Decree of the Rector n. 805 of 16/10/2026
Competition for awarding 1 research assignment 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. 805 of 16/10/2026). 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

Call for applications for the award of 1 research assignment at the University of Udine on the topic "Design, development, and evaluation of an integrated virtual reality, augmented reality, and embodied agents environment to support psychophysical well-being" GSD: 01/INFO-01, SSD: INFO-01/A (scientific supervisor, Luca Chittaro).

Article 1

A selection process has been arranged for the award of a research assignment at the University of Udine to carry out the research activity specified in Annex A, which is an integral and substantial part of this call for applications.
The research assignment is linked to the research project which will bear the relevant costs and is subject to the relevant funding.
The research assignment does not entitle the successful applicant to any rights as regards access to permanent posts at the University.
Any personal communications to applicants relating to this selection will be sent exclusively to the email address indicated during the application process.

Article 2

Young scholars who, at the time of submitting their application, have been in possession of a **master's degree or a single-cycle degree** for no more than six years and have a *curriculum vitae* suitable for assisting in the conduct of the research activities are eligible for the research assignment. In order to take part in the selection procedure, applicants **must not have reached the age of forty years** on the closing date of this call for applications.

The Examining Board shall proceed to assess the qualification obtained abroad on the basis of the documentation enclosed with the application to take part in the selection and may exclude any applicant if the documentation submitted does not provide sufficient elements for the assessment.

Applicants are therefore invited to enclose all documentation in their possession relating to their qualifications in order to provide the Examining Board with sufficient elements to assess their position.

Without prejudice to the provisions of Article 4 of the Regulations for the awarding of research assignments pursuant to Article 22-ter of Law no. 240 of 30 December 2010, applicants may not participate in the selection process if they:

- have held research assignments, even those held at different institutions, for a period which, when added to the total duration of the assignment that is the subject of this call for applications, is equal to or greater than a total of three years, even if the assignments were not continuous. The maximum time limit of three years can only be waived in order to implement specific EU research funding actions under the Marie Skłodowska-Curie (MSCA) programme;
- have benefited from fixed-term researcher contracts pursuant to Article 24 of Law no. 240 of 30 December 2010 and belong to the permanent staff of universities, public research organisations and institutions whose postgraduate scientific diploma has been recognised as equivalent to the PhD degree qualification pursuant to Article 74(4), of Presidential Decree no. 382 of 11 July 1980;
- have 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 Governors of the University of Udine, the Scientific Supervisor or a professor/researcher belonging to the relevant department or entity where the research assignment is to be carried out.

Any additional requirements are set out in Annex A and must be met at the time the application is submitted.
Failure to meet the admission requirements will result in the applicant's **exclusion** from the selection process.
Applicants are admitted conditionally to the selection process and their exclusion, for failure to meet the requirements, may be ordered at any time with a measure indicating the reasons.

Article 3

The research assignment in this call for applications is incompatible:

a. with attendance in courses for university degrees, specialised or master's degrees, PhD or specialisation courses in the medical field, in Italy and abroad, without prejudice to the possibility of implementing specific European Union research funding actions under the Marie Skłodowska-Curie (MSCA) programme;
b. with PhD scholarships or other scholarships, for whatever reason, awarded by national or foreign institutions, unless these are aimed at international mobility for research purposes;
c. with other research assignments;
d. with post-doc research assignments under Article 22-bis of Law no. 240 of 30 December 2010;
e. with research contracts under Article 22 of Law no. 240 of 30 December 2010;
f. with fixed-term contracts for university researchers referred to in Article 24 of Law No. 240 of 30 December 2010;

g. with research grants pursuant to Article 22 of Law no. 240 of 30 December 2010 (in the text prior to Decree Law no. 36 of 30 April 2022, converted with amendments by Law no. 79 of 29 June 2022);
h. with the status of full-time employee or part-time employee with more than 50% hours, without prejudice to the possibility of taking a period of unpaid leave from one's employer.

Persons who have been convicted of a criminal offence resulting in a secondary penalty entailing disqualification from holding public office or the inability to enter into contracts with the public administration, are not eligible for selection.

Further cases of incompatibility are set out in Article 10 of the Regulations for the awarding of research assignments pursuant to Article 22-ter of Law no. 240 of 30 December 2010.

