

# CALL FOR APPLICATIONS



## Neo-PRISM-C project

### NEurodevelopmental Optimal-Predictors, Risk factors, and Intervention from a Systems approach to Maladjustment in Children

#### Early Stage Researcher (ESR) positions

The Center for Applied Neuroscience (CAN) and the Department of Psychology at the University of Cyprus is offering:

- Positions for **3 Early Stage Researchers** (ESRs; doctoral students) in a project aiming to study neurodevelopmental disorders (NDD). The purpose of the *Neo-PRISM-C* ETN is three-fold. First, it seeks to train Early Stage Researchers (ESRs) in applying the Research Domain Criteria, a novel framework for understanding psychopathology, to the study of the mechanisms and treatments of NDD. Second, it aims to train ESRs from multiple disciplines (psychology, neuroscience, data science) in state-of-the-art and transferable skills for innovating the study of brain-behavior relationships in NDD, in the context of a systems-based, trans-diagnostic theoretical frame. Finally, this ETN will also support training in designing evidence-based, individualized treatments of learning, behavioral, and social maladjustment, bridging across diagnostic categories. Towards these goals, we have assembled a trans-sectoral European network with expertise in cognitive, social, educational, clinical, and emotion research to provide training ESRs.
- Applicants from all relevant academic disciplines are encouraged to apply, including psychology, neuroscience, data science, and related disciplines. The selected doctoral students will enroll in the graduate school of the University of Cyprus and work towards their **Ph.D. in Psychology** (for applicants with psychology and non-psychology backgrounds) or **Ph.D. in Clinical Psychology** (for applicants with a psychology background who wish to become licensed Clinical Psychologists in Cyprus and EU). Both programs offer advanced courses in psychopathology, methods, and neuroscience, links to the training activities of 10 active research laboratories, the Center of Applied Neuroscience, the Mental Health Center, Teaching and Learning Center for transferable skill training (<http://www.ucy.ac.cy/ctl/en/>). For more information about the two programs, see [http://www.ucy.ac.cy/psych/en/\\_academicprogramms/postgraduate](http://www.ucy.ac.cy/psych/en/_academicprogramms/postgraduate). Applicants who will choose to pursue a degree in Clinical Psychology must have mastery of the Greek language.

The multidisciplinary **Neo-PRISM-C** project is funded by the Horizon 2020 Marie Skłodowska-Curie action of the European Union. It is part of the Innovative Training Network (ITN) actions (<http://www.neoprismc.org/>).

## **Hosting Institution**

### **Center for Applied Neuroscience (CAN)**

These exciting and challenging positions are offered at CAN, an international research center focusing on neuroscience research, training, and innovation, contributing to improving health mental care (<https://www.cancyprus.org/>). CAN researchers are an enthusiastic group, actively publishing in a broad domain of topics related to neuroscience aspects of psychological science, and securing funding from international and national sources. CAN's Advisory Board is composed of local and international experts in the field of applied neurosciences. As the only Centre of its kind in Cyprus, investigating high incidence neuropsychological and neuropsychiatric disorders through the application of integrative and contemporary methodologies, CAN strives for academic excellence and continual growth.

### **DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF CYPRUS (UCY)**

The University of Cyprus is a top-ranked academic institution, established as a Pioneer Research Institution achieving International Scientific Recognition in European Higher Education, offering Competitive Programs and operating as a Centre of Excellence in the wider Euro-Mediterranean Region (<https://www.ucy.ac.cy/en/>). The main objectives of the University are twofold: the promotion of scholarship and education through teaching and research, and the enhancement of the cultural, social and economic development of Cyprus. Research is promoted and funded in all departments for its contribution to scholarship in general and its local and international applications. The Department of Psychology was established in 2004 and has as its mission to educate new scientists in contemporary scientific Psychology, the production of knowledge that contributes significantly to the international literature on the understanding of human beings, and the multidimensional contribution to the local community. In its short history, the Department has been able to offer very popular and competitive undergraduate and graduate programs of study, which enjoy international recognition. It has already succeeded to be ranked in the top 200 psychology departments worldwide ([https://www.timeshighereducation.com/world-university-rankings/2019/subject-ranking/psychology#!/page/0/length/25/name/cyprus/sort\\_by/rank/sort\\_order/asc/cols/stats](https://www.timeshighereducation.com/world-university-rankings/2019/subject-ranking/psychology#!/page/0/length/25/name/cyprus/sort_by/rank/sort_order/asc/cols/stats)).

