UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI FISICA

COMPETITION FOR ADMISSION TO DOCTORATE SCHOOL IN PHYSICS, ASTROPHYSICS AND APPLIED PHYSICS XXXVIITH CYCLE - A.Y. 2021/2022

Evaluation criteria (curriculum): up to 20 points

a. Academic career: up to 16 points
The overall university career is assessed, taking into account both the Bachelor and Master degree programs, the presence of honors. For foreign candidates, judgment criteria are applied coherently with the academic systems where they gained their qualifications.

b. Publications: up to 1 points
The publications are evaluated, also in the preprint mode.

c. Research and other titles and experiences: up to 3 points
Any professional experience, the achievement of awards and scholarships, the attendance of schools and refresher courses are evaluated.

Evaluation criteria (Research Project): up to 10 points

The submitted project will be evaluated considering its clarity and logical internal coherence, also with reference to the state of the art, and the relevance of the candidate contribution.

EVALUATION OF DOCUMENTS SUBMITTED

Candidate	Project	Curriculum	Total	Result
ABBAS SHAFQAT	6.0	7.50	13.50	not admitted for insufficient score
ABBASI FARAH RASHEED	4.0	4.67	8.67	not admitted for insufficient score
ADNAN MUHAMMAD	6.5	9.83	16.33	not admitted for insufficient score
AGARWAL UJJWAL	6.5	7.41	13.91	not admitted for insufficient score
AHMADI SHIRIN	5.0	3.83	8.83	not admitted for insufficient score
AHMED HASSAN	4.0	7.00	11.00	not admitted for insufficient score
ALAM ABID	5.0	9.50	14.50	not admitted for insufficient score
ALAM MARWAN	4.0	6.33	10.33	not admitted for insufficient score
ALBANESE ELISA	7.5	7.04	14.54	not admitted for insufficient score
AMNA KANEEZ	4.0	4.67	8.67	not admitted for insufficient score
ARCARI STEFANO	7.5	14.45	21.95	admitted to the oral exam
ARSHAK JAFAR	6.5	4.38	10.88	not admitted for insufficient score
ARSLAN BIN RIAZ MUHAMMAD	-	4.33	4.33	not admitted for insufficient score
ASHRAF NAVEED	5.0	4.33	9.33	not admitted for insufficient score
AZIZINIA MARYAM	5.0	8.83	13.83	not admitted for insufficient score
BAIG MIRZA	5.0	12.67	17.67	admitted to the oral exam
BALBONI MARCO	6.5	14.59	21.09	admitted to the oral exam
BARONTINI ANDREA	7.5	15.09	22.59	admitted to the oral exam
BELLIVEAU SAMUEL	5.0	5.00	10.00	not admitted for insufficient score
BERTOLAJA EMANUELE	7.5	11.97	19.47	admitted to the oral exam
BETTI PIETRO	6.8	16.51	23.31	admitted to the oral exam
BOLAMPERTI ANDREA	8.3	8.62	16.92	not admitted for insufficient score
BONFANTI MANUELE	7.5	14.49	21.99	admitted to the oral exam
BRIOSCHI MARTA	8.5	13.31	21.81	admitted to the oral exam
BRIVIO RICCARDO	6.5	10.13	16.63	admitted to the oral exam
CARDELLINI COSIMO	6.5	11.53	18.03	admitted to the oral exam
CERMENATI ALESSANDRO	8.0	8.93	16.93	not admitted for insufficient score