Article 4

Applicants must submit an application to take part in the selection, duly signed in handwritten or digital form in line with the procedures described in Article 5 below. An application without a signature will result in the **exclusion of** the applicant from the selection procedure, except in the cases of access using the Italian Public Digital Identity System (SPID) or the Electronic Identity Card (CIE); in these cases, a signature will not be required.
The application to take part must be uploaded in its entirety (i.e., with all pages included)**, otherwise** the applicant will be **excluded from** the selection process.

Applicants must enclose the following with their application for taking part in the selection, **under penalty of exclusion**:

1. a professional scientific *curriculum vitae* in Italian or English or in any additional language, indicated in Annex A, highlighting the applicant's aptitudes that make him or her suitable for carrying out and implementing the research programme;
2. copy of a valid identity document or other valid identification document. Citizens of non-EU states must compulsorily enclose a copy of their passport or a copy of their Italian identity document and valid residence permit, if they are in possession thereof;
3. limited to citizens of non-EU states residing or authorised to reside in Italy, a copy of their residence permit or authorisation to reside in Italy;
4. documentation proving possession of the academic qualification required for admission to the selection process or self-certification of possession of such a qualification, subject to the conditions set out below. Any possession of a higher academic qualification does not exempt the candidate from producing such documentation, and failure to produce it will result in exclusion:
   - **Applicants who are Italian citizens or citizens of a European Union Member State** must submit a declaration in lieu of certification and, if necessary, a notarial deed regarding the academic qualification required for admission (indicating the academic qualification, the academic institution awarding the qualification, the year it was awarded and the mark obtained) and the publications and other qualifications held, indicating for each one all the identification details required to allow the Examining Board to assess them. **Applicants must declare on the application form their possession of the academic qualification required for eligibility and this will count as a declaration in lieu of certification.** If the

subject matter of the declaration in lieu is not clearly identified in terms of its nature, duration, time setting and the institution concerned, the Examining Board will disregard it. The Administration reserves the right to carry out appropriate checks on the truthfulness of the content of the declarations made; in the event of a false declaration, the provisions of Article 76 of Presidential Decree no. 445/2000 and Articles 483, 485 and 486 of the Italian Criminal Code shall apply. The University will disregard any certificates attached by applicants who are Italian citizens or citizens of a state belonging to the European Union.

- **Citizens of a non-EU State** must submit documents and qualifications in Italian or English or any additional language indicated in Annex A, under penalty of exclusion from the selection process or, as the case may be, they will not be assessed.
  Documents and qualifications, originally in a different language, must be accompanied by a translation, made by the candidate under his or her own responsibility, into Italian or English or any other language indicated in Annex A. With reference solely to a thesis, the translation may be limited to an extended abstract.
- **Citizens of a non-EU State regularly residing in Italy** may use declarations in lieu of certification only in respect of statuses, personal qualities or facts that may be certified or attested by Italian public bodies, without prejudice to the special provisions contained in the laws and regulations governing immigration and the status of foreigners.
- **Citizens of non-EU states authorised to reside in Italy** may use the aforementioned declarations in lieu in cases where they are produced pursuant to international conventions between Italy and the declarant's country of origin.

Applicants may also enclose with their application for assessment purposes their publications, any letters of reference from scientific personalities and any other qualification deemed useful to prove their suitability in relation to the research programme described in Annex A and attest any research activity carried out in public and/or private entities (with indication of the starting date and duration). The procedures for submission are similar to those indicated in point 4 of the previous paragraph.

Only qualifications possessed by the applicant on the date of submission of his or her application for selection and submitted in accordance with Article 5 will be assessed.

Any exclusion from the selection procedure due to a lack of the requirements for eligibility, the absence of compulsory documents, failure to sign the application for taking part in the selection process or due to the submission of the application according to procedures other than those provided for in this call for applications will be communicated to interested parties exclusively by email to the email address indicated in the application to take part in the selection process.

Article 5

Registration for this selection process will start on October 27, 2026 at 2 p.m. (Italian time) and end on November 9, 2026 at 2 p.m. (Italian time).

The application to take part in the selection must be filled in, under penalty of exclusion, using the appropriate online procedure, available at https://pica.cineca.it/.

For those who do not already have a pica user account, the procedure includes a registration phase for the applicant, and a subsequent phase for filling out the application online.