### **LIVING IN NICOSIA, CYPRUS**

The University of Cyprus is located in Nicosia, the island's capital city. Nicosia is the administrative, commercial, cultural, and educational center of the country, and is also geographically at the center of the island. A modern highway system connects Nicosia to all main towns and cities, many in under an hours' driving time.

The University of Cyprus provides on-campus self-catering accommodation to a limited number of students. Information on rents, criteria and application procedures is available through the Housing Office of the Affairs and Student Welfare Service (all registered students may apply for accommodation at the Housing Office). The University can accommodate a limited number of students in single, self-catering study/bedrooms in the Student Halls located at the New Campus, and in private apartments located off-campus. There are several restaurants and cafeterias within the University areas, operating on commercial terms but with controlled prices.

The Quality of Life Index in Cyprus is very high (154.60), and the cost of living (price index) in Nicosia is medium (65.26/100). Nicosia is renowned for its numerous cafés and

restaurants, and it is a lively student city. Tourism information about Cyprus can be found at <http://www.visitcyprus.com/index.php/en/>.

### Individual Research Projects

A description of all relevant information about **ESRs' individual research projects** (project title, host institution, supervisors, link, specific requirements and expected results) is followed:

**Fellow:** Factors-*ESR3*

**Project Title:** A longitudinal analysis of learning, cognitive, and behavioral dysfunctions in young children: A multifactorial developmental perspective (WP1 to provide further support to WP2).

**Host Institution:** University of Cyprus

**Supervisors:** Timothy Papadopoulos, George Spanoudis (UCY), Paavo Leppänen (JYU)

**Link** for more information: <https://www.cancyprus.org/labs/>. See Learning Disabilities Group and Language and Cognitive Development Research Group, led by Prof. Timothy Papadopoulos and Dr. George Spanoudis, respectively.

#### Specific Requirements

ESR3 will investigate the risk and protective factors contributing to the learning, cognitive, and behavioral deficit, using multiple methodologies for assessing the function of valence, cognitive, and arousal and regulatory systems.

#### Expected results

- (1) To study developmental psychopathology by examining whether similarities or differences characterize children with different phenomenological symptom clusters regarding dysregulation and dysfunction in fundamental aspects of behavior and underlying mechanisms of cognition, affect, and self-regulation.
- (2) To better understand the etiology of complex symptom clusters by studying higher-level domains of human behavior and functioning using various methodologies at different units of analysis, such as cognition and behavior (e.g., eye-tracking), physiology (heart rate, skin conductance, facial EMG), and circuits (e.g., ERP, MEG).
- (3) To differentiate between *equifinality* and *multifinality* by understanding the unique and interactive contribution of various etiological mechanisms.

**Fellow:** Factors-*ESR5*

**Project Title:** Examining the development of emotion regulation abilities and basic social-interpersonal skills as protective factors against childhood emotional difficulties (WP1 & WP3 better inform evidence-based treatment).