Candidate	Project	Curriculum	Total	Result
CERVATO BEATRICE	7.5	10.12	17.62	admitted to the oral exam
CHOUDHURI SANKALP	6.0	3.33	9.33	not admitted for insufficient score
CIORIIA CRISTIAN-ALEXANDRU	6.5	4.50	11.00	not admitted for insufficient score
COLORETTI GUGLIELMO	7.0	9.32	16.32	not admitted for insufficient score
COLUCCI MICHELE	6.5	16.61	23.11	admitted to the oral exam
COSTANTINI ANDREA	8.0	10.00	18.00	admitted to the oral exam
CUOZZO VIVIANA	6.0	12.51	18.51	admitted to the oral exam
D'ALBERTO JACOPO	9.0	13.62	22.62	admitted to the oral exam
D'AMBROS ALESSIO	7.0	8.18	15.18	not admitted for insufficient score
D'ARPA MATTIA CLAUDIO	4.0	7.87	11.87	not admitted for insufficient score
DAL SANTO DANIELE	8.0	17.25	25.25	admitted to the oral exam
DE GREGORIO ANGELICA	6.5	6.25	12.75	not admitted for insufficient score
DEGNI GIULIA	5.5	11.17	16.67	admitted to the oral exam
DEY SUMAN	4.0	5.83	9.83	not admitted for insufficient score
DI BARTOLOMEO GIOVANNI	7.5	10.31	17.81	admitted to the oral exam
DINESH ADITHIYA	-	3.78	3.78	not admitted for insufficient score
DITRANI FABIO ROSARIO	7.5	10.44	17.94	admitted to the oral exam
FAIZA SYEDA RUBAR SHERAZI	6.0	9.83	15.83	not admitted for insufficient score
FAVARO LUIGI	7.5	10.46	17.96	admitted to the oral exam
FERRAMI GIOVANNI	6.5	12.62	19.12	admitted to the oral exam
FRANCO ROBERTO	7.0	12.16	19.16	admitted to the oral exam
GAHAN DEVIDUTTA	7.0	5.72	12.72	not admitted for insufficient score
GAROFALO STEFANO	6.0	3.83	9.83	not admitted for insufficient score
GIANOLLI VITTORIA ELVEZIA	6.5	7.77	14.27	not admitted for insufficient score
GIBILISCO LUCIO	5.0	6.11	11.11	not admitted for insufficient score
GILARDI RICCARDO AURELIO	6.0	4.64	10.64	not admitted for insufficient score
GRAVA MIRIAM	9.0	6.15	15.15	not admitted for insufficient score
GUPTA HARSH	4.0	3.33	7.33	not admitted for insufficient score
IANNA MARCO	6.0	10.39	16.39	admitted to the oral exam
IQBAL ATEF	5.0	11.00	16.00	admitted to the oral exam
ISRAM MUHAMMAD	4.0	8.67	12.67	not admitted for insufficient score
JABBAR MUHAMMAD USAMA	4.0	3.83	7.83	not admitted for insufficient score
JARRAHI DARBAN AMIR	7.5	7.33	14.83	not admitted for insufficient score
JAVED RIZWAN	6.0	3.33	9.33	not admitted for insufficient score
KARA SINANCAN	7.0	5.33	12.33	not admitted for insufficient score
KHAN WAHID ULLAH	6.0	9.42	15.42	not admitted for insufficient score
KHUZAIMAH FASYA	6.0	10.50	16.50	admitted to the oral exam
KRISHAK ADITI	5.0	5.33	10.33	not admitted for insufficient score
LAI DAVIDE	6.5	12.84	19.34	admitted to the oral exam
LAURENTI NICCOLO'	8.0	13.99	21.99	admitted to the oral exam
LOVISETTI LUISA	10.0	15.59	25.59	admitted to the oral exam
M RESMI	6.0	7.30	13.30	not admitted for insufficient score
MAGHAMI MOGHIM MINA	7.0	10.33	17.33	admitted to the oral exam
MAGONI MARCO	9.0	12.01	21.01	admitted to the oral exam
MANCUSO CHIARA	6.5	7.33	13.83	not admitted for insufficient score
MANSOOR HAYAT	4.0	3.33	7.33	not admitted for insufficient score
MANTICA CARLO ALBERTO	9.0	17.87	26.87	admitted to the oral exam
MANZAN ELENIA	8.5	12.01	20.51	admitted to the oral exam
MARCHI EDOARDO	8.5	15.57	24.07	admitted to the oral exam
MARIANI FEDERICO MARIA	10.0	11.26	21.26	admitted to the oral exam
MARINO MARCO	7.5	10.11	17.61	admitted to the oral exam
MARNI STEFANO	7.0	10.41	17.41	admitted to the oral exam
MARTINI GIANLUCA	9.0	13.96	22.96	admitted to the oral exam
MASSARELLI FEDERICO	8.0	8.65	16.65	not admitted for insufficient score
MAZZA MATTEO	6.0	10.73	16.73	admitted to the oral exam
MAZZEO ELENA	8.5	18.15	26.65	admitted to the oral exam
MAZZI CLAUDIO	7.0	6.98	13.98	not admitted for insufficient score
MAZZOLA GIUSEPPE	5.5	4.47	9.97	not admitted for insufficient score

