



Decree of the Rector n. 1195 of 21/11/2023
Competition for awarding 1 research grant at the University of Udine

DISCLAIMER:

The official and legally binding call for applications is in Italian only. This document cannot be used for legal purposes and is only meant to provide information in English on the call for applications (Decree of the Rector n. 1195 of 21/11/2023). Please refer to the official call published on: <https://www.uniud.it/it/albo-ufficiale>

Any change and integration will be made available on the above mentioned web page. Therefore, no personal written communication regarding the examination date and/or competition results shall be provided to applicants.

Annex 1

Competition announcement for the assignment of 1 research grant at the University of Udine, entitled “Study and Development of Artificial Intelligence Techniques for Automatic Analysis of Multimedia Data on Social Media” SSD: SPS/08 (principal investigator, Manuela Farinosi)

Art. 1

A selection procedure is hereby launched for the award of 1 research grant at the University of Udine, as identified in Attachment A which constitutes an integral part of the present announcement.

The research grant is linked to the research project and is subject and conditioned upon the relative funding.

The fellowship may be renewed, in compliance with Art. 22, Law No. 240 of 30 December 2010 (as in the text in force before the implementation of the Conversion Law of the D.L. 36/2022, L. 79/2022), Law No. 11 of 27 February 2015, and the current regulations of the University of Udine for awarding research grants, issued with the Rector’s Decree No. 182 of 31 March 2021. The renewal is subject to the scientific coordinator’s positive assessment of the researcher’s activities, an adequate scientific rationale, and a corresponding financial covering.

The research fellowship does not give rise to any right with regards to accessing University posts.

Any personal communication to candidates related to this selection will be sent exclusively to the email address indicated when registering for the selection, as mentioned in Art. 5.

Art. 2

The research grant described in this competition announcement and the required qualifications to apply for the position are identified in Attachment A. The lack of the admission requirements leads to the automatic exclusion from the competition procedure.

Possession of a PhD or equivalent degree obtained abroad or, only for the interested areas, of a medical specialization accompanied by an adequate scientific production, constitutes a preferential qualification for awarding the research fellowship of this selection, if it has not been provided as a mandatory requirement.

For the only purpose of the admission to the competition, the Examining Board (Art. 7) shall assess the equivalence of the qualification obtained abroad, except for the evaluation of the medical specialization



qualification to which Article 38 of the Legislative Decree 165/2001 and subsequent modifications and additions, and EU regulations on the matter, shall be applied.

The Examining Board will proceed to the evaluation of the qualification obtained abroad according to the documentation attached to the application form. The Examining Board may exclude the candidate if the submitted documentation does not provide sufficient information for the assessment.

Therefore, applicants must enclose all the documentation in their possession relating to their qualification in order to provide the Examining Board with sufficient information for assessment.

Candidates holding a qualification issued by a **European Research Area country**, if successful, must submit, if not already attached to the application form one of the following options:

- Supplement Diploma in English issued by the competent University.
- CIMEA Certificate of comparability of the foreign qualification, issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplome" service at <https://cimea.diplome.eu/udine/#/auth/login>

Candidates holding a qualification issued by a **non-European Research Area country**, if successful, must submit, if not already attached to the application form one of the following options:

- Declaration of the on-site value of the qualification and the certificate relating to the degree with examinations and grades. A certificate in a language other than Italian or English must be accompanied by an official translation into one of these languages (certified by the competent diplomatic-consular authority or certified by a court in Italy).
- CIMEA Certificate of comparability of the foreign qualification, issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplome" service at <https://cimea.diplome.eu/udine/#/auth/login>

If the Supplement Diploma or the statement/attestation of comparability are not available when signing the contract, the applicant must demonstrate that he/she has requested the documentation and submit it as soon as possible.

Any exclusion from the selection procedure due to lack of eligibility requirements, absence of required documents, failure to sign the selection application or submission of the selection application in a manner different from what is provided for in this call for applications will be communicated to applicants exclusively at the email address indicated in the application form.

