



Supporting TAlent in ReSearch@University of Padua (STARS@UNIPD) – 2021 Call for proposals

Call Opening: 11 January 2021 Application deadline: 12 April 2021, 1 p.m. (Italian time zone)

PREAMBULE

The University of Padua (Unipd or University), through the programme called "*Talent in Research*", supports excellent research to be performed on its premises by high-potential researchers.

The programme *"Talent in Research"* is characterized by several initiatives aimed at increasing the participation of young researchers in competitive calls for proposals, as well as attracting researchers from abroad, offering financial support to the most deserving projects, whose research value is acknowledged by internationally renowned experts. The programme includes the following actions:

- "**Talents@Unipd**", a scouting initiative open to all scientists, with no exclusion of citizenship, who are willing to choose Unipd as their Host Institution in their applications for the European Research Council (ERC) funded researches (<u>https://www.unipd.it/en/talent</u>);

- "Supporting TAlent in ReSearch@University of Padua - STARS@UNIPD", which encourages international, high quality, innovative and ambitious research in Padua and boosts the participation of Unipd in ERC calls, promoting an open and positive attitude towards international funding opportunities for basic research (https://www.unipd.it/en/stars).

The STARS@UNIPD – 2021 call for proposals, which is at its third edition, comprises two types of funding supporting individual research projects, proposed by a Principal Investigator (PI) at a "Starting" or "Consolidator" career stage. A third type of funding is specifically addressed to PIs who submitted an ERC application in the 2019 and 2020 calls for proposals, chose the University of Padua as their Host Institution and scored "A" in the second step of the evaluation process; despite being considered eligible for funding, they were not funded due to budget limits.

Candidates who wish to apply to the STARS@UNIPD - 2021 call for proposals can submit a project in one of the 27 scientific research areas, which Unipd grouped in three Macro-areas corresponding to the three ERC research domains as described in Annex 1.

Moreover, in order to reward excellence and foster a high-level, open, transparent and merit-based competition, as well as promoting the increasingly broad participation of researchers in international competitive calls for proposals, the evaluation process and criteria of the STARS@UNIPD call will be similar to those of the ERC. The application forms themselves, even if slightly simplified, match the templates of the ERC.

Art. 1 – DESCRIPTION OF THE PROGRAMME

The **STARS@UNIPD** call for proposals provides funding for two-year research projects, proposed by researchers with excellent scientific qualifications willing to launch or consolidate an independent research activity and a research team at Unipd.





Grants operate on a "bottom-up" basis, with no predetermined priorities. They are open to PIs of any age and nationality, who wish to pursue research at a Unipd department and who are able to demonstrate the innovative nature, the ambition and the feasibility of the proposed research.

This call for proposals includes the following types of grant:

- **STARS Starting Grants (STARS-StGs)**: designed to fund excellent PIs who are about to establish their own research team and/or to start their own independent research;
- **STARS Consolidator Grants (STARS-CoGs)**: designed to fund excellent PIs, who are already conducting research at Unipd and are consolidating their own research team and/or their own independent research;
- **STARS Wild Card Grants (STARS-WiCs)**: designed to fund PIs who submitted a project to the 2019 and 2020 ERC calls for proposals, indicated Unipd as their Host Institution and obtained a final score of "A", thus qualifying for funding, but were not funded due to budget limits.

Unipd will proportionally fund research projects amongst the Macro-areas and the types of grants, based on the number of eligible applications and of Wild Card projects submitted.

Art. 2 – ELIGIBILITY CRITERIA

For each type of grant, PIs of any nationality meeting the following criteria may apply:

- ✓ STARS-StGs: the PI has been awarded his/her first Doctoral degree within a minimum of 2 and a maximum of 7 years prior to 1 January 2021; eligibility extensions are provided for in the "SpecificEligibility Criteria" described in Annex 2;
- ✓ STARS-CoGs: the PI is a tenured professor or researcher at Unipd, or a researcher on a fixed-term contract type a) or type b)¹ at Unipd, who has been awarded his/her first Doctoral degree within a minimum of 7 and a maximum of 12 years prior to 1 January 2021; eligibility extensions are provided for in the "Specific Eligibility Criteria" described in Annex 2.
- ✓ STARS-WiCs: the PI is a professor/researcher who submitted a proposal in the ERC Starting or Consolidator or Advanced Grant, 2019 and 2020 calls for proposals, indicating Unipd as Host Institution, obtained a final mark of "A" but was not funded due to budget limits.

