UNIVERSITÀ DEGLI STUDI DI TORINO

ANNEX 4

CALL FOR PHD POSITIONS – 35 cycle
PHD PROGRAMME IN COMPUTER SCIENCE

PhD Programme Coordinator	Prof. Marco Grangetto
Department	Computer Science
PhD Programme Length	3 years
PhD web site	http://dott-informatica.campusnet.unito.it/do/home.pl
Course start date	1st November 2019
Departments involved in PhD programme	Computer Science Department

Positions offered by the PhD Programme [1]	
n. 7 positions with scholarship, of which n. 1 reserved to candidates with international qualifications	of which n. 7 funded by the university
n. 2 positions without financial support	

Titles of Research Projects / Research Fields

The list of research projects is available at the end of this PhD Programme's annex. This list may be updated until Call's deadline.

Calendar of entrance examinations

The calendar with information on dates and venues of entrance examinations shall be published on the websites: http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca and http://en.unito.it/research/phd/phd-programmes starting from **9th April 2019**.

Useful information for applicants

Application fee: €50.00 for each application submitted. Candidates with international qualifications are exempted from paying the application fee.

Application fee deadline: 16th April 2019 (mandatory deadline) Candidates who do not pay the application fee within the deadline will be excluded from the competition.

[1] All additional scholarships and apprenticeship contracts (Legislative Decree no. 81/2015 art.), which may become available after the publication of this Call, will be announced on the University websites http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca and http://en.unito.it/research/phd/phd-programmes until Call's deadline.

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CALL FOR POSITIONS	
Admission procedure for all positions	
Assessment of qualifications, research project and interview	
Qualifications to be uploaded on the on-line application	
• Application form (duly signed and including identification document/passport). • For International qualifications: submit on-line documentation as specified in Art. 4 of this Call • For applicants under condition: provision of Bachelor's degree grade, certificate or self-certification with a complete list of academic transcripts concerning the 1st cycle degree (Laurea Triennale) and 2nd cycle degree (Laurea Magistrale) with marks, weighted average and credits along with the total number of credits required for graduation. For applicants applying under condition, please also check Art. 5 of the Call. • For applicants applying under condition, please also check Art. 5 of the Call. • Letters of reference signed by professors or qualified researchers (max 2) (see art. 5 of the Call). • Research project (max 2000 words, bibliography excluded) written in English by the candidate choosing a subject concerning one of the projects offered by the PhD Programme.	
Assessment criteria	**maximum score 100 points**
Assessment of qualifications:	**maximum score 30 points**
Final grade of Italian Laurea Magistrale/second cycle degree. Said L the degree score in 110 scale the points are computed as follows: L=110 and 110 cum laude: 15 points L<=99 (less than or equal to 99): 3 points Otherwise points: L-96 or, for candidates applying under condition, weighted average of examinations taken during the Italian Laurea Magistrale /second cycle degree. Said M the weighted average in 30 scale the points are computed as follows: 29 <M <= 30: 12 points 28 <M <= 29: 11 points 27,5 <M <= 28: 10 points 27 <M <= 27,5: 8 points 26,5 <M <= 27: 6 points 26 <M <= 26,5: 5 points 25,5 <M <= 26: 4 points	maximum score 15 points

25 <M <= 25,5: 3 points 24,5 <M <= 25: 2 points 24 <M <= 24,5: 1 point M <= 24: no points The weighted average will be considered in the assessment only if the total number of credits not yet awarded is less than 50% of the total number of credits required for graduation.	
Publications Max 2 points for each publication (max 2 publications with evidence of acceptance will be assessed)	maximum score 4 points
Other qualifications Each additional qualification pertinent with the field of computer science with a recognised scientific value can be awarded maximum 1 point, up to a maximum of 2 points.	maximum score 2 points
Reference letters from professors or qualified researchers (max 2 letters)	maximum score 4 points
Research project	maximum score 5 points
Minimum threshold for admission to the interview	*15 points*
Oral interview	**Maximum score: 70 points**
Minimum threshold for passing the interview	*30 points*

Further information on examinations:

The research project (max 2000 words, bibliography excluded) elaborated in English by the candidate choosing a title within those mentioned in the PhD Programme. It must focus on the following:
a) state of the art of the chosen subject;
b) goals of the project;
c) innovation with respect to the state of the art.
The examining board will evaluate the scientific relevance of the project, the expected goals and the scientific impact of the results.

The interview will include a discussion of the proposed research project and, on request of the candidate and duly authorised by the examining board, may be taken via Skype (art. 8 of the Call).