Art. 3

The research grant referred to in this call for applications cannot be awarded:

- a. to employees of Universities and the entities referred to in Article 22, section 1, of Italian Law no. 240 of 30 December 2010 (in the text prior to the reform introduced by Law no. 79 of 29 June 2022);
- b. to those who have already been awarded research grants pursuant to Italian Law no. 240 of 30 December 2010 (prior to the reform introduced by Law no. 79 of 29 June 2022) for the maximum period provided by law, even if not continuously, excluding the period in which the grant was used in conjunction with the doctorate, up to the legal term of the relative course;
- c. to those who have already benefited from research grants and fixed-term researcher contracts provided for, respectively, in Articles 22 and 24 of Italian Law no. 240 of 30 December 2010 (in the text prior to the reform introduced by Law no. 79 of 29 June 2022), for a total of 12 years, even if not consecutive;
- d. to anyone who has a degree of kinship or affinity, up to and including the fourth degree, with:
 - the Rector, the Director General or a member of the Board of Directors of the University of Udine;



- the scientific supervisor or a professor/researcher belonging to the department or organisation hosting the research grant in question.

The research grant provided for in this call for applications cannot be combined:

- a) with scholarships of any kind, except for those granted by Italian or foreign institutions to supplement, by means of stays abroad, the fellow's training or research activities;
- b) with other research grants;
- c) with an employment relationship, even if part-time, without prejudice to the relevant provisions for employees of public administrations.

The grant awarded under this call for applications is also incompatible with simultaneous attendance at university degree courses, either Bachelor's degree or Master's degree courses, research Doctorates with scholarships and medical specializations, in Italy or abroad.

Art. 4

Applicants must enclose with their application, under penalty of exclusion, the following documents:

- a) their professional scientific CV, highlighting the candidate's aptitude for carrying out and implementing the research project (Attachment A);
- b) their identity card, their passport or any other identification document¹;
- c) (for candidates with a foreign qualification only) certification or self-certification of both the academic qualification required for the admission to the selection, and of the exams (with evaluation) took during the period of study abroad, and of any other document that can be useful to the evaluation of the degree by the Examining Board.

Applicants can attach to the application, publications and any other certification considered useful to demonstrate the qualification based on the research program (Attachment A) and to certify any research activity accomplished at public or private institutes (indicating the starting and ending date and the duration).

The documents and qualifications mentioned above must be submitted in Italian or English. Those that are not as requested will not be evaluated. Documents originally written in a language other than Italian or English must come with a translation in Italian or English, that the candidate will do on its own responsibility. The translation can be an abstract concerning the thesis.

Italian and Community candidates wishing to submit qualifications referring to conditions and facts attested by Public Administrations must proceed exclusively with self-certification.

Non-EU citizens legally residing in Italy may self-certify only data that can be verified or certified by Italian public bodies. They may also use declarations in lieu when provided for by an international convention between Italy and the declarant's country of origin.

Non-EU citizens not residing in Italy cannot self-certify.

Only the qualifications possessed by the candidate on the date the application form is submitted and submitted in accordance with the procedures set out in Article 5 will be assessed.

Failure to submit mandatory documents provided for in this article will constitute grounds for exclusion from the selection.

¹ Please be aware that the residence permit is not an identification document.



Art. 5

The submission of the applications for the present call starts on November 30, 2023 at 2:00 pm (Italian time) and ends on February 29, 2024 at 2:00 pm (Italian time).

The application to take part in the selection must be completed, under penalty of exclusion, using the appropriate online procedure, available at the link <https://pica.cineca.it/>. The procedure involves an applicant registration step, for those who do not already have an account, and then an application completion step.

Once completed, the online application must be signed in the manner described in the online procedure (manual signature with attached identity document or digital signature), under penalty of exclusion from selection. The application does not have to be signed if you access the above-mentioned online procedure using your SPID ID.

The qualifications referred to in Article 4 must be attached to the application in .pdf format. Individual .pdf files may not exceed 30MB.