Once completed, the application must be signed in the manner described in the online procedure (handwritten signature, with attached identity document, or digital signature), under penalty of exclusion from the selection process. The application does not have to be signed if the above-mentioned online procedure is accessed using the Italian Public Digital Identity System (SPID) or the Electronic Identity Card (CIE). The information entered on the application form shall constitute a declaration in lieu of certification and affidavit, pursuant to Articles 46 and 47 of Presidential Decree no. 445/2000.

The qualifications referred to in Article 4 must be attached to the application in .pdf format. Individual files, in .pdf format, may not exceed 30MB in size.
It is not permitted to submit attachments to the application in the form of links to files residing on "online storage/file sharing" services or web pages. Reference to documents or publications submitted to this or other administrations or to documents attached to an application to take part in other selection procedures is not permitted

The application for taking part in the selection process will automatically be sent to the University of Udine with the final closure of the online procedure.

The University Administration:
- accepts no liability in the event that it is impossible to read the submitted documentation in electronic format due to damaged files;
- does not accept or take into consideration any qualifications or documents received in paper form or by any other means than those specified in this Article.

The Administration accepts no liability in the event of incorrect indication by the applicant of his or her email address or in the event of failure or delay in communicating a change in the email address indicated in the application, nor for any online errors attributable to third parties, unforeseeable circumstances or force majeure.

Applicants are advised not to wait until the last few days before the deadline date for submitting their application to take part in the selection process. The University accepts no liability for any malfunctions due to technical problems and/or overloading of the communication line and/or application systems.

Article 6

The selection test shall take place in accordance with the procedures and any timetable set out in Annex A.

The test will aim to assess the candidates' preparation and aptitude for research and innovation. It will consist of an assessment of the *curriculum vitae*, publications, scientific and academic qualifications, documented research activities in public and private entities, and letters of reference from scientific personalities; if provided for in Annex A, the test will also consist of an

interview with the applicants. Failure of the applicant to attend the interview will be considered as a renunciation of taking part in the selection, whatever the cause.

Applicants who intend to avail themselves of the benefits provided for by Article 20 of Law no. 104 of 1992, in relation to their disability condition, must request them in the application form, specifying the aid needed in relation to their disability condition as well as the possible need for additional time, in order for the Administration to prepare in good time the means and tools to guarantee the envisaged benefits. Such candidates must send appropriate medical certification together with their application; failure to submit the medical certification shall exempt the Administration from any obligation in this regard.

Article 7

The Examining Board shall be identified in Annex A.

At its first meeting the Examining Board shall appoint its Chairperson and Secretary taking the minutes and establish the criteria and procedures for assessing the qualifications and the interview, if any takes place.

The Examining Board shall conduct a comparative assessment of the applications.
The results of the assessment of qualifications must be made known to the interested parties at the interview, if any takes place.

The Examining Board has a total number of 100 points (one hundred hundredths) attributable to each applicant.
At the end of its work, the Examining Board shall draw up the overall ranking list on the basis of the total marks obtained by each applicant and prepare the minutes indicating the various competition operations. The ranking list will be made public exclusively by publication on the University's official notice board; the outcome of the assessment will not be communicated personally to the applicants.

To be declared eligible, applicants must have obtained a minimum overall mark of 70/100 (seventy hundredths). The research assignment shall be awarded to the eligible applicant with the highest score in the ranking list.

Any applicant who does not declare his or her acceptance of the research assignment or does not show up at the entity where the research activity is to be carried out to sign the contract by the deadline communicated by the entity to the email address indicated by the applicant in their application, shall forfeit his or her right to the research assignment, except in the case of any health reasons or reasons of force majeure duly documented and promptly notified.

In the event of non-acceptance of the assignment or failure to show up at the entity by the notified deadline, the eligible candidates on the ranking list will be approached based on the order of ranking.

In the event that the holder renounces the research assignment after the start of the research activities, the University will consider whether or not to proceed with approaching other applicants on the ranking list.

Successful applicants with qualifications obtained abroad, must submit, if not already attached to their application for taking part in the selection process:

- **For degrees issued by a country that is a party to the Lisbon Convention (**https://www.enic-naric.net/**), the following documentation**
  - Diploma *Supplement* or similar certificate in English issued by the competent university;
  - "Certificate of Verification of a Foreign Qualification - CIMEA" issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplo***me***" service at https://cimea-diplome.it/
- **For degrees issued by a country that is not a party to the Lisbon Convention (**https://www.enic-naric.net/**), one of the following options:**
  - Declaration of Validity in loco of the qualification held and the certificate relating to the qualification with examinations and grades. A certificate in a language other than Italian or English must be accompanied by an official translation into one of those languages (certified by the competent diplomatic-consular authority or sworn at a court in Italy);
  - "Certificate of Comparability and Verification of a Foreign Qualifications - CIMEA" issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplo***me***" service at https://cimea-diplome.it/

If the aforementioned documentation is not available at the time of entering into the contract, the holder must prove that he or she has requested it and submit it as soon as possible; if it is not submitted within six months of the start of the assignment, the candidate will forfeit the assignment and will be required to repay any sums received up to that moment under the contract.

