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## Regional Program STIC-AmSud 2016 Project Proposal (Research – Innovation)

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### Basic Form

#### A. General Information

<b>A1</b>	<b>Project title</b>
	Awakening Science and Technology vocation in children through ICTs.

<b>A2</b>	<b>Acronym</b>
	ASTEV.

<b>A3</b>	<b>Research domain</b>
	Educational use of ICTs.

<b>A4</b>	<b>Project goals</b>
	Encourage Science and Technology as a vocation in children through the use of mobile devices designed and developed for those purposes.

<b>A5</b>	<b>Abstract</b>
	<p>A vocation is not something you can create, but you can stimulate it so that it is not silenced, thus enabling skills and tools to be developed from an early age.</p> <p>In the age of information, communication and knowledge, we need to use ICTs both in formal and informal education of children to build a future in which knowledge plays a key role for economic growth and inclusion. We are seeking to encourage Science and Technology as a vocation in children through the use of mobile device applications designed and developed for this specific purpose. Reaching this goal will enable our countries to gain a more prominent role in the global scenario as science and technology professionals are needed today and will be needed in the near future.</p>

<b>A6</b>	<b>Scientific coordinators at each institution</b>			
	<b>South America A</b>		<b>South America B</b>	
	Institution	School of Technology - National University of the North West of the Province of Buenos Aires (Escuela de Tecnología, Universidad Nacional de Buenos Aires ET-UNNOBA).	Institution	Research and Development and Software Engineering University of Cauca (IDIS-UC).

Project coordinator	Mg. Claudia Cecilia Russo.	Project coordinator	Dr. César Alberto Collazos Ordóñez.
Address	Jorge Newbery 355, Junín (6000), Buenos Aires, Argentina.	Address	Calle 5 No. 4-70, Popayán, Cauca, Colombia.
Phone/Fax	+54 236 4636945	Phone/Fax	+57 28209800
Email	crusso@unnoba.edu.ar	Email	ccollazo@unicauca.edu.co
<b>France A</b>		<b>France B</b>	
Institution	Universidad Paris-Est Marne-la-Vallée	Institution	-
Project coordinator	Dr. Miguel Almiron	Project coordinator	-
Address	Université Paris-Est Marne-la-Vallée B.360 Bât. IFI- 2 Allée du Promontoire 93140 Noisy le Grand	Address	-
Tel/Fax	+33 1 49 32 90 20	Tel/Fax	-
Email	miguel.almiron@u-pem.fr	Email	-

<b>A7</b>	<b>Other participating institutions</b>	
	<b>In South America</b>	<b>In France</b>
	No.	No.

<b>A8</b>	<b>List of expected participants (name and affiliation and status: junior, senior).</b>
	<p>Claudia Russo, UNNOBA, Senior.  Mónica Sarobe, UNNOBA, Senior.  Hugo Ramón, UNNOBA, Senior.  Carlos Di Cicco, UNNOBA, Senior.  Ana Smail, UNNOBA, Senior.  Mariana Ado, UNNOBA, Senior.  Macarena Forneris, UNNOBA, Senior.  Laura Yamel, UNNOBA, Student.  Marina Lilian Rodríguez, UNNOBA, Student.  Benjamín Cicerchia, UNNOBA, Student.  Juan Pablo Tessore, UNNOBA, Student.  Moreti Nicolas, UNNOBA, Student.  Bendatti Natalia, UNNOBA, Student.</p>

César Alberto Collazos Ordóñez, UC, Senior.  
 José L. Arciniegas, UC, Senior.  
 Julio Hurtado, UC, Senior.  
 Libardo Pantoja, UC, Senior.  
 Pablo Mage, UC, Senior.  
 Andrés Solano, UC, Senior.  
 Yenny Mendez, UC, Senior.  
 Vanessa Agredo, UC, Student.  
 Rene Zuñiga, UC, Student.  
 Mauricio Ramírez, UC, Student.  
 Jefferson Arango, UC, Student.  
 Leandro Flórez, UC, Student.  
 Gustavo Constain, UC, Student.

Miguel Almiron, UPEM, Senior  
 Martin Laliberté, UPEM, Senior  
 Kevin Dahan, UPEM, Senior  
 Florent Di Bartolo, UPEM, Senior  
 Azadeh Nilchiani, UPEM, Student  
 Sana Bouckris, UPEM, Student

<b>A9</b>	<b>International Project Coordinator (to be chosen among the Scientific Coordinators mentioned in A6)</b>
	Mg. Claudia Russo.