The application for participation in the selection is automatically sent to the University of Udine with the definitive closing of the online procedure.

The University Administration:

- is not responsible if it is impossible to read the submitted documentation in electronic format due to damaged files;
- shall not accept or take into consideration qualifications or documents received in paper form or by any means other than what is specified in this article.

Reference to documents or publications already submitted in connection with other competitions is not allowed.

The Administration is not responsible for any missing document or communication because of inaccurate indication of residence and/or address submitted by the candidate during the application. Also, the Administration is not responsible if the candidate has not communicated changes in this information, or has communicated them too late. The Administration is also not responsible for any postal or telegraphic problems not attributable to the Administration itself.

Applicants are advised not to wait until the last few days before the closing date to submit their application. The University accepts no responsibility for any malfunctions due to technical problems and/or overloading of the communication line and/or application systems.

Art. 6

The selection procedure is held in accordance with the modality indicated in Attachment A.

The test will aim to assess the general preparation, experience and aptitude for research of the candidate. It will consist in the evaluation of the professional scientific curriculum, of the publications and qualifications presented, and of the interview, where foreseen.



Art. 7

The Examining board for the competition is identified in Attachment A of the present competition announcement, of which it is an integral part.

At its first meeting, the Examining board shall appoint its President and Secretary, and establish the criteria and methods for evaluating the qualifications and the interview, where foreseen.

The results of the qualifications assessment must be disclosed to applicants during the interview, where foreseen.

The Examining board can award a maximum of 100 points (one hundred out of one hundred) to the selection.

At the end of the evaluation procedure, the Examining board shall formulate the general merit list based on the overall score of each candidate, and draw up the minutes of the whole competition procedure.

Based on the ranking list, the assignment is awarded to candidates who have obtained a minimum overall score of 70/100 (seventy out of one hundred).

The Examining board's judgement is final.

The ranking list will be made public exclusively through publication on the University's official website.

Applicants will not be notified of the outcome of the evaluation.

Those who do not declare their acceptance of the research grant and do not present themselves at the research centre within the deadline communicated by the latter, even if not formally, shall lose the right to receive it. Exceptions to this term will only be granted in cases of documented force majeure.

Art. 8

The research activity cannot be started before signing the contract defining the terms and conditions of the collaboration.

The activity covered by the research grant must have the following characteristics:

- a) it must be carried out as part of the research programme covered by the grant and not be a merely technical support to it;
- b) it must have a close connection with the realization of the research program for which the winner of the grant has been awarded the contract;
- c) it must be continuous and, in any case, temporally defined, not merely occasional, and in coordination with the overall activity of the University;
- d) it must be carried out autonomously, solely within the limits of the programme prepared by the programme supervisor, without predetermined working hours.

The researcher is required to submit a detailed written report on the work carried out and the results achieved, accompanied by the opinion of the scientific supervisor, to the reference organisation at the intervals set out in the contract. The researcher must also submit interim reports and timesheets, if requested by the reference organisation.

Either the fellow or the reference organisation may withdraw from the contract.



The reference organisation may terminate the contract not only in the cases referred to in Article 9, sections 2 and 3, of the "Internal rules for awarding research grants pursuant to law 240 of 30 December 2010" of the University of Udine, but also in the event the research project and therefore the financial coverage on which the research grant is based cease to exist.

Art. 9

The following legal dispositions shall apply to the grant referred to in this call for applications:

- for tax matters, the provisions of Article 4 of Italian Law no. 476 of 13 August 1984, as subsequently amended and supplemented;
- for social security matters, the provisions of Article 2(26) *et seq.* of Italian Law no. 335 of 8 August 1995, as subsequently amended and supplemented;
- for mandatory maternity leave, the provisions of the Italian Ministerial Decree of 12 July 2007;
- with regard to sick leave, the provisions of Article 1(788) of Italian Law no. 296 of 27 December 2006 and subsequent amendments.

