

Two PhD Open Position at the Human-IST Institute

Fribourg, Switzerland, January, 2019

1 Position Overview

The Department of Informatics (DIUF) at University of Fribourg signed an agreement with the Secretariat of High Education, Science, Technology and Innovation (SENESCYT) of Ecuador to grant two scholarships for Ecuadorian students holding a Master in Science degree with a strong background in computer science or a closely related field are offered the opportunity to directly join a PhD program offered by the Human-IST Institute.

Students should be able to develop a theoretical framework that will be implemented on a prototype that will be finally applied on a use case within an existing project together with one of our business partners (i.e., Swiss Post¹, Swisscom², and Viasuisse³, among others).

2 Core Challenges (not limited)

- Soft computing, blockchain, smart contracts, smart cities, IoT, big data, analytics, and machine learning.
- A main focus should be given soft computing techniques as fuzzy logic, computing with words and perceptions, etc.

3 Eligibility

Required qualifications:

- A strong Undergraduate and Masters of Science degree in computer science or a relevant discipline with a minimum grade of 5/6 (or equivalente). Ideally applicants will be able to demonstrate an interest in both theoretical and software engineering skills. The Master of Science degree MUST be for at least 90 ETCS.

¹<https://www.post.ch/en>

²<https://www.swisscom.ch>

³<http://viasuisse.ch>

- The ability to work independently as well as in a team.
- Applicants must provide evidence of good English language skills, written and spoken. The following tests can be used as such documentation: TOEFL, IELTS or Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE) or Proficiency English Levels (provided by recognized language institutions in Ecuador). Minimum scores are: TOEFL: 600 (paper-based test), 92 (Internet-based test), IELTS: 6.5, with no section lower than 5.5 (only Academic IELTS test accepted), CAE/CPE: grade B or A, english proficiency with a minimum 90% of passing grade. In extraordinary circumstances, formal documentation of language skills can be required. Language skills will be assessed in a personal interview.
- Maximum age at the moment of application is 29 years.

4 Position

The Human-IST (Human Centered Interaction Science and Technology)⁴ Institute at the University of Fribourg has one PhD positions available to work under de supervision of Prof. Dr. Edy Portmann (supervisor) and Dr. Luis Terán (co-supervisor). Successful applicants will receive funding to cover the tuition and a monthly scholarship of 1000 CHF to cover the accommodation expenses in Switzerland granted by the Human-IST Institute. The Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT⁵) will provide as counterpart a scholarship that covers the following: flight tickets; a complementary amount for living expenses, in accordance to the costs of living stipulated by the Secretariat for Fribourg, Switzerland; and health and living insurance; according to the detailed specificities of the scholarship program normative, framed under the Agreement Number 2016-056⁶ and the Amendment signed in 2017⁷.

The Ph.D open positions will be promoted by the Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT) in their website for the *Globo Común Scholarship Program*⁸.

⁴<http://human-ist.unifr.ch/>

⁵SENESCYT: <http://educacionsuperior.gob.ec>

⁶Agreement: 2016-056 (https://diuf.unifr.ch/main/is/sites/diuf.unifr.ch.main.is/files/Agreement_2016-056_EN.pdf)

⁷Amendment: https://diuf.unifr.ch/main/is/sites/diuf.unifr.ch.main.is/files/Amendment_UniFR-SENESCYT_EN.pdf

⁸<http://programasbecas.educacionsuperior.gob.ec/globo-comu/>

5 Information About the Department

The Human-IST Institute is part of the Department of Informatics at the University of Fribourg, Switzerland (DIUF⁹). The Informatics Department is part of the Swiss Joint Master of Science in Computer Science¹⁰ offered by the universities of Bern, Neuchâtel, and Fribourg, ideal for computer scientists who want to expand their horizons and open doors to future career opportunities. PhD students are encouraged to participate in the different master courses to complete the number of credits required for the first two years of doctoral studies (refer to numeral 4 in Section 7.1).

Additionally, PhD students at DIUF can participate in the Doctoral Program in Computer Science¹¹ of the Universities of Fribourg, Geneva, Lausanne, Neuchâtel, Bern and the EPFL. Thanks to the financial support offered from the Conférence Universitaire de Suisse Occidentale (CUSO), these five Universities decided to join their efforts and expertise to establish a new Doctoral Program in Computer Science. The Doctoral Program in Computer Science aims to facilitate the acquisition of knowledge and scientific methods through seminars and workshops to which foreign experts will be invited. The doctoral program will also allow doctoral students to improve their aptitude for communication about their research, and offers a possibility to improve scientific English. Furthermore, the school encourages the doctoral students to acquire experience in the organization of their own scientific events (congress, seminars) and to establish networks of collaboration. PhD students are encouraged to participate in the different congress, seminars, etc organized by CUSO to complete the number of credits required for the first two years of doctoral studies (refer to numeral 4 in Section 7.1).