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Titoli progetti di ricerca

Dottorato di Ricerca in Informatica

Titles of research projects

PhD Programme in Computer Science

For further details on the research project offered by the PhD program please refer to the link https://dott-informatica.campusnet.unito.it

1. Reti Complesse per le Scienze Sociali Computazionali/Complex Networks for Computational Social Science (prof. Giancarlo Ruffo)
2. Algoritmi di apprendimento automatico con garanzie di privacy in domini complessi/Privacy-preserving machine learning in complex domain (prof. Ruggero G. Pensa)
3. Modellazione, Verifica e Riuso di Sistemi / System Modelling, Verification and Reuse, (prof. Ferruccio Damiani)
4. Modelli di programmazione paralleli per applicazioni moderne: AI and BigData/Parallel programming models for modern applications: AI and BigData, (prof. Marco Aldinucci)
5. Open Five: un progetto di ricerca di open science, con software open source, su robot open hardware, con open data, open culture/A reserach project conjugating open science with open software, on open hardware, using open data, for the open culture, (prof. Rosa Meo)
6. Cyber-Physical Systems, prof. Enrico Bini
7. Fondazioni Logiche dei modelli di computazione, (prof. Luca Paolini)
8. Programming Languages, (prof. Luca Padovani)
9. Artificial Intelligence for Dependable and Critical Systems, (prof.Luigi Portinale)
10. Model checking quantitativo/Quantitative Model Checking, prof. Jeremy Sproston
11. Mining, retrieval e analisi di processi di business /Mining, retrieval and analysis of business process models , (prof. Stefania Montani)
12. Sistemi avanzati di Ontology Learning e Open Information Extraction basati su tecniche di Natural Language Processing, Machine Learning ed integrazione di risorse semantiche/Advanced Ontology Learning and Open Information Extraction systems based on Natural Language Processing, Machine Learning and integration of semantic resources, (prof. Luigi Di Caro)
13. Reti neurali cognitivamente plausibili/Cognitively plausible neural networks, (prof. Valentina Gliozzi)
14. Tecniche Avanzate di Intelligenza Artificiale e di Basi di Dati Temporali in Medicina: Teoria ed Applicazioni / Advanced Artificial Intelligence and Temporal Database Techniques in Healthcare: Theory and Applications, (prof. Paolo Terenziani)
15. Accountability computazionale/Computational accountability, (prof. Matteo Baldoni, Cristina Baroglio, Roberto Micalizio)
16. Interazione e coordinazione di sistemi multiagente basata su relazioni sociali /Interaction and coordination based on social relationships for Multiagent Systems, (prof. Matteo Baldoni, Cristina Baroglio)
17. Crowdmapping/Crowdmapping, (prof. Guido Boella)
18. Applicazioni di blockchain e smart contract/Blockchain applications and smart contracts, (prof. Claudio Schifanella)

19. Linguaggio e mappe dell'odio in rete/Language and maps of hate speech online, (prof. Viviana Patti)
20. Explainable inferences in Artificial Intelligence Systems, (prof. Luca Console)
21. Computer vision and deep learning for multi-dimensional imaging/ Visione artificiale e deep learning per immagini multi-dimensionali, (prof. Marco Grangetto)
22. Conversational Interfaces and Natural Language Generation for Artificial Intelligence / Interfacce conversazionali e generazione automatica del linguaggio naturale per l'intelligenza artificiale , (prof. Alessandro Mazzei)
23. Cognitive Architectures for Virtual Agents, (prof. Antonio Lieto, Rossana Damiano)
24. Computational approaches and reources for stance and stereotype detection (prof. Cristina Bosco)
25. Knowledge representation and plausible reasoning in AI/ Rappresentazione della conoscenza e plausible reasoning in AI, (prof. Laura Giordano, Daniele Theseider Dupré)
26. Sistemi intelligenti basati su modellazione dell'utente per soggetti fragili / Intelligent systems for fragile people, (prof. Cena Federica)
27. Bioinformatics work-flow for the reproducible analysis of massive sequencing data./Work-flow bioinformatici per analisi riproducibile di dati di sequenziamento massivi, (prof. Marco Beccuti, Francesca Cordero)
28. Interfacce utente intelligenti / Intelligent user Interfaces, (prof. Cristina Gena)
29. Modeling, simulation and analysis of the propagation of ideas over social networks, (prof. Rossano Gaeta, Michele Garetto)
30. Elaborazione di immagini biomediche/Biomedical image processing, (prof. Davide Cavagnino, Maurizio Lucenteforte)
31. SafeML: Machine learning for critical system we can rely upon / Intelligenza artificiale affidabile per la costruzinoe di sistemi critici sicuri, (prof. Marco Botta and Susanna Donatelli)
32. Ottimizzazione nei sistemi sanitari / Operational Research Applied to Health Services, (prof. Roberto Aringhieri e Andrea Grosso)
33. Apprendimento per ottimizzazione / Learning for optimization, (prof. Roberto Aringhieri e Andrea Grosso)
34. Lexical resources for the semantic analysis of natural language, (prof. Daniele Radicioni)
35. Leveraging Big Data Analysis to understand emerging phenomena in complex systems, (prof. Maria Luisa Sapino)
36. Logics for Computational Creativity, (prof. Viviana Bono, Antonio Lieto, Gian Luca Pozzato)
37. Logiche descrittive preferenziali per la revisione di ontologie /Preferential Description Logics for Ontology Revision, (prof. Roberto Micalizio, Gian Luca Pozzato)
38. Data Science for Social Good (prof. Rossano Schifanella)
39. Tecnologie semantiche e sentiment analysis per la valorizzazione dei beni culturali /Semantic Technologies and sentiment analysis to enhance the value of cultural heritage (Tutor:Anna Goy, Rossana Damiano, Viviana Patti)