During the period of mandatory maternity leave, the allowance paid by INPS according to Art. 5 of the Italian Ministerial Decree of 12 July 2007 is supplemented by the University up to the full amount of the research grant.

The grant will be paid in monthly instalments.

Art. 10

The data collected as part of the procedure referred to in Art. 5 are necessary to properly manage the selection procedure, for any subsequent management of the research grant and for purposes related to managing services provided by the University. The University of Udine is the Data Controller. At any time, the data subject may request access, rectification and, depending on the University's institutional purposes, cancellation and restriction of processing or oppose the processing of their data. The data subject can always lodge a complaint with the Italian Data Protection Authority. The complete disclosure is available on the University of Udine website in the "Privacy" section, accessible from the home page www.uniud.it Direct Link: <https://www.uniud.it/it/it/pagine-speciali/guida/privacy>

Art. 11

For all matters not expressly mentioned in this call for applications, refer to the regulations in force on the subject cited in the introduction and to the "Internal rules for awarding research grants pursuant to Italian Law no. 240 of 30 December 2010" of the University of Udine, issued by Rector's Decree no. 182 of 31 March 2021.

Art. 12

The procedure supervisor is Dr Sandra Salvador, Head of the Research Services Area of the University of Udine.

The Responsible office at the University of Udine is "Area Servizi per la Ricerca - Ufficio Formazione per la Ricerca", via Mantica n. 31 - 33100 Udine, Italia.

To request information about the call for applications, please complete the following form available on the University of Udine website:

https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42105



Attachment A

Responsabile scientifico della ricerca / Principal investigator:

Nome e cognome / Name and surname: Manuela Farinosi
 Qualifica / Position: Professoressa Associata / Associate Professor
 Dipartimento / Department: Scienze Matematiche, Informatiche e Fisiche (DMIF) / Mathematics, Computer Science and Physics
 Area MUR / Research field: 14 - Scienze politiche e sociali
 Settore concorsuale e Settore scientifico disciplinare / Scientific sector: 14/C2; SPS/08 - Sociologia dei processi culturali e comunicativi

Titolo dell'assegno di ricerca / Topic of the research fellowship "assegno di ricerca":

I bandi sono consultabili dal sito dell'Ateneo, del MUR e di Euraxess / The calls are available on the University, MUR and Euraxess websites

Testo in italiano:

Studio e Sviluppo di Tecniche di Intelligenza Artificiale per l'Analisi Automatica di Dati Multimediali su Social Media.

Text in English:

Study and Development of Artificial Intelligence Techniques for Automatic Analysis of Multimedia Data on Social Media.

Obiettivi previsti e risultati attesi del programma di ricerca in cui si colloca l'attività dell'assegnista di ricerca / Foreseen objectives and results of the research programme performed by the research fellow "assegnista di ricerca":

I bandi sono consultabili dal sito dell'Ateneo, del MUR e di Euraxess / The calls are available on the University, MUR and Euraxess websites

Testo in italiano:

Abstract del progetto	Il tema di ricerca di questo assegno riguarda l'uso di tecniche di AI (classificazione, clustering, ecc.) per effettuare big data analytics al fine di estrarre informazioni utili da dati multimediali (testuali, immagini, video, etc.) provenienti da social media. Ci si concentrerà sia sullo sviluppo temporale dei post sia sulle caratteristiche dei profili/utenti e sulle loro attività.
Obiettivi del progetto	Il progetto ha come principale obiettivo quello di estrarre informazioni significative e rilevanti da dati multimediali (testuali, immagini, video, etc.) provenienti dalle piattaforme di social media utilizzando le recenti tecniche di AI (classificazione, clustering, ecc.) per effettuare classificazione e analisi. Ci si concentrerà sia sullo sviluppo temporale dei post sia sulle caratteristiche dei profili/utenti e sulle loro attività.
Stato dell'arte	L'Intelligenza Artificiale (Artificial Intelligence - AI) è una delle tematiche che in questi ultimi anni sta aprendo interessanti prospettive e opportunità, in ambito sia accademico sia industriale. In ambito accademico la comunità scientifica è impegnata principalmente su due direzioni: lo sviluppo di nuove metodologie/algoritmi e l'utilizzo di metodologie di AI in ambiti affini quali la medicina, la biologia, l'automotive, analisi di comportamenti sociali ecc. Questo sforzo ha portato, attraverso l'utilizzo di grandi