Important: PhD programs at the University of Fribourg, Switzerland are automatically recognized by the Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT)¹².

6 To Apply

Applications should be provided electronically with the following electronic form: <https://diuf.unifr.ch/main/is/phd-positions-application-form>. Applications must include, in PDF format the following:

- Full CV.
- A transcript of results for all university level modules and courses.
- A transcript of results for all English courses.

⁹DIUF: <http://diuf.unifr.ch>

¹⁰MCS: <http://mcs.unibnf.ch>

¹¹Doctoral Program in Computer Science: <http://informatique.cuso.ch/welcome/>

¹²Universities Recognized by SENESCYT: <http://www.educacionsuperior.gob.ec/titulos-phd/>

- One-page abstract describing final year undergraduate project.
- One-page abstract describing MSc project.
- One-page abstract describing relevant work experience.
- Motivation letter explaining interest in research, referring explicitly to one or more of the areas listed above.
- Three emails of contacts willing to provide a recommendation letter (do not submit the recommendation letter, contact information only).

Short list of applicants will be requested for an online interview with the thesis supervisors.

7 Work description

The appointment is for a term of 3 to 4 years, with duties equivalent to 30%. Duty work, will primarily be related to support of education tasks. This is a researcher training position aimed at providing promising future researchers the opportunity of academic development in the form of a doctoral degree.

7.1 Tasks and responsibilities

1. **Duration:** The PhD project should be completed in three years, extended by a maximum of one year at the request of the applicant.
2. **Agreements and Targets:** Annual targets will be defined in agreement with the supervisor of the doctoral thesis. The research, student assistance, and other responsibilities will be defined.
3. **Quarterly Report:** A brief quarterly report shall be drawn on the status of the thesis project. They should mention the various presentations, publications, supervision of student research projects and related services.
4. **PhD Studies:** In the first two years of doctoral education students shall be completed 120 hours of additional studies, half of these studies should be conducted out of the University of Fribourg.
5. **Qualifications:** PhD candidate must submit at least three publications in international journals or conferences. Publications must be in English and at least one as first author.
6. **Supervision of Exercises:** Research assistant should be in charge of a course each semester.

7. **Supervision of Research Projects of Students:** documents should be published seminar in the field of research.
8. **Seminar:** At least one seminar in the field of research should be proposed and carried out in collaboration with a Professor.

7.2 Guidelines for scientific publications

1. **Principle:** To promote the publication of scientific papers. For graduate students, this means generating the evaluation of parts of the thesis by the scientific community, and thus strengthen their own reputation.
2. **Authoring:** Different jobs can be drawn as sole author or in combination with other co-authors. Post is recommended in conjunction with researchers from other research institutions and/or collaborations with professionals.
3. **Sequence of Authors:** In the event of publications with several authors, the name of the principal author should go first. In a variant of cooperation with different authors can be helpful in alphabetical order of authors.
4. **Obligation in the publication:** Prior to submitting an article for publication, this should be discussed beforehand with the head of the research group. It is also necessary that before the formal presentation (submission), the research is presented to the supervisor. The results of a research project shall be owned by the research institution and the head of the research group must give the green light for the publication (assignment of copyright for a conference organizer, editor, etc.).
5. **Magazines and Books Contributions:** Contributions in scientific journals or books have a long evolution. It is therefore desirable that the head of the research group is taken into account as a possible co-author. The head of the research group ensures the continuity of the project and participate in the acquisition of research funds.
6. **References:** Citations of own work and research group should be limited to 2-3 appointments.
7. **Acknowledgements:** Funders of different research projects should be mentioned.
8. **The registration of publications:** The articles and papers accepted and published should be indexed in the *Futura* research database (trajectory of the research group). All works published should also be include in the website of the research group.

Deadline: April 28, 2019.

Start date: September 1, 2019 (desired but not fixed, it depends on the visa application).

Contacts

The undersigned supervisors of the doctoral program offered at the Human-IST Institute at the University of Fribourg, Switzerland.

Prof. Dr. Edy Portmann

University of Fribourg, Switzerland
Human-IST Institute
edy.portmann@unifr.ch

Priv.-Doz. Dr. Luis Terán

University of Fribourg, Switzerland
Human-IST Institute
luis.teran@unifr.ch