**Host Institution:** University of Cyprus

**Supervisors:** Georgia Panayiotou (UCY), Olivier Luminet (UCL)

**Link** for more information: <http://www.ucy.ac.cy/psychophysiology/en/>. Our lab under the direction of Professor Georgia Panayiotou, examines emotions and their role in both normal psychological functioning and psychopathology in both adults and children. We have examined how various systems of emotion and emotion regulation abilities operate in populations with anxiety, externalizing disorders, alexithymia, substance use and other conditions. We use a variety of measures including self-report, peripheral psychophysiology, eye-tracking, ERP and fNIRS. We have also been working to develop innovative therapeutic approaches in collaboration with other partners at UCY and the *NEO-PRISM-C* network.

#### Specific Requirements

ESR5 will study basic systems of emotional valence, arousal, attention, and self-regulation as early predictors of the development of emotion regulation skills and fundamental social

skills with the goal of finding objective biomarkers of emotion regulation abilities utilizing Heart Rate Variability, facial EMG, ERP and eye-tracking methods.

### **Expected results**

- (1) To examine the developmental trajectory of emotion regulation and social/affiliative abilities with the use of multiple measurements at a young age (5- 8), including parent report and objective biomarkers of fundamental systems of emotion, cognition, and self-regulation including several psychophysiological measures ranging from Heart Rate Variability (as an index of emotion regulation) to facial EMG to assess emotional expression and ERPs to emotional stimuli.
- (2) To identify biomarkers that serve as best early predictors of the development of essential adjustment skills and mental health.
- (3) To implement an experimental prevention program, targeted at the training of emotion regulation skills in a subset of the sample, using interactive computer technology and gaming environments to moderate the effects of the identified risk factors on the development of emotion regulation capacity, social affiliation, and mental health.

**Fellow:** Neuro-*ESR6*

**Project Title:** Psychoneurometric operationalization of externalizing and internalizing psychopathology: Taking genetic and environmental influences into account (WP 2).

**Host Institution:** University of Cyprus

**Supervisors:** Kostas Fanti (Developmental Psychopathology Lab, UCY), Olivier Luminet (UCL), Georgia Panayiotou (UCY)

**Link** for more information: <http://ucy.ac.cy/dir/el/component/comprofiler/userprofile/kfanti>

Please contact Dr Fanti at [kfanti@ucy.ac.cy](mailto:kfanti@ucy.ac.cy) for specific questions related to the project.

### **Specific Requirements**

ESR6 will apply a psychoneurometric approach to explain the manifestation of externalizing and internalizing psychopathology based on composite bio-behavioral constructs informed from multi-systemic behavioral (clinical and personality assessments), cognitive (attention allocation to empathy and threat), physiological (skin conductance, heart rate, electromyography), and brain (dorsolateral and medial prefrontal cortex) indicators. Additionally, ESR6 will investigate how gene by environment interactions modulate susceptibility to the identified bio-behavioral constructs.

### **Expected results**

- (1) To inform Research Domain Criteria (RDoC) by re-conceptualizing externalizing and internalizing psychopathology through the incorporation of cognitive, neurobiological and behavioral constructs investigated across multiple domains of measurement.
- (2) By examining different cognitive, physiological, and brain domains, we will also inform current research efforts towards biomarkers of psychological disorders.
- (3) To explain the effect of genetic risk on identified bio-behavioral informed conditions in children and adolescents with different environmental exposures. The ESR will gain significant skills in statistical methods, neurophysiology, genetics, and transferable skills (e.g., psychoneurometric approach), enabling the ESR to excel in several future scientific areas and continue within areas of industry relevant to neurophysiological and genetic data.

### **Eligibility criteria**

Successful applicants should:

- (a) Must **not** have resided or carried out their main activity (work, studies, etc.) in the country of their host organisation **for more than 12 months** in the 3 years immediately prior to the contract commencement date; and
- (b) Have a proven knowledge of **at least one of the three themes** of the *Neo-PRISM-C* (as described in the first paragraph of this announcement) network, as judged based on outstanding results within a diversified career path, publication activity, and teaching, supervision, teamwork, knowledge transfer, and management.
- (c) For entry into either Ph.D. program, a Bachelors degree and Masters degree **from an accredited University are required** (recognized by the relevant authority of Cyprus <http://www.kysats.ac.cy/index.php/en/>). For entry in the Ph.D. in Clinical Psychology both previous degrees must be in Psychology.