PIs with an ERC grant still active at the deadline of the call, or who will be funded within the date of the approval of the ranking list, are not eligible to apply. PIs who have been previously funded in the framework of the STARS@UNIPD programme past editions are not eligible to apply.

Art. 3 - PROPOSAL SUBMISSION

3.1 Submission process

Each candidate may submit a single research proposal in one of the 27 research areas within the three Marcoareas corresponding to the three ERC research domains. The following procedure applies:

¹ Under the provisions of law no. 240/2010, article 24.







- ✓ in order to submit the proposals, candidates must exclusively follow the on line procedure available at this link: <u>https://pica.cineca.it/unipd/</u>. They must first register on the platform and follow the instructions described in Annex 2;
- ✓ the proposal must be submitted within the opening and closing date of the call. The STARS@UNIPD 2021 call will open on 11 January 2021 and close on 12 April 2021 at 1 p.m. (Italian time zone). Proposals submitted after this deadline will not be considered eligible;
- ✓ the proposal must be written in English;
- ✓ the proposal must be completed in its entirety and must include all the required documents; should any document in the application be written in any other language, an English translation thereof must be included;
- ✓ if the PI does not hold a permanent position at Unipd² and his/her proposal is submitted under the STARS-StG or STARS-CoG type, then the application must include a "Letter of commitment" duly signed by the Head of the Department chosen by the candidate as his/her hosting department. Such procedure is detailed in Annex 2;
- ✓ once the filling in of the online proposal is completed, the candidate must sign the application according to the instructions provided on the on line platform (and in Annex 2). A valid ID must be enclosed.

The system performs a general check on the completeness of the required information and reports any errors that have to be corrected before submission. Once the application is signed, it can be submitted to Unipd. Only proposals submitted via the on line system will be considered eligible.

3.2 Contents of the proposal

The application package consists of:

- ✓ an administrative form containing the PI personal data and some general information about the research proposal;
- ✓ the research proposal (*Research Proposal*), drawn up according to the forms included in Annex 2 and uploaded in a .pdf format. The *Research Proposal* comprises the following:
 - Research Proposal [Part B1]: extended synopsis, PI's CV and track record;
 - Research Proposal [Part B2]: scientific proposal.

PIs applying for WiC grants should only complete part B2 of the proposal, extrapolating a line of research from their original ERC project, which must be consistent with the duration and budget of the STARS grant.

For all types of grants, the application form includes a table related to the ethical implications ("*Ethics Issues Table*" described in Annex 2) of the proposed research, which certifies the project compliance to the national, European and international legislation on ethical issues.

The application form, according to the type of grants selected by the candidate, also includes the documents listed below:

✓ STARS-StGs and STARS-CoGs: a Letter of Commitment must be provided by PIs who do not hold a permanent position at Unipd. The letter has to be duly signed by the Head of the Department that

² A **P.I. not holding a permanent position at Unipd** is either external to the Institution or holding a fixed-term contract at the University of Padua under the provisions of Law no. 240/2010, article 24 (*Ricercatore a tempo determinato di tipo a*) or *b*) – *Rtda* or *Rtdb*).





the candidate has chosen for carrying out his/her project. Considering the proposal feasibility, the Head of Department supports the access to the Department structures, tools and useful knowledge that may be necessary for the implementation of the project.

✓ STARS-WiCs: the Evaluation Summary Report issued by the ERCEA for the project submitted in the 2019 and 2020 calls for proposals, which obtained an "A" as final score but was not funded.

This call for proposals, its attachments and any document that may be relevant to the submission process are available on the website <u>https://www.unipd.it/en/stars2021</u>.

3.3 Budget

The budget of STARS projects includes an amount covering research costs (RC), which depends on the scientific domain of the proposal. For STARS-StGs and STARS-CoGs, the budget also features an amount covering a research grant contract, type B^3 (RG, "assegno di ricerca"), to be foreseen when the PI does not hold a permanent position at Unipd or his/her fixed-term contract at the University of Padua under the provisions of Law no. 240/2010, article 24 (*Ricercatore a tempo determinato di tipo a*) or *b*) – *Rtda* or *Rtdb*) does not cover the whole two-year duration of the STARS project.