Candidate	Project	Curriculum	Total	Result
MAZZOLARI GIOVANNI	8.5	17.12	25.62	admitted to the oral exam
MEDINA ELISABETTA	7.0	11.32	18.32	admitted to the oral exam
MERLA GIULIA	5.5	10.51	16.01	admitted to the oral exam
MINARINI CATERINA	7.0	10.40	17.40	admitted to the oral exam
MONTI MATTEO	6.5	7.33	13.83	not admitted for insufficient score
MORGANTE DAVIDE	6.0	13.29	19.29	admitted to the oral exam
MORI MARTINA	6.5	18.84	25.34	admitted to the oral exam
MUHAMMAD TARIQ	6.0	4.83	10.83	not admitted for insufficient score
MUSHTAQ RUQYYAH	5.0	7.33	12.33	not admitted for insufficient score
NAVARRO MARTINEZ IMANOL	-	2.83	2.83	not admitted for insufficient score
NOTARNICOLA MICHELE NICOLA	9.0	19.90	28.90	admitted to the oral exam
NOVELLI ALESSANDRO	6.0	14.59	20.59	admitted to the oral exam
PARISE GIANMARCO	6.5	8.19	14.69	not admitted for insufficient score
PASQUALE ANDREA	7.0	14.62	21.62	admitted to the oral exam
PATERNOSTER COSTANZA	8.0	14.70	22.70	admitted to the oral exam
PELUCCHI LORENZO	6.5	16.92	23.42	admitted to the oral exam
PERCIAVALLE FRANCESCO	7.5	14.31	21.81	admitted to the oral exam
PETRALIA ILARIA	7.0	4.32	11.32	not admitted for insufficient score
PETROSYAN ALEKSANDR	7.0	4.00	11.00	not admitted for insufficient score
PIGNATARO GIADA VENUSTA	8.0	7.12	15.12	not admitted for insufficient score
PISCIA GIACOMO	8.0	7.09	15.09	not admitted for insufficient score
PONNAMPADIKKAL SAFNA ZUBAIR	4.0	12.17	16.17	not admitted for insufficient score
POYATOS JULIEN	4.0	4.50	8.50	not admitted for insufficient score
PRADHAN SHREETAMA	4.0	4.33	8.33	not admitted for insufficient score
PROFUMO FILIPPO	9.0	11.99	20.99	admitted to the oral exam
RATTI ALESSANDRO	6.5	13.04	19.54	admitted to the oral exam
RAZA ALI	7.0	4.33	11.33	not admitted for insufficient score
REGI RINTU	6.5	7.04	13.54	not admitted for insufficient score
RICHTER MORITZ FERDINAND	7.5	13.83	21.33	admitted to the oral exam
RIVA GIACOMO	7.5	16.72	24.22	admitted to the oral exam
ROSSELLI DAMIANO	8.5	10.29	18.79	admitted to the oral exam
ROSSI LORENZO	7.5	15.93	23.43	admitted to the oral exam
ROSSI VALENTINO	7.3	13.57	20.87	admitted to the oral exam
SANKARAMANGALAM SREEJESH PATTENA	4.0	5.08	9.08	not admitted for insufficient score
SCALCINATI LORENZO	8.5	8.45	16.95	not admitted for insufficient score
SHAFIQUE MUHAMMAD	5.0	2.83	7.83	not admitted for insufficient score
SHAH SAHAR	4.0	4.33	8.33	not admitted for insufficient score
SHIROYA NIRMALKUMAR	2.0	3.51	5.51	not admitted for insufficient score
STAIGER BENJAMIN	8.0	6.67	14.67	not admitted for insufficient score
STEL GIOVANNI	7.5	12.95	20.45	admitted to the oral exam
SUDATI FRANCESCO PAOLO LUIGI	7.5	10.00	17.50	admitted to the oral exam
TAGLIABUE DAVIDE MARIA	8.0	11.89	19.89	admitted to the oral exam
TERUZZI LUCA	8.0	12.93	20.93	admitted to the oral exam
TONANI GIORGIA	8.0	10.88	18.88	admitted to the oral exam
TRAVAGLINI CRISTOFORO	8.0	7.94	15.94	not admitted for insufficient score
TRIGGIANI FRANCESCO	6.5	4.89	11.39	not admitted for insufficient score
UBOLDI LORENZO	6.5	13.31	19.81	admitted to the oral exam
ULGIATI ALBERTO	7.0	12.99	19.99	admitted to the oral exam
VAIDYANATHAN ABHISHEK	8.0	3.38	11.38	not admitted for insufficient score
VERMA HEMANT	2.0	4.83	6.83	not admitted for insufficient score
VISIBILE ANDREA	8.0	13.01	21.01	admitted to the oral exam
VOCATURO RICCARDO	8.0	6.41	14.41	not admitted for insufficient score
WALLBANK AUGUSTINE	6.5	3.50	10.00	not admitted for insufficient score
ZAFAR FAISAL	4.0	2.83	6.83	not admitted for insufficient score
ZANCHI MARCO	8.3	8.78	17.08	not admitted for insufficient score
ZANNONI RAUL	9.0	11.11	20.11	admitted to the oral exam

