

## Research fellow 1 year post-doctoral position (renewable once)

# Ampiric

(Aix Marseille – Pôle d'Innovation, de Recherche, d'enseIgnement pour l'éduCation)

Aix-Marseille Université

### 1. Context

The Ampiric (Aix-Marseille - Pôle d'Innovation, de Recherche, d'enseIgnement pour l'éduCation) pilot centre, coordinated by Aix-Marseille University, is launching a call for applications to finance a one-year post-doctoral contract, renewable once.

Ampiric aims to improve the foundation skills of pupils throughout their school career, especially those facing the greatest difficulties, by working towards a better understanding of the teaching and learning processes of foundation skills, by supporting fundamental research and/or research focused on the needs of education and training. AMPIRIC is based on the development of innovative research work, to better inform the evolution of initial and in-service teacher training, and to develop, experiment with and disseminate new pedagogical approaches. The centre relies on a better structuration between research, training and the field, in order to create virtuous circles of knowledge production and transfer, and to encourage the deployment of a dynamic of communities of practice, with the aim of improving learning for all (see project summary in appendix 1. Details of the project are also available at <https://www.univ-amu.fr/ampiric>).

Ampiric gathers 22 research units (see appendix 2) in the transverse field of Learning and Education, divided into four interdisciplinary poles :

- Digital sciences for education
- Human and social sciences
- Education, pedagogy and didactics
- Cognitive sciences

### 2. Profile sought

The post-doc fellow recruited will join a team in the Cognitive Psychology Laboratory working on the role of emotions in the learning of mathematics. The research will aim to contribute to our knowledge of the mechanisms responsible for the deleterious or beneficial effects of negative or positive emotions during the cognitive development of the child in the field of mathematics. The theoretical, empirical and pedagogical contributions of the research are to be in line with the orientations of AMPIRIC, particularly as regards the foundation skill of counting and calculating.

The competences expected from the candidates include :

- Knowledge acquired or to be acquired on (a) numerical cognition and its development, (b) the role of emotions in cognition, in adults and during child development
- Skills in (a) experimentation (building an experiment and testing children and adults), (b) statistics (classical analysis techniques, such as correlation-regression, ANOVA, baysian and mixed-effects

analysis), (c) computer science (e.g. programming experiments on computers (with software such as E-Prime, Gorilla, jatos; statistical software: R, jamovi-jasp).

- Availability to learn new research techniques (e.g. eye movements; virtual reality) for the study of cognition as well as new statistical analysis techniques
- Skills in scientific communication (publications, congresses) and dissemination of knowledge (to a large non-academic audience) for the valorisation of results.

Applications will be examined based on the quality of the scientific file as well as the quality of the post-doctoral project. Applicants are invited to identify the extent to which their post-doctoral research could contribute to the initial and/or in-service teacher training. The greatest attention will be paid to the interdisciplinary nature of the proposals and the international character of applicants' scientific backgrounds.

### **3. Application**

The application is composed of the following documents:

1. Curriculum vitae and list of publications (pdf)
2. PhD diploma (pdf or jpeg)
3. Defence report (pdf)
4. Research project: title, host research unit, presentation of the project in 10,000 characters maximum, explaining the relevance of the project for Ampiric (pdf)
5. Letter of support from the director of the Ampiric's partner research unit
6. Letter of support from the supervisor within Ampiric's partner research unit
7. Letter of recommendation from an external scientific personality (pdf)

Deadline for applications: **27 January 2023 at midnight**

Applications should be sent to [mathilde.favier@univ-amu.fr](mailto:mathilde.favier@univ-amu.fr) and should be named as follows

1. NAME\_CV
2. NAME\_Doctorate
3. NAME\_Defence
4. NAME\_Project
5. NAME\_LetterDir
6. NAME\_LetterSup
7. NAME\_Recommendation

Audition for shortlisted candidates: **6 March 2023**

Duration of the contract: 1 year from 1 April 2023, renewable once

Remuneration: €2,466.38 gross per month (€1,982.94 net) for the first year

For further information: [mathilde.favier@univ-amu.fr](mailto:mathilde.favier@univ-amu.fr)

## **Annex 1: Ampiric – executive summary**

AMPIRIC (Aix-Marseille - Pôle d'Innovation, de Recherche, d'Enseignement pour l'Education) is a pilot centre aiming to improve the learning of pupils' foundation skills throughout their school career, particularly those who are under-achieving. AMPIRIC is based on the development of innovative research work, to better inform the evolution of initial and in-service teacher training, and to develop, experiment with and disseminate new pedagogical approaches.