Each STARS-StG project budget may include:

- 1) the cost of a two-year research grant contract (RG, "assegno di ricerca") for the PI (max 40,000 euros per year; gross amount of 80,000 euros for two years);
- 2) a maximum funding of 100,000 euros for the Macro-areas LS and PE and 60,000 euros for the Macroarea SH, to cover research costs (RC) (Table 1).

Applicants for STARS-StGs holding a fixed-term contract at the University of Padua (*Ricercatore a tempo determinato di tipo a*) or *b*) – *Rtda* or *Rtdb*), whose expiration date is set before the end of the STARS project, may include in their budget both the research costs (RC) and the costs of a research grant contract for the PI (RG). RG will last between the expiration date of the PI fixed-term contract at Unipd and the end of the STARS project.

Beneficiaries of STARS-StGs already holding a research grant contract on funds for previous projects must renounce it before the start of the STARS project in order to activate a new research grant contract as PI. As an alternative, they may consider requesting to postpone the beginning of their STARS project; such request must be adequately justified.

	Research costs (RC)			Research grant (RG)
STARS-StG (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	Maximum funding covering the PI grant (gross amount for two years)
With no grant covering the PI's contract	140	140	80	N.A.
With a grant covering the Pl's contract	100	100	60	80

Table 1 - STARS-StG eligible costs

Each STARS-CoG project budget may include:

³ Pursuant to article 3, paragraph 2, letter b) of Unipd regulation on research grant contracts. See also Art. 7 - Allocation of funding in this call.



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- 1) the cost of a two-year research grant contract type B (RG, "assegno di ricerca"), for the PI (max 40,000 euros per year; gross amount of 80,000 euros for two years);
- 2) a maximum funding covering research costs of 140,000 euros for the Macro-areas LS and PE, and up to 80,000 euros for the Macro-area SH, for 2 years (Table 2).

Applicants for STARS-CoGs holding a fixed-term contract at the University of Padua (*Ricercatore a tempo determinato di tipo a*) or *b*) – *Rtda* or *Rtdb*) whose expiration date is set before the end of the project may include in their budget both the research costs (RC) and the costs of a research grant contract for the PI (RG). RG will last between the expiration date of the PI fixed-term contract at Unipd and the end of the STARS project.

Beneficiaries of STARS-CoGs holding a permanent position at the University of Padua may include in the budget only research costs RC.

	Research costs (RC)			Research grant (RG)
STARS-CoG (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	Maximum funding for the PI grant (gross amount for two years)
With no grant covering the PI's contract	140	140	80	N.A.
With a grant covering the Pl's contract	140	140	80	80

Table 2 - STARS-CoG eligible costs

Each STARS-WiC project budget may include a maximum funding covering research costs (RC) of 140,000 euros for the Macro-areas LS and PE and of 80,000 euros for the Macro-area SH for 2 years (Table 3).

	Research costs (RC)			
STARS-WiC (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	
PI holding a permanent position at Unipd	140	140	80	

Table 3 – STARS-WiC eligible costs

Art. 4 – THE EVALUATION COMMITTEE

An evaluation committee will be set up for the selection of proposals that are eligible for funding. The Evaluation Committee is composed by a maximum of 27 external experts of recognized international prestige, selected among the panel members of the competitive European projects funded by the ERC, who will be assigned to 3 sub-committees matching the three ERC Domains:

- PE: Physical Sciences and Engineering ;
- LS: Life Sciences;
- SH: Social Sciences and Humanities.

The subcommittees will be composed by 11, 9, 7 experts (PE=11, LS=9, SH=7).







Three sub-committee coordinators will be appointed with the task of finding the other members of their own sub-committee, one for each ERC sector different from their own, and coordinating the work of the three sub-committees (Annex 1).

If no projects are submitted within a scientific area, no experts will be appointed in that area. Sub-committees will employ independent anonymous reviewers who are expert in the scientific areas of the projects admitted to the peer-review process (Step 2).

The Evaluation Committee, chaired by three sub-committee coordinators acting as Presidents, will collaborate with a Unipd commission (STARS@Unipd Internal Commission) composed by the Vice Rector for Research (Coordinator), the Research and Business Relations Area Manager (ARRI) and the Head of the International Research Office of the University of Padua.