to be admitted to interview, candidates must obtain a minimum of 10 points in the curriculum and a minimum of 5 points in the research project.

CALENDAR OF ORAL EXAMINATIONS

The interviews will take place on the platform ZOOM by the link https://zoom.us/my/aula.y or via the APP ZOOM with ID aula.y.

NON-EU Candidates having (serious) problems with the date of interview are requested to communicate it before 9th July to phd@fisica.unimi.it or matteo.paris@unimi.it.

The rules of the oral exam have been specified in the email sent from the Committee President.

Friday 9th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	FAVARO LUIGI	Fast generation of LHC events using generative Machine Learning techniques.
2	FERRAMI GIOVANNI	Dynamical properties of the different mass components in cluster of galaxies.
3	FRANCO ROBERTO	Measurement of blackbody radiation spectrum through state-selective de-excitation in a Rydberg atoms experiment.
4	IANNA MARCO	Direct search for dark matter with the NaI(Tl) scintillating crystals: signal analysis and development of an innovative technology.
5	IQBAL ATEF	First-principles calculations of displacement thresholds of atoms from graphene in the presence of adatoms and with/without account for electronic excitations.
6	KHUZAIMAH FASYA	The Development of Quantum-Inspired Machine Learning for the Reconstruction of Double b-Jets from Boosted Higgs Boson Events in ATLAS data.
7	LAI DAVIDE	Study of Supergravity Supersymmetric AdS Solutions and their Holographic Interpretation.

Monday 12th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	LAURENTI NICCOLO'	Research project for the PhD course in Physics, Astrophysics and Applied Physics: Parton distribution function determination beyond next-to-next-to-leading order.
2	LOVISETTI LUISA	(RI)Fondazione anno cento: una proposta didattica per l'insegnamento della Meccanica Quantistica.
3	MAGHAMI MOGHIM MINA	Study and design of a Timepix2 Hybrid pixel detector with a novel readout system in the FOOT experiment to improve energy and time resolution.
4	MAGONI MARCO	I neutrini solari e l'interazione con la materia: tests delle teorie di mixing e ricerca di nuova fisica con l'esperimento JUNO e in un modello a tre sapori.