Article 8

The activity that is the subject of the research assignment cannot begin until the contract defining the terms of the collaboration has been signed.

The activity that is the subject of the research assignment must have the following characteristics:

a) be carried out within the framework of the research programme that is the subject of the assignment and not be a mere technical support to it;
b) have a close connection with the implementation of the research programme;
c) be of a continuous and in any case temporally defined nature, not merely occasional, and in coordination with the overall activity of the University;
d) be carried out autonomously, under the supervision of the Scientific Supervisor, within the sole limits of the research programme in which it is included, without any preset working hours.

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The holder of the research assignment is required to submit a detailed written report on the work carried out and the results achieved, together with the opinion of the Scientific Supervisor, to the reference entity by the deadlines specified in the contract. The holder of the research assignment must also submit interim reports and timesheets if requested by the reference entity and/or the Scientific Supervisor.

The holder of the research assignment is entitled to use the equipment of the department or entity at hosting his or her research activity and to use the services available to the university's permanent staff in accordance with the internal rules in force.

The holder of the research assignment is bound to strict confidentiality regarding the data and information he or she becomes aware of in the course of performing the research activity. At the request of the Scientific Supervisor, he or she will be required to sign an appropriate confidentiality agreement.
Industrial property rights over the results achieved by the holder in the performance of the research activity belong exclusively to the University, without prejudice to the moral right to be recognised as the creator or inventor.
With reference to the confidentiality and ownership of results, Article 11(3) of the Regulation for the awarding of research assignments pursuant to Article 22-ter of Law no. 240 of 30 December 2010 shall apply, in addition to any internal regulations that may apply.

The holder of the research assignment must comply with the University's open access policies and make their research products available on the IRIS catalogue, subject to the opinion of the Scientific Supervisor.

The holder of the research assignment shall carry out his or her activities in compliance with the University's Code of Ethics and Conduct. As a member of the academic community, the holder of the research assignment is required to comply with the University's Statute of Autonomy as well as the internal rules and regulations adopted by the governing bodies of the University.

The University reserves the right to revoke this call for applications for reasons of public interest, should the research project and/or the funding on which the research assignment is based cease to exist. Should such causes arise after the contract has been signed, the University may withdraw from the contract without notice.

Article 9

The following shall apply to the research assignment referred to in this call for applications:

- in tax matters, the provisions of Article 4 of Law no. 476 of 13 August 1984, as amended and supplemented;
- in social security matters, the provisions of Article 2(26 et seq.) of Law no. 335 of 8 August 1995, as amended and supplemented;
- on compulsory maternity leave the provisions of the Ministerial Decree of 12 July 2007;
- on sick leave, the provisions of Article 1(788) of Law no. 296 of 27 December 2006, as amended.

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During the period of compulsory maternity leave, the allowance paid by INPS pursuant to Article 5 of the Ministerial Decree of 12 July 2007 is supplemented by the University up to the full amount of the research assignment.

The amount of the research assignment is paid in monthly instalments in arrears.

The cost of insurance cover for accidents and third-party liability is borne by the holders of research assignments, if not already covered by the University.

Article 10

The data collected as part of the procedure referred to in Article 5 are necessary for the proper management of the selection procedure, for the possible subsequent management of the research assignment and for purposes related to the management of the services provided by the University. The University of Udine is the Data Controller. At any time, the data subject may request access, rectification and, compatibly with the institutional purposes of the University, erasure and restriction of processing or object to the processing of his or her data. Data subjects can always lodge a complaint with the Italian Data Protection Authority. The full privacy policy 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

Article 11

For all matters not expressly mentioned in this call for applications, reference is made to the relevant regulations in force cited in the introduction and to the "Internal Regulations for the awarding of research assignments, Article 22 *ter* of Law no. 240 of 30 December 2010" of the University of Udine issued by Rector's Decree no. 557 of 7 August 2025.