The STARS@Unipd Internal Commission will screen projects for eligibility and support the Evaluation Committee in the preliminary phase, confirming whether financial, human and instrumental resources declared for the projects are actually available. The STARS@Unipd Internal Commission will be in charge of all communication activities taking place among the Evaluation Committee, Departments and Unipd bodies involved in the programme.

Art. 5 – SELECTION PROCESS

The selection process includes an eligibility check of all applications followed by two different evaluation steps for the STARS-StG and STARS-CoG grants and by a single step for the STARS-WiC grants. The selection process will be carried out according to the following indicative timetable:

Opening of the call for proposals	11 January 2021
Deadline for proposals submission	12 April 2021 hrs 1 p.m.
Eligibility check	30 April 2021
Pre-selection (Step 1 fot StG and CoG) and evaluation (single step for WiC)	30 June 2021
Evaluation of proposals (Step 2)	30 September 2021
Interview	October 2021
Evaluation results	15 November 2021
Approval of the ranking list of projects selected for funding	30 November 2021
Projects starting date	1 January 2022
Latest deadline for the signature of STG or COG research grant contract ("assegno di ricerca")	31 March 2022

5.1 – Eligibility check

After the call deadline, all proposals will be checked to ensure they meet the eligibility requirements in accordance with Art. 2.

Eligibility is checked on the basis of the information the PI provided in the administrative form and the correctness and completeness of the documents enclosed in the application.

The results of the eligibility check will be published on the following website: <u>https://www.unipd.it/en/stars2021</u>. PIs excluded from the selection process due to the lack of one or more







individual requirements for participation will be informed through an e-mail. Such e-mail will also describe the procedure for a possible redress.

Upon receipt of the notification of ineligibility, the candidate has 5 working days to report any mistakes in the eligibility check carried out by Unipd and the redress will be evaluated by the STARS@Unipd Internal Commission. After the above mentioned time lapse, the disqualification becomes definitive.

The University reserves the right to disqualify proposals at any time if one or more requirements for participation are missing.

5.2 – Evaluation criteria of StG and CoG proposals

Scientific excellence will be the sole criterion of evaluation (Annex 2). Each proposal will be evaluated, at every step of the selection process, on the following two principles:

- the ground-breaking nature, ambition, and feasibility of the project;
- the PI's scientific skill, creativity, and commitment.

A PI of a STARS-StG project must already have demonstrated the potential to conduct independent research and evidence of scientific maturity. For example, a StG PI must have published at least one important publication as main author or without his/her PhD supervisor. The PI should also be able to demonstrate a promising track record of early achievements which are in line with his/her field of studies and career stage. (S)He should highlight:

- the most important publications (as main author) in international peer-reviewed scientific journals or in leading journals in his/her research field;
- the participation in national or international conferences, granted patents, awards, prizes and other qualifications that may be useful for the selection process.

A PI of a STARS-CoG project must have already demonstrated research independence and evidence of scientific maturity. For example, a CoG PI must have published several important publications as main author or showing his/her fundamental scientific contribution. The PI should also be able to demonstrate a consolidated track record of achievements which are appropriate to his/her field of studies and career stage. (S)He should highlight:

- the most important publications (as main author) in major international peer-reviewed scientific journals or in leading journals in his/her research field;
- the participation in established national or international conferences, granted patents, awards, prizes and other qualifications that may be useful for the selection process.

5.3 – Pre-selection (Step 1)

At Step 1, only part B1 of the STARS-StG and STARS-CoG proposals will be assessed.

Each proposal will be reviewed by the member of the Macro-area sub-committee who is expert in the scientific area indicated in the administrative form.

At the end of Step 1, every sub-committee will rank the proposals in their Macro-area on the basis of the scores given by the experts.

At the end of Step 1, candidates will be informed that their proposal:

A. is of excellent quality and passes to the following step of the evaluation;

B. is not of sufficient quality to pass to the following step of the evaluation.

The number of proposals passing to Step 2 will approximately double the number of fundable projects.







WiC proposals will be assessed by the expert of the Macro-area sub-committee in charge of the scientific area indicated in the administrative form of the proposal. Only Part B2 - *Research Proposal* has to be submitted and will be evaluated.

The Evaluation Committee will express an evaluation comment on the WiC projects and propose the allocation of funds to the ones that are considered worth supporting.

Results will be published on the following website: <u>https://www.unipd.it/en/stars2021</u>.