Monday 12th July 2021 - from 15:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	MANTICA CARLO ALBERTO	Spazi tempi generalizzati di Robertson-Walker, con applicazioni alla cosmologia e vettori doubly-torqued.
2	MANZAN ELENIA	Controlling Galactic foregrounds in primordial B-mode measurements using spectro-imaging with QUBIC (Q&U Bolometric Interferometer for Cosmology).
3	MARCHI EDOARDO	Optimal transport and search time of active particles in crowded environments.
4	MARIANI FEDERICO MARIA	Astrofisica dei raggi cosmici di ultra alta energia con l'Osservatorio Pierre Auger.
5	MARINO MARCO	Plasma Physics under Extreme Conditions.
6	MARNI STEFANO	Statistical Physics and Phase Behaviour in Biomolecular Systems with Many Components: RandomDNA as a model of superdiverse fluids.

Tuesday 13th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	MARTINI GIANLUCA	Multi-purpose data processing with complex nanostructured systems.
2	MAZZA MATTEO	Un modello di Poland-Scheraga generalizzato dell'architettura della cromatina.
3	MAZZEO ELENA	Search for Higgs boson pair production in the two bottom quarks plus two photons final state using Run3 pp collision data with the ATLAS detector.
4	MAZZOLARI GIOVANNI	Extreme Mass Ratio Inspirals prediction for future LISA mission.
5	MEDINA ELISABETTA	Studio delle performance dell'osservatorio SWGO tramite simulazioni e test su prototipo.
6	MERLA GIULIA	Innovative modelling methods for the sensitivity analysis and uncertainty quantification of Reactor Antineutrino signal.

Tuesday 13th July 2021 - from 15:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	MINARINI CATERINA	Unveiling the long-lasting effect of the star formation process on the evolution of protoplanetary disks.
2	MORGANTE DAVIDE	Flavour Physics in the Standard Model and Beyond: constraining New Physics effects and more.
3	MORI MARTINA	Improving the quality of Radiotherapy by multi-Institutional Knowledge-based planning optimization models.
4	NOTARNICOLA MICHELE NICOLA	Exploiting coherent optical technologies for continuous-variable quantum communication.
5	NOVELLI ALESSANDRO	Sviluppo di un algoritmo di self-calibration mirato a misurazioni di CMB effettuate con un elevato numero di polarimetri.

Wednesday 14th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	DITRANI FABIO ROSARIO	A new constrain on the evolu1on of passive galaxies.
2	PATERNOSTER COSTANZA	Inverse Statistical-Mechanics Methods to Model DNA-Protein and Protein-Protein Interaction.
3	PELUCCHI LORENZO	Gauge-gravity duality. AdS-CFT Correspondence.
4	PERCIAVALLE FRANCESCO	Multipartite entanglement properties of disordered quantum systems.
5	PROFUMO FILIPPO	Development of a hybrid platform for the study of neural spiking activity.
6	RATTI ALESSANDRO	High precision calculations for particle colliders.

Wednesday 14th July 2021 - from 15:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	RICHTER MORITZ FERDINAND	SIC-POVM based Frame Representation of Quantum Correlations and Processes.
2	RIVA GIACOMO	Iron abundance and iron mass in a sample of intermediate-mass galaxy clusters observed with XMM-Newton.
3	ROSSELLI DAMIANO	Redshift Gravitazionale negli Ammassi di Galassie
4	ROSSI LORENZO	Study of the phenomenology of Transverse Momentum Dependent distributions in jet-SIDIS and e+e¤ annihilation.
5	ROSSI VALENTINO	Characterization of LGAD sensors for the High Granularity Timing Detector in the ATLAS Phase-II upgrade project.