The centre relies on an interdisciplinary scientific perimeter made up of 22 laboratories, and develops ; collaborative research, co-constructed with educational teams to respond to concerns in the field; research in partnership with private companies, to encourage the emergence of innovative educational tools, derived from both digital and non-digital technologies; fundamental research, to develop new scientific knowledge and to support the transformation of teaching practices. The Ampiric ecosystem is thus based on a better articulation between research, training and the field, in order to create virtuous circles of knowledge production and transfer, and to encourage the deployment of a dynamic of communities of practice, with the aim of improving learning for all.

5 strategic objectives :

- Transform teacher training and support, in order to develop teaching practice, in the challenging context of foundation skills' learning;
- Encourage cooperation between research and teaching professionals, by supporting action research and bringing "communities of practice" to life;
- Improve our understanding of foundation skills' teaching and learning processes, by supporting research to meet the needs of training and education;
- Co-produce numeric tools and applications, and innovative teaching practices, aimed at foundation skills' learning within a CreativLab;
- Disseminate and promote educational resources on foundation skills' learning.

An evaluation and impact measurement system is put in place, based on a double longitudinal follow-up: on the one hand, a follow-up of the learning performances of the pupils and on the other hand, a follow-up of the evolution of teaching professionalism, from the first year of undergraduate training to the continuous professional development of practising professionals.

Initially, the project is being tested in academic networks identified as prefiguring ones within the Aix-Marseille academy. In a second phase, it will be extended to other academic networks, to the entire PACA region and to the Inspé of the Nice Academy.

Coordinated by Aix-Marseille University, AMPIRIC is conducted in partnership with the Academy of Aix-Marseille, Avignon University (AU) and the University of Côte d'Azur (UNS), the CNRS, the National Association of Research and Technology (ANRT), the Canopé Network, and the Région Sud. The project is laureate of the call for projects "Pôle Pilote de formation et de recherche en éducation" of the PIA3's Territoires d'Innovation Pédagogique component. It is financed by the Caisse des dépôts et des Consignations for a period of 10 years (2020-2030).

## **Annex 2 : Ampiric's partner research units**

UMR 7064 – **Centre Méditerranéen de sociologie, de science politique et d'histoire** – MESOPOLHIS/AMU-CNRS-Science-Po – Directeur : Marc Bernardot

[UMR 7310](#) – **Institut de recherches et d'études sur le monde arabe et musulman** (IREMAM/AMU-CNRS) – Directeur : Richard Jacquemond, Directeur-adjoint : Cédric Parizot

[UMR 7303](#) – **Temps, espaces, langages. Europe méridionale, Méditerranée** (TELEMME/AMU-CNRS) – Directeur : Xavier Daumalin

[UMR 7317](#) – **Laboratoire d'économie et de sociologie du travail** (LEST/AMU-CNRS) – Directeur : Thierry Berthet

[UR 4671](#) – **Apprentissage, Didactique, Évaluation, Formation** (ADEF/AMU) – Directrice : Christine Poplimont

[UR 3274](#) – **Laboratoire d'Études en Sciences des Arts (LESA/AMU)** – Directeur : Jean-Michel Durafour

[UMR 7309](#) – **Laboratoire Parole et Langage (LPL/AMU-CNRS)** – Directeur : Laurent Prévot, Directeur-adjoint : Serge Pinto

[UMR 7020](#) – **Laboratoire d'Informatique et Systèmes** (LIS/AMU-CNRS) – Directeur : Frédéric Bechet, Directeur-adjoint : Eric Busvelle

[UR 3273](#) – **Psychologie de la Connaissance, du Langage et de l'Émotion** (PSYCLE/AMU) – Directrice : Nathalie Bonnardel

[UMR 7345](#) – **Laboratoire de Physique des Interactions Ioniques et Moléculaires** (PIIM/AMU-CNRS) – Directrice : Annette Calisti, Directeur-adjoint : Jean-Marc Layet