	quantità di dati, a un importante progresso scientifico. Parallelamente anche il settore industriale sta da tempo investendo ingenti quantità di risorse economiche (si pensi ad esempio a Google, Facebook, Amazon, Microsoft e Apple) in startup e in competenze tecniche sull'AI al fine di automatizzare servizi e processi, quali virtual assistant, biometric recognition, sistemi AI per la gestione automatica del magazzino o dei processi decisionali.
Descrizione del progetto	L'attività specifica dell'assegnista di ricerca sarà organizzata in accordo ai principali obiettivi del progetto e cercherà di focalizzarsi sulle metodologie e tematiche di ricerca di interesse del Dipartimento. L'assegnista dovrà svolgere attività di ricerca al fine di ottenere almeno una pubblicazione a una conferenza scientifica internazionale di particolare rilevanza nel settore d'interesse e la redazione di un articolo scientifico per una rivista internazionale di buon livello (classe 1, classe 2).
Possibili potenzialità applicative	Risultati scientifici attesi: <ul style="list-style-type: none"> • Sviluppo di algoritmi di intelligenza artificiale per la classificazione di dati multimediali provenienti da social media. • Pubblicazione di un articolo a conferenza scientifica internazionale di particolare rilevanza nel settore dell'intelligenza artificiale. • Redazione di un articolo scientifico per una rivista internazionale di buon livello (classe 1, classe 2).
Bibliografia	[1] Aggarwal, Charu C. <i>An introduction to social network data analytics</i> . Springer US, 2011. [2] Amato, Flora, et al. "Extreme events management using multimedia social networks." <i>Future Generation Computer Systems</i> 94 (2019): 444-452. [3] Ferraro, Antonino, Vincenzo Moscato, and Giancarlo Sperli. "Deep learning-based community detection approach on multimedia social networks." <i>Applied Sciences</i> 11.23 (2021): 11447. [4] Zhao, Sicheng, et al. "Real-time multimedia social event detection in microblog." <i>IEEE transactions on cybernetics</i> 48.11 (2017): 3218-3231.

Text in English:

Abstract	The research topic of this fellowship concerns the use of AI techniques (classification, clustering, etc.) to perform big data analytics in order to extract useful information from multimedia data (text, images, videos, etc.) on social media. We will focus both on the temporal evolution of the posts and on the characteristics of the profiles/users and their activities.
Objectives of the project	The main goal of the project is to extract meaningful and relevant information from multimedia data (text, images, videos, etc.) coming from social media platforms using the most innovative AI techniques (classification, clustering, etc.) to perform big data analytics. The focus will be both on the temporal evolution of the posts and on the characteristics of the profiles/users and their activities.
State of the art	In recent years, Artificial Intelligence (AI) is a key topic that is opening up new prospects and opportunities both in the academic and industrial fields. In the academia, the scientific community is principally engaged in two directions: development of new



