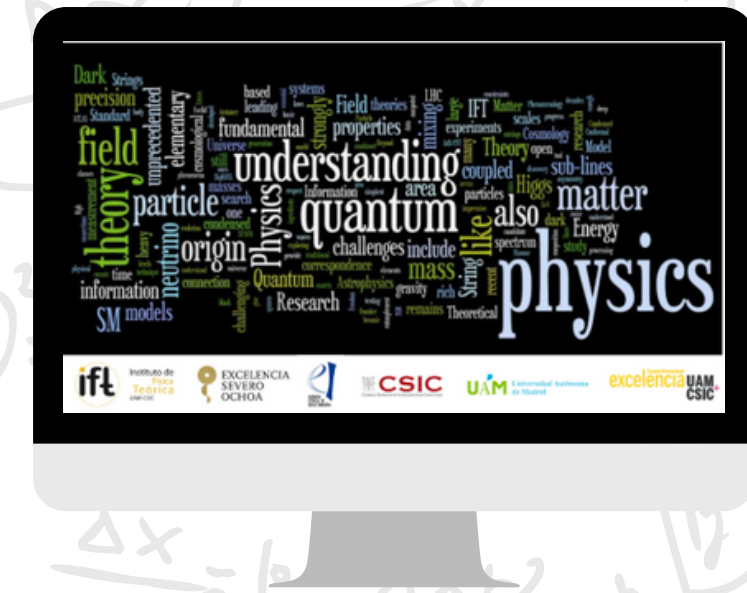
<https://www.ift.uam-csic.es/en/events/seminar>

IFT Colloquia

<https://www.ift.uam-csic.es/en/events/colloquium>

Old Journal Club

<https://www.ift.uam-csic.es/es/events/old-journal-club>



DFT events

<https://www.uam.es/ciencias/facultad/departamentos/fisica-teorica>

CIAFF events

<http://www.ciaff.uam.es/events>

EQUITY, DIVERSITY, AND INCLUSION ON CAMPUS

UAM and IFT as a whole are committed to providing an inclusive and welcoming environment for all: No discrimination based on personal factors including (but not limited to) race, color, national or ethnic origin, alienage, age, religion, creed, sex, sexual orientation, gender identity or expression, marital status, functional diversity, political affiliation or philosophy. UAM and IFT do not tolerate actions that constitute discrimination or harassment.

Gender Equality Unit @UAM

(<https://www.uam.es/uam/unidad-igualdad-genero>)



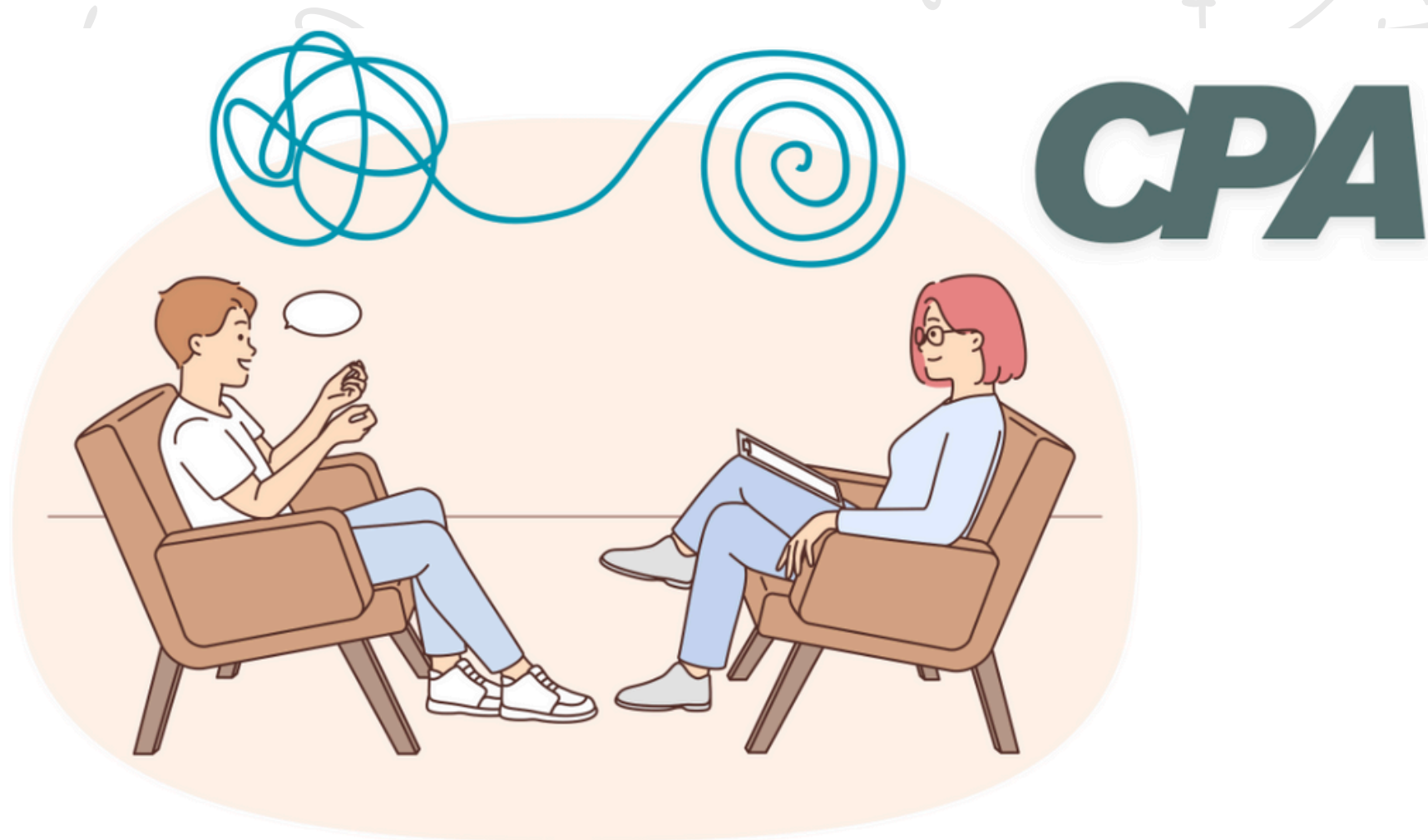
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Equity, Diversity, and Inclusion (EDI) Committee @IFT

(<https://members.ift.uam-csic.es/ed/>)



CENTRO DE PSICOLOGÍA APLICADA



If you're a student and need support with stress, anxiety, your studies, or any personal challenge, the CPA at the Faculty of Psychology is here to help. They offer professional care with reduced fees for UAM students and the best part: it's right on campus!

YOUR OPINION IS IMPORTANT FOR US

Fill in the Student Questionnaires at the end of the year!! This is the main way in which we can identify what we can improve!



For any question/comment/problem/suggestion, do not hesitate to contact us:

Ernesto Arganda (Ernesto.arganda@uam.es) Master's Coordinator.

Ana Cueto (anar.cueto@uam.es) Coord. of PEC itinerary.

Yago Ascasibar (yago.ascasibar@uam.es) Coord. of ACF itinerary.



MSc Theoretical Physics

Universidad Autónoma de Madrid