[UMR 7287](#) – **Institut des Sciences du Mouvement** (ISM/AMU-CNRS) – Directrice : Martine Pithioux, Directeur-adjoint : Gilles Montagne, Stéphane Viollet

[UMR 7291](#) – **Laboratoire de Neurosciences Cognitives** (LNC/AMU-CNRS) – Directeur : Thierry Hasbroucq, Directeur-adjoint : Boris Burle

[UMR 7031](#) – **Laboratoire de Mécanique Acoustique** (LMA/AMU-CNRS) – Directeur : Dominique Eyheramendy, Directeur-Adjoint : Pierre-Olivier Mattei

[UR 854](#) – **Centre Aixois d'Études Romanes** (CAER/AMU) – Directeur : Claudio Milanese

[UMR 7290](#) – **Laboratoire de Psychologie Cognitive** (LPC/AMU-CNRS) – Directeur : Johannes Ziegler

[UMR 7304](#) – **Centre Gilles Gaston Granger** (CGGG/AMU-CNRS) – Directeur : Monsieur Pascal Taranto, Directeur adjoint : Giuseppe Di Liberti

[EA 849](#) – **Laboratoire de Psychologie Sociale** (LPS/AMU) – Directrice : Valérie Fointiat

[UMR 7373](#) – **Institut de Mathématique de Marseille** (I2M/AMU-CNRS) – Directeur : Peter Haissinsky

[EA 4128](#) – **Laboratoire d'informatique d'Avignon** (LIA/Université d'Avignon) – Directeur : Yannick Estève

[UMR 8245](#) – **Unité de Recherche Migrations et Société** (URMIS/ Université Paris Diderot – Université de Nice Côte d'Azur – IRD - CNRS) – Directrice : Swanie Potot

[UMR 7320](#) – **Bases, Corpus, Langages** (BCL/Université Nice Sophia Antipolis-CNRS) – Directrice : Fanny Meunier, Directeur-adjoint : Richard Faure

[LINE](#) – **Laboratoire d'innovation et numérique pour l'éducation** (LINE/URE Université Nice Côte d'Azur) – Directrice : Ana Chiaruttini

[IREM](#) – **Institut de Recherche sur l'Enseignement des Mathématiques** (Service commun AMU)  
Directeur : Olivier Gues

## Appendix 3: Eligibility and selection criteria for applicants

The general objectives of AMPIRIC post-doctoral funding are (i) to support research related to the foundation skills' teaching and learning (reading, writing, counting, reasoning, respecting others), or more transversal and systemic research on the conditions of learning and the factors that have an impact on their improvement (ii) to promote collaborations between the teams of the centre and (iii) to support high-level international research.

### 1. Eligibility criteria for supervisors

- Be part of one of AMPIRIC's research units (see Annex 2 of the call for applications)
- An AMPIRIC member may supervise only one application.

### 2. Eligibility criteria for applicants

- The project must be related to the scientific objectives of AMPIRIC
- The application must be complete (see text of the call for applications)
- The candidate must have defended his/her Phd before the audition date.
- It is not possible to apply with one's own Phd director immediately after the end of the Phd.

### 3. Selection of candidates for the audition

- After checking the eligibility of the candidates, the commission selects 2 experts for each file
- The evaluation is based on the selection criteria (see point 4 below).
- The experts' reports are sent to the commission, to shortlist the candidates for an audition
- AMPIRIC is attentive to the parity of the selected applications.

### 4. Selection criteria

- Quality of the candidate (10 points):
  - Academic background/publication record (50%)
  - Suitability of the profile for the project (25%)
  - Quality of the CV (25%)
- Quality, originality and feasibility of the project (10 points)
- Interdisciplinarity, structuring effect and consistency with AMPIRIC's scientific policy (10 points)

### 5. Conflict of interest criteria for jury members

- Being a supervisor of a candidate (% of participation equal to or higher than 50%).
- If a member of the jury belongs to the same laboratory or team as the supervisor, it is possible for him/her to sit on the jury but not to participate in any vote on this file.

### 6. Audition

The audition will take the form of an individual interview (10 minutes of presentation and 15 minutes for questions). The members of the jury then deliberate for 5 minutes. A general deliberation takes place after the audition of all the candidates to agree on the final selection.