Article 12

The Procedure Supervisor is Ms Sandra Salvador, Head of the Research, Libraries and Third Mission Division of the University of Udine.

The reference office at the University of Udine is the Research Training Office - Research, Libraries and Third Mission Division, via Mantica no. 31 - 33100 Udine.

This call for applications, including Annex A, is written in Italian and English. In the event of any conflict or discrepancy between the two versions, the Italian language version shall prevail.

For information regarding applications, please send an e-mail to: incarichi.ricerca@uniud.it

Annex A

Responsabile scientifico della ricerca / *Principal investigator:*

Nome e cognome / Name and surname: Luca Chittaro
Qualifica / Position: Professore Ordinario / *Full Professor*
Dipartimento / Department: Dipartimento di Scienze Matematiche, Informatiche e Fisiche / *Department of Mathematics, Computer Science and Physics*
Area MUR / Research field: 01 - Scienze Matematiche e Informatiche / *Mathematics and informatics*
Gruppo scientifico disciplinare e Settore scientifico disciplinare / Scientific sector: 01/INFO-01 Informatica, INFO-01/A Informatica; *01/INFO-01 Informatics, INFO-01/A Informatics*

Titolo dell'incarico di ricerca / *Topic of the research assignment "incarico di ricerca"*:

Progettazione, sviluppo e valutazione di un ambiente integrato di realtà virtuale, realtà aumentata ed *embodied agent* a supporto del benessere psicofisico.

Design, development, and evaluation of an integrated virtual reality, augmented reality, and embodied agents environment to support psychophysical well-being.

Funzioni richieste, obiettivi previsti e risultati attesi del programma di ricerca in cui si colloca l'attività del titolare di incarico di ricerca / *Required functions, intended objectives and expected results of the research programme in which the researcher will carry out his/her work*:

Il candidato opererà in un progetto di ricerca finalizzato allo sviluppo e alla valutazione di ambienti immersivi e interattivi che integrino Realtà Virtuale (VR), Realtà Aumentata (AR) ed *Embodied Agent* per supportare interventi orientati alla mitigazione dello stress, dell'ansia e del dolore. L'obiettivo principale è quello di utilizzare tecnologie immersive e agenti virtuali intelligenti per guidare gli utenti nell'apprendimento e nell'esecuzione di tecniche di rilassamento e autoregolazione, promuovendo al tempo stesso una maggiore consapevolezza dei propri stati fisiologici e corporei.

Gli *Embodied Agent* saranno progettati per interagire in modo naturale con l'utente e potranno adottare differenti strategie di controllo, includendo sia approcci *rule-based*, basati su regole e protocolli predefiniti, sia approcci basati su *Large Language Models* (LLM), in grado di supportare forme di interazione conversazionale più flessibili e adattive. Gli agenti guideranno l'utente nello svolgimento di tecniche quali mindfulness, esercizi di respirazione, yoga e altre attività di rilassamento e regolazione psicofisiologica. Durante le sessioni, l'utente potrà inoltre interrompere l'*Embodied Agent* e porre domande per richiedere chiarimenti sulle istruzioni ricevute o sulle attività da eseguire, favorendo un'interazione maggiormente naturale, personalizzata e centrata sulle esigenze individuali.

Particolare attenzione sarà dedicata all'integrazione nell'ambiente virtuale di segnali fisiologici acquisiti in tempo reale tramite opportuni sensori. Tali informazioni potranno essere utilizzate dall'*Embodied Agent* durante attività di psico-educazione per spiegare all'utente la relazione tra stati psicologici, risposte corporee e strategie di autoregolazione. L'utente dovrà poi poter disporre di visualizzazioni intuitive ed animate in tempo reale dei segnali fisiologici sovrapposti al suo corpo. Questa modalità di visualizzazione sarà studiata con l'obiettivo di migliorare le capacità di automonitoraggio, la consapevolezza corporea e interocettiva dell'utente, e la sua capacità di raggiungere e mantenere uno stato di rilassamento.

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L'ambiente dovrà infine consentire agli Embodied Agent di osservare, attraverso una telecamera, l'esecuzione delle attività motorie da parte dell'utente. In particolare, durante esercizi di respirazione, yoga o altre attività che coinvolgono il movimento del corpo, il sistema potrà analizzare il comportamento dell'utente e confrontarlo con le modalità di esecuzione previste, permettendo all'agente di fornire feedback correttivi e suggerimenti personalizzati in tempo reale.