Women and men from all countries are encouraged to apply. The recruitment milestone for all ESRs is estimated at the 6th month from the ETN start.

## Offer Requirements

### Qualifications

1. A University degree and Master's degree in psychology, neuroscience, data science, and related disciplines.
2. Excellent written and spoken English skills (applicants are required to provide relevant proof).
3. Knowledge of at least one more European Language represented in the consortium (e.g., French, Finnish, Hungarian) will be considered as an advantage.
4. A keen interest in neuroscience and specifically in neurodevelopmental disorders.
5. Knowledge on computer proficiency in standard softwares of Social Sciences and mathematics (e.g., SPSS, R, MATLAB) is highly desirable.
6. Knowledge and prior involvement in experiments using brain imaging methods (e.g., EEG, MRI, fMRI, fNIRS, MEG), data collection, analysis, and interpretation will be considered as an advantage.
7. Knowledge and prior involvement in experiments using psychophysiological and neurophysiological experimental techniques (e.g., eye-tracking, startle eyeblink; nerve conduction; habituation; electrodermal activity (GSR); electromyography, heart rate variability) will also be considered as an advantage.
8. Sufficient breadth or depth of specialist knowledge in the discipline and research methods and techniques.
9. Strong organizational and planning skills and ability to take initiatives.
10. Demonstrated experience with experimental research and an ability to work with international research teams whose work focuses on children from special and vulnerable populations will be considered an advantage.

### Additional information

Overall, *Neo-PRISM-C* will offer the ESRs:

- Project-specific research in neurodevelopmental disorders
- Full-time employment for 3 years with a competitive salary and additional resources to take part in international conferences and collaborations
- Tuition for doctoral studies at the University of Cyprus
- A PhD-title after 4 years of research
- Secondments to partner organizations

- Participation in workshops and courses /training on scientific and entrepreneurial skills, as well as excellent supervision
- Competitive salaries and additional resources to take part in international conferences and collaborations
- Membership of world-renowned labs, as part of a motivated interdisciplinary team
- Membership of the University of Cyprus, one of the pioneering younger research universities in Europe.

## Benefits

## Post Financial Terms

The *Neo-PRISM-C* consortium comprises eight teams from several European countries and N. America partners and has a total budget of €4 million. The post for the ESR is a **full-time** and fixed term for one year with a possible renewal for another two years, with an expected start date September 2, 2019. Salary will be €32,412 per year, including comprehensive health insurance and social security plans. Salary will be supplemented with Mobility Allowance (€600 per month). Qualified applicants based on family status may receive an additional Family Allowance of €500 per month.

## How to apply

Candidates are asked to submit the required documents in a single .pdf file via email to the Project Administration Manager of the *Neo-PRISM-C* project, Mrs. Afroditi Stefanou at [stefanou.afroditi@ucy.ac.cy](mailto:stefanou.afroditi@ucy.ac.cy) until March 31, 2019, 14:30 EET, stating the project they would like to be involved in (see <https://euraxess.ec.europa.eu>):

- Letter of motivation (research interests, research career goals, skills, experience, reasons for applying to the program and the specific host organization)
- A full updated CV (including among other information, personal details with complete contact data, work, and education history, etc.)
- Certified copies of relevant degrees and English Language proof of proficiency
- The names and e-mail addresses of two referees

For more information, please contact Prof. Timothy C. Papadopoulos, *Neo-PRISM-C* Project Coordinator, at the Center for Applied Neuroscience, University of Cyprus, +357 22 892079, email: [papadopoulos.timothy@ucy.ac.cy](mailto:papadopoulos.timothy@ucy.ac.cy).

Deadline for the first round of applications is **March 31, 2019**.