	methodologies/algorithms and use of AI methodologies in related fields such as medicine, biology, automotive, analysis of social behavior, etc. This effort has led, through the use of large amounts of data, to important scientific progress. At the same time, the industrial sector has also been investing large amounts of money (think, for example, of Google, Facebook, Amazon, Microsoft, and Apple) in startups and AI skills in order to automate services and processes, such as virtual assistants, biometric recognition, AI systems for the automatic management of the warehouse or decision-making processes.
Project description	The specific activity of the research fellow will be organised in accordance with the main objectives of the project and will seek to focus on research methodologies and topics of interest to the Department. The research fellow must carry out research activities in order to obtain at least one publication at an international scientific conference, relevant in the area of interest, and prepare a paper for a good international journal.
Possible application potentialities	Expected scientific results: <ul style="list-style-type: none"> • Development of artificial intelligence algorithms for social data analytics. • Publication of an article at an international scientific conference of particular relevance in the field of artificial intelligence. • Drafting of a scientific article for a good international journal
References	[1] Aggarwal, Charu C. <i>An introduction to social network data analytics</i> . Springer US, 2011. [2] Amato, Flora, et al. "Extreme events management using multimedia social networks." <i>Future Generation Computer Systems</i> 94 (2019): 444-452. [3] Ferraro, Antonino, Vincenzo Moscato, and Giancarlo Sperli. "Deep learning-based community detection approach on multimedia social networks." <i>Applied Sciences</i> 11.23 (2021): 11447. [4] Zhao, Sicheng, et al. "Real-time multimedia social event detection in microblog." <i>IEEE transactions on cybernetics</i> 48.11 (2017): 3218-3231.

Struttura dell'Università di Udine presso la quale verrà sviluppata l'attività di ricerca / Department or other structure of the University of Udine where research activities will be carried out:

Dipartimento di Scienze Matematiche, Informatiche e Fisiche (DMIF) / Department of Mathematics, Computer Science and Physics

Importo dell'assegno di ricerca (al lordo oneri carico assegnista) / Total grant gross for the research fellowship:

€ 19.367,00

Durata dell'assegno di ricerca / Duration of the research fellowship "assegno di ricerca":

12 mesi / months



Finanziamento / Financed by:

La copertura finanziaria graverà sui fondi/progetto:

- Risorse d'Ateneo: bando interno finanziamento assegni 2023 (D.R. n. 406/2023);
- Progetto finanziato dalla Regione FVG dal titolo "Supporto alla diagnosi di malattie rare tramite l'intelligenza artificiale abbreviando il percorso verso la diagnosi di MR attraverso l'applicazione di tecnologie digitali avanzate che consentano il sospetto / identificazione di malattie rare". CUP F53C22001770002. Codice U-GOV: Convenzione_ASUFC_MalattieRare_2023_Foresti.

Requisiti di ammissione / Minimum qualifications necessary:

- Possesso del titolo di Dottore di ricerca o titolo equivalente conseguito all'estero;
- possesso di un curriculum scientifico professionale idoneo allo svolgimento dell'attività di ricerca contemplata.
- Research doctorate or equivalent qualification obtained abroad;
- professional scientific curriculum suitable for the research activity above mentioned.

Procedura selettiva / Competition procedure:

Valutazione per titoli e colloquio / Evaluation of titles and oral exam

I risultati della valutazione dei titoli saranno resi noti agli interessati nel corso del colloquio / The evaluation of the qualifications will be disclosed to candidates during the interview

Calendario del colloquio / Calendar of the oral exam	Modalità / Modality	In presenza / On site
	Data / Date	20 marzo / March 2024
	Ora / Time	14:30 / 2:30 pm (Italian time)
	Luogo / Place	Sala riunioni del Dipartimento di Scienze Matematiche, Informatiche e Fisiche (DMIF) / Meeting room of the Department of Mathematics, Computer Science and Physics

Per sostenere il colloquio i candidati devono esibire un valido documento di riconoscimento. / Candidates must come to the interview with a valid identity document.

Eventuali variazioni saranno rese note esclusivamente mediante pubblicazione all'albo ufficiale on line dell'Ateneo / Any change will be made public solely through publication on the University web site http://web.uniud.it/ateneo/normativa/albo_ufficiale



Commissione giudicatrice / Examining Board:

Nome e Cognome	Qualifica	SSD	Università
Membri Effettivi / Permanent members			
Gian Luca Foresti	PO	INF/01	Università degli Studi di Udine
Manuela Farinosi	PA	SPS/08	Università degli Studi di Udine
Claudio Piciarelli	PA	INF/01	Università degli Studi di Udine
Membro Supplente / Temporary member			
Carlo Drioli	PA	ING-INF/05	Università degli Studi di Udine