ANNEX A - NATIONAL PHD PROGRAMME IN ARTIFICIAL INTELLIGENCE - ACADEMIC YEAR 2021/2022 (37th CYCLE)

National PhD Programme in Artificial Intelligence	
	ACADEMIC YEAR **2021/2022**
Security e Cybersecurity Area	
Coordinator Prof. Daniele Nardi	
Administrative headquarters Dipartimento di Ingegneria Informatica Automatica e Gestionale "Antonio Ruberti"	
Degree title required for admission	Italian laurea magistrale/specialistica or any equivalent academic degree obtained abroad (generally equivalent to a Master Degree)
Outcome of the selection procedure	ranking of candidates for the entire PhD Programme
Available positions	**Total 31** *of which* **28 with grant** **3 industrial PhD**

Details of the grants:	**4** grants co-financed by Sapienza Università di Roma and CNR through FOE funds
	1 grant financed by Sapienza Università di Roma
	3 grants financed by Fondazione Bruno Kessler on the topics:
	   - *A formal approach to trustworthy autonomy*
	   - *Automated Security Assistants for Confidential Computing*
	   - *TINY-ML for end-to-end audio processing on IOT devices*
	2 grants financed by Università di Cagliari, of which one co-financed by MUR through FFO funds, both on the topic of *Safe and Robust Machine Learning approaches for the detection and analysis of cyber threats with a specific focus on malware and malware vectors*
	3 grants financed by Università di Genova, of which 2 co-financed by MUR through FFO funds, on the topic of *Trustworthy and Sustainable AI*
	2 grants co-financed by Università Libera di Bolzano and MUR through FFO funds
	3 grants co-financed by Università di Brescia and MUR through FFO funds
	3 grants co-financed by Università della Calabria and MUR through FFO funds
	2 grants co-financed by Politecnico di Bari and CNR through FOE funds
	1 grant financed by Dipartimento di Ingegneria Informatica Automatica e Gestionale "A. Ruberti" di Sapienza Università di Roma on the topic of *Foundations, Techniques and Tools for Reasoning about Actions under Temporal Specifications, Planning in Nondeterministic Domains, and Non-Markovian Reinforcement Learning in Autonomous Systems (cf. ERC Advanced WhiteMech <https://whitemech.github.io>)*
	1 grant co-financed by CNR-Istituto di Informatica e Telematica sede di Pisa and CNR through FOE funds on the topic of *Edge-based collaborative and privacy preserving AI for cyber security applications in multi-modal transport systems*
	1 grant co-financed by Università di Bergamo and MUR through FFO funds on the topic of *Security and privacy policies: Models, languages and techniques*
	1 grant co-financed by Università del Sannio and MUR through FFO funds on the topic of *Application and network security*
	1 grant co-financed by Università di Camerino and MUR through FFO funds on the topic *Formal verification of security protocols in Distributed Ledger Technologies*

	3 industrial PhD positions available for Babelscape Srl employees on the topics:
	    - *Multilingual information extraction and knowledge acquisition*
	    - *Multilingual text summarization*
	    - *Multilingual sentence representations and its applications*

Notes	*Agreements with other institutions/universities are being finalised to finance additional grants. In this case, the number of available positions will be increased*
Selection criteria	Evaluation of curriculum and research project; interview
Curriculum and research project:	The evaluation of the curriculum and the research project will be conducted as follow: ● Up to 30 points for the evaluation of the curriculum (including academic career and other titles), reference letters, and publications ● Up to 30 points for the research project submitted by the candidate. The project will be evaluated particularly taking into account the description of the state of the art, the originality and innovative content, the clarity and completeness of the objectives, methodologies, and potential results, the relevance of the project with the educational objectives of the Doctorate. **Minimum score to qualify: 40 out of 60**
Interview	**Videoconference** YES During the interview, aspects concerning the qualifications presented and the project will be deepened and clarified. The interview will also assess the candidate's knowledge, aptitude for research, willingness to conduct training in Italy and abroad, and interest in scientific deepening. **Minimum score to qualify: 28 su 40**
Test schedule	**The test schedule and venue will be published on July 15th, 2021 at** https://phd.uniroma1.it/web/NATIONAL-PHD-IN-ARTIFICIAL-INTELLIGENCE_nD3764_EN.aspx. **The list of candidates invited for the interview will be published on the same website (https://phd.uniroma1.it/web/NATIONAL-PHD-IN-ARTIFICIAL-INTELLIGENCE_nD3764_EN.aspx) at least 5 days before the interview**
Information on the teaching	**Description and objectives of the course:** Since enrolled PhD students are involved in a unique, joint and shared educational-scientific project of the National Doctorate in Artificial Intelligence, they can carry out their research and training activities in the different universities / institutions involved. PhD students are guaranteed an effective sharing of the structures necessary for carrying out the teaching and research activities aimed at the realization of the doctoral project. **Website of the course:** https://phd.uniroma1.it/web/NATIONAL-PHD-IN-ARTIFICIAL-INTELLIGENCE_nD3764_EN.aspx https://www.phd-ai.it/