Più specificamente, il candidato dovrà completare le seguenti attività:

1. Sviluppare un ambiente virtuale che integri Realtà Virtuale e Realtà Aumentata per supportare interventi finalizzati alla mitigazione dello stress, dell'ansia e del dolore. L'ambiente dovrà consentire la presentazione di differenti attività di rilassamento e autoregolazione, anche attraverso *Embodied Agents* in grado di guidare l'utente nell'apprendimento e nell'esecuzione di tecniche di mindfulness, yoga, respirazione e rilassamento, attraverso interazioni conversazionali flessibili e contestuali.
2. Integrare nell'ambiente virtuale l'acquisizione e la visualizzazione tempo reale di segnali fisiologici dell'utente. Tali segnali potranno essere utilizzati dall'*Embodied Agent* all'interno di attività di psico-educazione per spiegare la relazione tra le risposte fisiologiche, gli stati di stress o rilassamento e gli effetti delle tecniche proposte. Verranno sviluppare tecniche di Realtà Aumentata per sovrapporre al corpo dell'utente rappresentazioni intuitive ed animate dei propri segnali fisiologici.
3. Integrare tecniche di monitoraggio del comportamento dell'utente attraverso telecamera durante l'esecuzione di movimento fisico. Il sistema dovrà consentire di riconoscere elementi rilevanti dell'esecuzione dell'attività, quali postura, movimenti e ritmo degli esercizi, e permettere all'*Embodied Agent* di fornire feedback correttivi in tempo reale qualora l'esecuzione si discosti da quella prevista. L'utente potrà interrompere l'*Embodied Agent* durante lo svolgimento delle attività e porre domande relative alle attività.
4. Valutare l'efficacia delle soluzioni proposte per i tre punti precedenti attraverso esperimenti finalizzati a valutare la qualità dell'interazione con gli *Embodied Agent* e l'efficacia delle differenti modalità di visualizzazione e feedback. Sarà inoltre analizzato il contributo dell'integrazione tra Realtà Virtuale, Realtà Aumentata, segnali fisiologici e agenti intelligenti nel favorire consapevolezza corporea, interocezione, capacità di autoregolazione e riduzione di stress, ansia e dolore.

The candidate will work within a research project aimed at developing and evaluating immersive and interactive environments integrating Virtual Reality (VR), Augmented Reality (AR), and Embodied Agents to support interventions targeting the mitigation of stress, anxiety, and pain. The main objective is to use immersive technologies and intelligent virtual agents to guide users in learning and performing relaxation and self-regulation techniques, while at the same time promoting greater awareness of their physiological and bodily states.

The Embodied Agents will be designed to interact naturally with users and may adopt different control strategies, including both rule-based approaches, based on predefined rules and protocols, and approaches based on Large Language Models (LLMs), capable of supporting more flexible and adaptive forms of conversational interaction. The agents will guide users in performing techniques such as mindfulness, breathing exercises, yoga, and other activities aimed at relaxation and psychophysiological regulation. During the sessions, users will also be able to interrupt the Embodied Agent and ask questions to request clarification regarding the instructions received or the activities to be performed, thereby fostering a more natural, personalized, and user-centered interaction.

Particular attention will be devoted to the integration, within the virtual environment, of physiological signals acquired in real time through appropriate sensors. Such information may be used by the Embodied Agent during psychoeducational activities to explain to users the relationship between psychological states, bodily responses, and self-regulation strategies. Users will be provided with real-time intuitive, animated visualizations of their physiological signals superimposed on their bodies. This visualization approach will be investigated with the aim of improving users' self-monitoring abilities, bodily and interoceptive awareness, and their ability to achieve and maintain a state of relaxation.

Finally, the environment will enable the Embodied Agents to observe, through a camera, the user's execution of motor activities. In particular, during breathing exercises, yoga, or other activities involving body movement, the system will be able to analyze the user's behavior and compare it with the expected execution patterns, allowing the agent to provide corrective feedback and personalized suggestions in real time.