5.4 – Evaluation of proposals (Step 2)

Proposals for STARS-StG and STARS-CoG grants that are admitted to Step 2 will be assessed in full (parts B1 and B2) by the sub-committee of the Macro-area in charge of the scientific area indicated in the administrative form. The sub-committees will make use of 3 reviewers' evaluations: two evaluations are provided by external experts and one is provided by the sub-committee member.

PIs of STARS-StG and STARS-CoG proposals will be invited to an interview of approximately 30 minutes with the relevant Macro-area sub-committee. The interview consists of a brief presentation of the research project and a question and answer session related to the project and its budget.

Candidates will be notified of the date/time of the interview by e-mail (at the address indicated in the application form) with a notice of approximately 3-4 weeks. The interviews will be held in English, via Skype or in person at Unipd. No reimbursement will be provided for the participation to the interview. In compliance with Annex 2, absence or unavailability to attend the interview shall be deemed as a withdrawal from the selection process and will result in the exclusion of the proposal from funding.

Each Macro-area sub-committee will use the information gathered from the reviewers' evaluations and the interviews to jointly draw the final ranking for StG and CoG proposals. The sub-committees will propose the budget allocation for proposals deemed fundable.

Art. 6 – APPOINTMENT OF THE EVALUTATION COMMISSION AND APPROVAL OF THE RANKING LIST

The Evaluation Committee referred to in Art. 4 is appointed through a Unipd Rector's decree and is in charge of formulating the list of proposals selected for funding, which will be submitted to the University Board of Directors for its final approval.

Art. 7 – ALLOCATION OF FUNDING

Unipd will award a Research grant contract (i.e. "assegno di ricerca", pursuant to Art. 3, paragraph 2, clause b) of the current University Regulations for research grants at Unipd) to PIs of STARS-StG and STARS-CoG projects including the cost of their own contract in the proposal (option "With a grant for the PI" – see tables in Art. 3 of this call)⁴. The contract will be drawn for the amount specified in the proposal budget after deduction of any contributions required by law.

The Department hosting the research shall agree with the PI the contract starting date, under penalty of forfeiture. Such date shall not be later than 31 March 2022: any exceptional extension may be granted by

⁴ PIs including the cost of a research grant in their budget are either external to the Institution or holding a fixed-term contract at the University of Padua under the provisions of Law no. 240/2010, article 24 (*Ricercatore a tempo determinato di tipo a*) or *b*) – *Rtda* or *Rtdb*), which is expected to expirebefore the end of the project.







the STARS@Unipd Internal Commission in agreement with the Head of the hosting Department, following a justified request by the PI.

Should the agreement not be entered into by this date, the grantee shall forfeit the right to the research grant. An extension to the agreed date may be allowed in exceptional cases, for example if a project requires an ethics review, in case of prolonged visa procedures, or justified and documented personal or professional problems.

The signing of the contract shall not imply a subordinate employment relationship or ensure any rights to access permanent Unipd staff positions.

Unipd will make the project funding available to hosting Departments.

- ✓ For STARS-StG and STARS-CoG grants: when the PI does not hold a permanent position at Unipd, the project shall start on the date specified in the research contract and last two years. If the PI's employment relationship with Unipd changes during the project, the project shall continue but the residual amount related to the cost of the PI will be recovered by Unipd;
- ✓ For STARS-StG and STARS-CoG grants: when the PI holds a fixed-term contract of type a) or type b) at Unipd, expiring before the end of the STARS project, the funding will be made available to the hosting Department for two years. If necessary, a research grant contract ("assegno di ricerca") will be entered into with the PI and last from the end of the type a) or type b) position to the closure of the STARS project (for a gross amount of maximum 40.000 euros per year). If the PI's employment relationship with Unipd changes during the project, the project shall continue but the residual amount related to the cost of the PI will be recovered by Unipd;
- ✓ For STARS-CoG grants (when the PI holds a permanent position at Unipd) and for STARS-WiC grants: funding will be made available to the PI's hosting Department for two years.

Should an extension of the project be necessary, for STARS-StG and STARS-CoG grants, the PI's research grant (RG) may be renewed using the available research budget (RC), if any. Current regulations on the renewal procedure will apply.

The contribution for research costs will cover costs for additional staff, equipment, travels, consumables, publications and other costs necessary for the implementation of the project. Expenses that occur outside the period of the contract are not eligible.