## **B. Project Details**

### **B1. Project guidelines**

1. Analyzing the current state of the art
2. Learning about the needs of the new generations.
3. Assessing teaching and teaching approaches that respond to the needs of the new generations.
4. Identifying the Science and Technology processes that interest children the most.
5. Based on the Science and Technology processes identified, design three applications for mobile devices, for three different age ranges : children aged 4-6, children aged 7-9, and pre-teens, aged 10-12.
6. Testing the applications with children at Science Fairs and similar events.
7. Correcting applications based on the findings of the tests.
8. Disseminating applications massively.

### **B2. Project description**

#### **Goals, motivation, methodology and contribution of each participating institution**

The main objective is to encourage Science and Technology as a vocation in children through the application of mobile devices specifically designed and developed for such purpose. To do so, we need to research into the current state of the art and design applications based on educational principles and which can cater for the needs of the new generations and tackle the Science and Technology processes that interest children the most. Each of the institutions involved will contribute to the versatility of the application by enriching it with a diversity of points of view that will come together thanks to this program.

#### **Project scope**

Research into the state of the art and identify which Science and Technology processes are more interesting to children with the aim of creating a vision of the application.

Learn about the needs of the new generations and the teaching approaches that respond to those needs so as to design the functional specifications, user identification and implementation methodology.

Create a technical architecture and develop it in order to design applications for mobile devices for different age ranges: three applications for children aged 4-6, three applications for children aged 7-9, and three applications for pre-teens, aged 10-12.

Conduct functional and technical tests of the applications with children at Science fairs and similar events.

Disseminate the application and conduct the required technical maintenance.

#### **Expected results**

Encourage and foster Science and Technology as a vocation in children through the use of mobile applications designed and developed for such specific purpose.

### B3. Schedule, with main execution stages

<b>Stage 1</b>	Research into the state of the art and identify which Science and Technology processes are more interesting to children with the aim of creating a vision of the application (jointly through the Internet).	February 2018.
<b>Stage 2</b>	Learn about the needs of the new generations and the teaching approaches that respond to those needs in order to design the functional specifications, user identification and implementation methodology. This will be conducted by each university separately.	March 2018.
<b>Stage 3</b>	International meeting of representatives from UNNOBA, UC and UPEM in Junín, Buenos Aires to share the institutional contributions and reach a common agreement about the needs of the new generations and the teaching methods and approaches that respond to those needs, and design functional specifications and identify user and implementation methodology.	April 2018.
<b>Stage 4</b>	Create a technical architecture and develop it in order to design three applications for mobile devices for children aged 4-6.	May through September 2018.
<b>Stage 5</b>	Draft and submit first report.	October 2018.
<b>Stage 6</b>	Conduct functional and technical tests of the applications with children aged 4-6 at Science fairs and similar events.  Create a technical architecture and develop it so as to design three applications for mobile devices for children aged 7-9.	October to December 2018.
<b>Stage 7</b>	International virtual meeting to analyze and leverage the first results.	February 2019
<b>Stage 8</b>	Conduct functional and technical tests of the applications with children aged 7-9 at Science fairs and similar events.  Create a technical architecture and develop it so as to design three applications for mobile devices for children aged 10-12.	March to May 2019.
<b>Stage 9</b>	Conduct functional and technical tests of the applications with children aged 10-12 at Science fairs and similar events.	June to August 2019.

<b>Stage 10</b>	International meeting of the representatives of UNNOBA, UC and UPEM in France to analyze and leverage the final results.	September 2019.
<b>Stage 11</b>	Present mobile applications in Science fairs and disseminate them massively.	October to December 2019.
<b>Stage 12</b>	Draft and submit final report.	February to March 2020.
<b>Stage 13</b>	Publish results in scientific journals.	April 2020.

#### **B4. Contributions**

**Present contributions so as to highlight the role of each partner and the integration among partners.**

UNNOBA, UC and UPEM encourage research, technology development, innovation projects and outreach activities through the creation of new e-learning and b-learning environments and the development of games, simulators and educational robots. They can be great partners in the educational use of ICTs contributing to the flexibility on the product for each environment of application. According to its competencies, UNNOBA will focus on the design of the product architecture while UC will deal with its development and user interface. For its part, UPEM will focus on the artistic and the interchange of the product.

#### **B5. Regional Aspects**

**Indicate how the activities will stimulate effective scientific interactions between all the participants.**

The joint development of applications for mobile devices will stimulate scientific interactions to create new products which can compete in the market, are versatile in different situations and consistent thanks to multiple tests and thorough corrections

#### **B6. Institutions and CVs of coordinators**

**Description of each participating institution and curriculum vitae of each participant.**

The School of Technology at the University of the North West of the Province of Buenos Aires (ET-UNNOBA) is an institution based in Junín, Buenos Aires, Argentina, specializing in teaching Computer Science, Engineering and Design programs. The School director is Mg. Claudia Russo.