More specifically, the candidate will be required to carry out the following activities:

1. *Develop a virtual environment integrating Virtual Reality and Augmented Reality to support interventions aimed at mitigating stress, anxiety, and pain. The environment will support the presentation of different relaxation and self-regulation activities, including through Embodied Agents capable of guiding users in learning and performing mindfulness, yoga, breathing, and relaxation techniques through flexible and context-aware conversational interactions.*
2. *Integrate the real-time acquisition and visualization of users' physiological signals into the virtual environment. These signals may be used by the Embodied Agent within psychoeducational activities to explain the relationship between physiological responses, states of stress or relaxation, and the effects of the proposed techniques. Augmented Reality techniques will be developed to superimpose intuitive, animated representations of users' physiological signals onto their bodies.*
3. *Integrate techniques for monitoring users' behavior through a camera during the execution of physical movements. The system will be able to recognize relevant aspects of activity performance, such as posture, movements, and exercise rhythm, and will enable the Embodied Agent to provide real-time corrective feedback whenever the user's performance deviates from the expected one. Users will also be able to interrupt the Embodied Agent during the activities and ask questions related to the tasks being performed.*
4. *Evaluate the effectiveness of the solutions proposed in the three previous points through three different experiments aimed at assessing the quality of the interaction with the Embodied Agents and the effectiveness of the different visualization and feedback modalities. The contribution of the integration of Virtual Reality, Augmented Reality, physiological signals, and intelligent agents will also be investigated with respect to its ability to promote bodily awareness, interoception, self-regulation skills, and the reduction of stress, anxiety, and pain.*

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 / *Department of Mathematics, Computer Science and Physics*.

Importo dell'incarico di ricerca (al lordo oneri carico titolare di incarico) / *Total grant gross for the research assignment "incarico di ricerca" (gross expenses charged to the person in charge)*:

€ 23.058,00

Durata dell'incarico di ricerca / *Duration of the research assignment "incarico di ricerca"*:

12 mesi / *months*

Proroga o rinnovo dell'incarico di ricerca / *Extension or renewal of the research assignment "incarico di ricerca"*:

L'incarico può essere prorogato e/o rinnovato con il titolare in conformità con quanto previsto dall'art. 22-ter della Legge 30 dicembre 2010, n. 240 e dal Regolamento dell'Università degli Studi di Udine per il conferimento di incarichi di ricerca in presenza di valutazione positiva del responsabile scientifico sull'attività svolta dal titolare dell'incarico di ricerca, adeguata motivazione scientifica e relativa copertura finanziaria. Qualora il responsabile scientifico riscontri elementi che richiedano la necessità o l'opportunità di prorogare/rinnovare l'incarico di ricerca, dovrà presentare apposita istanza di proroga/rinnovo alla struttura di riferimento in tempo utile per garantire la gestione delle relative procedure. Nell'istanza, il responsabile scientifico dovrà evidenziare le motivazioni a giustificazione in modo tale da permettere all'organo collegiale della struttura di riferimento di adottare una decisione in merito.

In accordance with the provisions of Article 22-ter of Law No. 30 of 30 December 2010, No. 240, and the University of Udine's Regulations for the awarding of research assignments, the assignment may be extended and/or renewed with the holder, subject to a positive evaluation of the work carried out by the research assignment holder, adequate scientific justification, and relative financial coverage. If the scientific supervisor identifies any reasons to extend or renew the research assignment, they must submit a specific request for extension or renewal to the relevant body in good time to allow for the management of the related procedures. The scientific director must provide justification for the extension/renewal in the request so that the relevant body of the reference structure can make a decision on the matter.

Finanziamento / *Financed by*:

La copertura finanziaria grava sui seguenti fondi / *The following funds cover the financial costs*:
- Ricerca libera del prof. Luca Chittaro.

Requisiti di ammissione / *Minimum qualifications necessary*:

Alla data di presentazione dell'istanza, il candidato deve / *By the date of presentation of the application, the candidate must:*
- essere in possesso del titolo di laurea magistrale o a ciclo unico da non più di sei anni / *have held a italian master's degree or equivalent qualification obtained abroad for no more than six years.*

Alla data di scadenza del presente bando, il candidato deve / *By the deadline of this call, the candidate must:*
- non aver compiuto 40 anni d'età / *not having reached 40 years of age.*

Requisiti aggiuntivi di ammissione / *Additional admission requirements*:

LM-18 (Classe delle lauree magistrali in Informatica) o equiparate ai sensi della normativa vigente o titolo di studio equivalente conseguito all'estero. / LM-18 (Master's Degree Class in Computer Science) or an equivalent Italian qualification pursuant to current legislation, or an equivalent qualification obtained abroad.