During the carrying out of the project, modifications to the approved budget must be authorized by the STARS@Unipd Internal Commission.

Art. 8 – DUTIES OF PIS OF FUNDED PROJECTS

PIs are duty bound to carry out the activities envisaged in the research project they submitted and for which they have been funded.

At the end of the first year and within 30 days from the end of the project, the PI must submit a scientific report (*Intermediate* and *Final*, respectively) describing the implementation of the project, the results obtained, any changes to the original proposal.

The scientific report, together with the approval of the Board of the hosting Department, must be sent to Unipd, which will send it to the STARS@Unipd Internal Commission.

Research results must be published according to the "Open Access Regulation for the scientific production of the University of Padua" and, for the purpose of ex post verification, in publications resulting from







research funded under this call, PIs should quote (in order of priority) the STARS@UNIPD programme, the acronym and the title of the project.

The PI undertakes to submit an ERC-StG or ERC-CoG or ERC-Adv project proposal indicating Unipd as his/her Host Institution either during the project implementation or in the period immediately after the project closure.

Art. 9 – ETHICAL PRINCIPLES

All the proposed research and innovation activities shall comply with ethical principles and relevant national, EU and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination and the need to ensure high levels of human health protection. Research and innovation activities proposed under these projects shall have an exclusive focus on civil applications.

Art. 10 – FINAL PROVISIONS

For anything not specified in this call for proposals, please see Law no. 240/2010 and the University of Padua current Regulations for research grants and subsequent amendments and integrations, and other current regulations

(https://www.unipd.it/en/sites/en.unipd.it/files/UNIPD_REG_Research_Grants_ENG%20%281%29.pdf).

The University reserves the right to verify a candidate's self-certifications and statutory declarations (provided in accordance with the Italian Presidential Decree DPR 445/2000) at any stage of the procedure. If the aforementioned statements are found to be false, the declarer shall forfeit any benefits that (s)he may have gained from the false statements, without prejudice to any sanctions envisaged by the Italian criminal code or by special laws governed by Art. 76 of Italian Presidential Decree DPR no. 445/2000.

Personal data provided by candidates shall be processed according to the EU Regulation no. 679/2016 (*General Data Protection Regulation - GDPR*).

The candidates' personal data will be electronically processed only for the purposes of this call for proposals and the possible establishment of their employment contract.

The provision and collection of personal data is mandatory for the participation in the selection procedure and, in case of sensitive data, it is carried out according to Law 68/1999 and Law 104/1992.

The complete documentation informing on the personal data processing at Unipd is available at the following link: <u>https://www.unipd.it/en/privacy</u>.

The person in charge of this procedure is Mr. Andrea Berti, Manager of the Research and Business Relations Area (ARRI) of the University of Padua.

This call for proposals is managed by the International Research Office of the University of Padua: questions and information requests about the proposal submission or the evaluation procedures may be addressed to <u>talent.stars@unipd.it</u>.

All relevant documents for this call for proposals are available at the following links: <u>https://www.unipd.it/en/stars2021 (in English) and http://www.unipd.it/stars2021 (in Italian)</u>.







The English version of this call for proposals has the sole purpose of enabling applicants to understand the content thereof; only the Italian version of the call is legally binding.

Padua, date of signature.

The Rector Rosario Rizzuto

Annexes:

- 1. Macro-areas and ERC scientific domains;
- 2. Guide for Applicants and application template.