Thursday 15th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	BAIG MIRZA	Designing high performance superconductors with nanoparticle inclusion comparisons to strong pinning theory.
2	SUDATI FRANCESCO PAOLO LUIGI	Verifica degli output del nuovo modello numerico ad area limitata e ad alta risoluzione "ICON" sul territorio italiano, di prossimo impiego operativo da parte del servizio meteorologico dell'aeronautica militare.
3	TAGLIABUE DAVIDE MARIA	Threshold resummation of rapidity and transverse momentum distributions in direct QCD.
4	TERUZZI LUCA	Development of Advanced Two-Dimensional Beam Size Diagnostics Based on X-Ray Coherence Measurements with Heterodyne Near Field Speckle.
5	TONANI GIORGIA	Measurement of magnetic dipole moment of baryon and search for new physics via the search of electric dipole moment.
6	UBOLDI LORENZO	Triggering solar neutrinos in DUNE with deep learning techniques.

Thursday 15th July 2021 - from 15:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	ULGIATI ALBERTO	Studio sistematico delle emissioni in banda ottica, X e infrarossa da parte di buchi neri transienti.
2	VISIBILE ANDREA	Search for resonances in the di-photon channel with Run3 data collected with the ATLAS detector at the LHC.
3	ZANNONI RAUL	Proposal for a high accurate measurement experiment of the neutron-neutron scattering length.
4	ARCARI STEFANO	Novel Research in the Dark Matter Quest: Exploiting Cosmic Voids as New Probes.
5	STEL GIOVANNI	Caratterizzazione delle survey di prossima generazione per lo studio dell'intracluster medium negli ammassi di galassie.

Friday 16th July 2021 - from 14:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	BALBONI MARCO	Radio study of the inter-cluster environment.
2	BARONTINI ANDREA	Determination of the N3LO PDFs from deep-inelastic scattering data and computation of single-top production.
3	BERTOLAJA EMANUELE	Applicazione degli algoritmi di Deep Learning all'identificazione di pigmenti e coloranti in uso nelle arti visive.
4	BETTI PIETRO	Studio e ottimizzazione delle prestazioni del calorimetro dell'esperimento HERD per misure di alta precisione di elettroni e positroni nei raggi cosmici.
5	BONFANTI MANUELE	An attractor mechanism for five-dimensional black holes and the holographic interpretation of the entropy.
6	BRIOSCHI MARTA	Low energy excitations of magnetization dynamics and spin texture in quantum materials.
7	BRIVIO RICCARDO	Polarization Analysis of Astrophysical Transients: Study of GRBs & Kilonovae Emission.
8	CARDELLINI COSIMO	Ricostruzione della profondità del massimo dello sciame *X mas* basata su un metodo Deep-Learning usando le stazioni AugerPrime del rivelatore di superficie dell'Osservatorio Pierre Auger.

Monday 19th July 2021 - from 8:30 to 12:30 of the Milan (Summer) time zone

N°	candidate	project title
1	CERVATO BEATRICE	Sviluppo dei rivelatori a pixel per l'esperimento ATLAS a HL-LHC.
2	COLUCCI MICHELE	Studio dell'ottimizzazione della produzione di radionuclidi non convenzionali ad Alta Attività Specifica per applicazioni di tipo teranostico.
3	COSTANTINI ANDREA	Observational Features of F(R) Models Explaining Dark Energy in the Jordan Frame.
4	CUOZZO VIVIANA	Nonlinear structure formation and cosmic radiation backgrounds.
5	D'ALBERTO JACOPO	Pairing and condensation in a two-dimensional Bose-Fermi mixture.
6	DAL SANTO DANIELE	Test of lepton flavor universality in beauty hadron decays at LHCb.

Monday 19th July 2021 - from 15:00 to 17:30 of the Milan (Summer) time zone

N°	candidate	project title
1	DEGNI GIULIA	Cosmic Voids and Their Surroundings: A New Cosmological Probe.
2	DI BARTOLOMEO GIOVANNI	Continuous quantum measurement and feedback models related to gravity: Relativistic generalization and experimental tests.
3	PASQUALE ANDREA	Jet-tagging algorithms using expert-knowledge.

The President of the Committee
Prof. Matteo Paris