Ulteriori elementi valutativi / *Additional assessment elements*:

In sede valutativa, la Commissione giudicatrice terrà in particolare considerazione i seguenti elementi se coerenti con la tematica della presente selezione:
- precedente esperienza documentata sulle tematiche ed attività previste dall'incarico di ricerca.

In its evaluation, the Examining Board will take into particular consideration the following requirements if relevant to the subject matter of this selection:
- *documented previous experience in the topics and activities of the research position*.

Modalità di presentazione della documentazione oggetto di valutazione / *Arrangements for the submission of documents*:

La modalità di presentazione della documentazione oggetto di valutazione è specificata agli articoli 4 e 5 del bando. / *The way of presenting the documentation under evaluation is specified in the articles 4 and 5 of the present notice.*

Ai fini valutativi, i candidati potranno presentare le pubblicazioni e ogni altro titolo ritenuto utile a comprovare la propria qualificazione in relazione al programma di ricerca descritto nell'Allegato A, nelle seguenti lingue: / *For evaluation purposes, candidates may present publications and any other qualifications deemed useful to demonstrate their qualification in relation to the research program described in Attachment A, in the following languages:*

- Italiano / *Italian*;
- Inglese / *English*.

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*	16 novembre / *November* 2026
	Ora / *Time*	10:00 / *10:00 am (Italian time)*
	Luogo / *Place*	Sala Riunioni del Dipartimento di Scienze Matematiche, Informatiche e Fisiche (DMIF), Università di Udine

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* https://www.uniud.it/it/albo-ufficiale

Per situazioni non riconducibili all'Università degli Studi di Udine (es. emergenze etc.), la Commissione giudicatrice può chiedere a tutti i candidati di svolgere la prova orale in videoconferenza / *For situations not attributable to the University of Udine (e.g. emergencies, etc.), the Examining Board may ask all candidates to take the oral exam in video conference.*

Commissione giudicatrice / *Examining Board*:

Nome e Cognome / Name and Surname	**Qualifica**	**GSD**	**SSD**	**Università**
Membri Effettivi / Permanent members				
Luca Chittaro	PO	01/INFO-01	INFO-01/A	Udine
Fabio Buttussi	PA	01/INFO-01	INFO-01/A	Udine
Stefano Burigat	RU	01/INFO-01	INFO-01/A	Udine
Membro Supplente / Temporary member				
Ivan Scagnetto	PA	01/IINF-01	IINF-01/A	Udine

Diritti e doveri / *Rights and responsibilities*:

Il titolare di incarico di ricerca sarà aggregato alla struttura di riferimento individuata dal responsabile scientifico. Alle condizioni indicate dalla struttura di riferimento, potrà accedere ai locali dedicati all'attività di ricerca e ai relativi laboratori oltre alle sedi dell'Ateneo. Il titolare riceverà un indirizzo di posta elettronica istituzionale dell'Ateneo che dovrà essere utilizzato per tutte le comunicazioni relativa all'attività di ricerca. Potrà accedere ai servizi informatici e alle risorse amministrative e informatiche dedicati al personale non dipendente.

Il titolare di incarico di ricerca è tenuto al rispetto dello Statuto di autonomia dell'Università, del Codice Etico e di Comportamento nonché della normativa interna e delle prescrizioni interne adottate dagli organi di governo dell'Università, in particolare del Regolamento per l'affidamento di incarichi di ricerca ai sensi dell'art. 22 ter della legge 30.12.2010, n. 240. Il titolare di incarico di ricerca deve osservare le prescrizioni a suo carico dettate nel bando di selezione e nel contratto da stipularsi a seguito di vincita.

The research fellow will be assigned to the reference structure specified by their scientific supervisor. They will have access to the premises dedicated to research activities and related laboratories, as well as the university's premises, under the conditions specified by the reference structure. They will receive an institutional email address from the university for all communications relating to research activities. They will also have access to IT and administrative resources intended for non-employee staff.
They are required to comply with the University's Statute of Autonomy and Code of Ethics and Conduct, as well as its internal regulations and requirements adopted by the governing bodies. In particular, they must comply with the Regulations for the Assignment of Research Positions pursuant to Article 22 ter of Law No. 240 of 30 December 2010. Holders of research positions must comply with the requirements set out in the selection notice and the contract to be signed following the award.

Documento informatico firmato digitalmente ai sensi del D.lgs. 82/2005 s.m.i. e norme collegate, il quale sostituisce il documento cartaceo e la firma autografa