Annex no. 1 to the Call for proposals - Macroareas and ERC scientific domains

Macroarea PE:	Macroarea LS:	Macroarea SH:	
Physical Sciences and Engineering	Life Sciences	Social Sciences and	
PE1 Mathematics: All areas of	LS1 Molecules of Life: Biological	Humanities	
mathematics, pure and applied,	Mechanisms, Structure and	SH1 Individuals, Markets and	
plus mathematical foundations of	Functions: For all organisms:	Organisations: Economics,	
computer science, mathematical	Molecular biology, biochemistry,	finance and management	
physics and statistics.	structural biology, molecular	SH2 Institutions, Governance	
PE2 Fundamental Constituents of	biophysics, synthetic and chemical	and Legal Systems: Political	
Matter: Particle, nuclear, plasma,	biology, drug design, innovative	science, international	
atomic, molecular, gas, and optical	method and modelling.	relations, law.	
physics.	LS2 Integrative Biology: From Genes	SH3 The Social World and its	
PE3 Condensed Matter Physics:	and Genomes to Systems: For all	Diversity : Sociology, social	
Structure, electronic properties,	organisms: Genetics, epigenetics,	psychology, social	
fluids, nanosciences, biological	genomics and other 'omics studies,	anthropology, education	
physics.	bioinformatics, systems biology,	sciences, communication	
PE4 Physical and Analytical	genetic diseases, gene editing,	studies.	
Chemical Sciences: Analytical	innovative methods and modelling,	SH4 The Human Mind and Its	
chemistry, chemical theory,	'omics for personalized medicine	Complexity: Cognitive	
physical chemistry/chemical	LS3 Cellular, Developmental and	science, psychology,	
physics.	Regenerative Biology: For all	linguistics, theoretical	
PE5 Synthetic Chemistry and	organisms: Structure and function for	philosophy.	
Materials: New materials and new	the cell, cell-cell communication,	SH5 Cultures and Cultural	
synthetic approaches, structure-	embryogenesis, tissue differentiation,	Production : Literary studies,	
properties relations, solid state	organogenesis, growth, development,	cultural studies, study of the	
chemistry, molecular architecture,	evolution of development, organoids,	arts, philosophy	
organic chemistry.	stem cells, regeneration, therapeutic	SH6 The Study of the Human	
PE6 Computer Science and	approaches.	Past: Archaeology and	
Informatics: Informatics and	LS4 Physiology in Health, Disease	history.	
information systems, computer	and Ageing: Organ and tissue	SH7 Human Mobility,	
science, scientific computing,	physiology, comparative physiology,	Environment, and Space:	
intelligent systems.	physiology of ageing,	Human geography,	
PE7 Systems and Communication	pathophysiology, inter-organ and	demography, health,	
Engineering: Electrical, electronic,	tissue communication,	sustainability science,	
communication, optical and	endocrinology, nutrition, metabolism,	territorial planning, spatial	
systems engineering.	interaction with the microbiome,	analysis.	
PE8 Products and Processes	non-communicable disease including		
Engineering: Product and process	cancer (and except disorders of the		
design, chemical, civil,	nervous system and immunity-related		
environmental, mechanical, vehicle	disease).		
engineering, energy processes and			
relevant computational methods.			







PE9 Universe Sciences: Astro-	LS5 Neurosciences and Disorders of	
physics/-chemistry/-biology; solar	the Nervous System: Nervous	
system; planetary system; stellar,	system development, homeostasis	
galactic and extragalactic	and ageing, nervous system function	
astronomy, cosmology; space	and dysfunction, systems	
sciences; astronomical	neuroscience and modelling,	
instrumentation and data.	biological basis of cognitive processes	
PE10 Earth System Science:	and of behavior, neurological and	
Physical geography, geology,	mental disorders	
geophysics, atmospheric sciences,	LS6 Immunity, Infection, Infection	
oceanography, climatology,	and Immunotherapy: The immune	
cryology, ecology, global	system, related disorders and their	
environmental change,	mechanisms, infectious agents and	
biogeochemical cycles, natural	infection, prevention and treatment	
resources management.	of infectious diseases, innovative	
PE11 Materials Engineering:	immunological tools and approaches,	
Advanced materials development:	including therapies.	
performance enhancement,	LS7 Prevention, Diagnosis and	
modelling, large-scale preparation,	Treatment of Human Diseases :	
modification, tailoring,	Medical technologies and tools for	
optimization, novel and combined	prevention, diagnosis and treatment	
use of materials, etc.	of human diseases, therapeutic	
	approaches and interventions,	
	pharmacology, preventative	
	medicine, epidemiology and public	
	health, digital medicine.	
	LS8 Environmental Biology, Ecology	
	and Evolution: For all organisms:	
	Ecology, biodiversity, environmental	
	change, evolutionary biology,	
	behavioural ecology, microbial	
	ecology, marine biology,	
	ecophysiology, theoretical	
	developments and modelling.	
	LS9 Biotechnology and Biosystems	
	Engineering: Biotechnology using all	
	organisms, biotechnology for	
	environment and food applications,	
	applied plant and animal sciences;	
	bioengineering and synthetic biology;	
	biomass and biofuels, biohazards.	