The Software Engineering Research and Development Team belongs to the School of Electronic Engineering and Telecommunications at the University of the Cauca (IDIS-UC), in Popayán, Cauca, Colombia. The group Coordinator is Dr. César Collazos, Vice-Chairman of the Colombian Computing Association.

The Graduate School of Engineering of the University Paris-Est Marne-la-Vallée (ESIPE-MLV, UPEM) is based in Paris, France. ESIPE-MLV proposes training courses for engineers by apprenticeship in partnership with the CFA Ingénieurs 2000 recognized for 20 years.

See CVs included in Appendix B.

## **B7. Additional information**

### **List all the complementary fundings expected or already obtained.**

Hiring specialists  
Office supplies  
Living expenses additional sums.

### **Experience of the coordinators in similar projects.**

The Coordinator of the IDIS team from UC, Dr. César Alberto Collazos developed the project « Integrating collaborative projects in digital game based learning: Design Methodology and Development Tools » which is very closely related to this new project.

Part of the UNNOBA team, under its coordinator, Mg. Claudia Russo, worked in the project « Educational robot for the teaching of imperative programming » presented at the XI Conference on Technology in Education and Education Technology in 2016.

The UPEM team Coordinator, Dr. Miguel Almiron, is currently working on the “Les arts trompeurs”, Labex Arts-H2H (directed by G. Pisano). He directed the Organic Program of the former LASELDI-Montbéliard at the University of Franche-(UFC-M) where he conducted research into the intersection of art, cognitive science and computer science in the development of immersion environments with virtual and augmented reality devices.

### **Present main activities and their relationship with the project’s main goal.**

Research into the state of the art and identify which Science and Technology processes are more interesting to children with the aim of creating a vision of the application. The institutions involved will carry out this activity jointly through the Internet in order to create a vision of the application.

Learn about the needs of the new generations and the teaching methods and approaches that respond to those needs. Each institution will carry out this activity separately in order to design the functional specifications, user identification and implementation methodology.

First international meeting of representatives from UNNOBA, UC and UPEM in Argentina. The meeting will be held to reach a common agreement about the needs of the new generations and the teaching methods and approaches that respond to those needs, design functional specification, identify user and implementation methodology.

Create a technical architecture and develop it. This activity will be carried out simultaneously over the Internet so as to design the applications for mobile devices

Conduct functional and technical tests of the applications. The tests will be conducted by each university separately. However, errors will be corrected by the three institutions jointly. Error correction will be coordinated in order to conduct a thorough review.

Draft and submit first report to inform about the project stage of completion.

International virtual meeting to analyze and leverage the first results

Second international meeting of the representatives of UNNOBA, UC and UPEM. This meeting will be held to analyze and leverage the final results and for project wrap-up.

Present mobile applications in Science fairs and disseminate them massively.

Draft and submit final report to inform about the results of the project.

### **Perspectives of continuing collaboration after project financing is over.**

Develop similar applications to foster Science and Technology as a vocation in adolescents aged 13-18.

## **B8. International referees**

**Suggest names of at least 3 international referees to evaluate the project. These researchers should not be connected to people in the project.**

- 1- Manuel Ortega, Universidad de Castilla (La Mancha, España), manuel.ortega@uclm.es
- 2- Fernando Moreira, Universidad Portucalense (Porto, Portugal), fmoreira@uportu.pt
- 3- Mayela Coto, Universidad Nacional de Costa Rica, (Heredia, Costa Rica), mayela.coto@gmail.com
- 4- Maria Teresa Lugo, IIPe - UNESCO, tlugo@iipe-buenosaires.org.ar
- 5- Constanza Pedersoli, Programa Mundo Nuevo, UNLP, copedersoli@gmail.com

Names of referees who should not review this project in your opinion (optional)

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## **B9. Public and private support obtained related to the project:**

**Previous project STIC AMSUD / MATH AMSUD?**

We have not received funding for this Project.

**If YES, indicate the code, the year and the name of the project:**

-

**Other public support in the past (ECOS, COFECUB, CNRS, European Union, etc.):**

-

**Other private support in the past:**

-

**Prospects for public or private support in the future:**

-

## C. Project Budget

**Project title:** Awakening Science and Technology vocation in children through ICTs

**Participating institutions:** UNNOBA (Argentina), UC (Colombia) and UPEM (France)

The STIC-AmSud program funds travel expenses (air tickets and *per diem*) to researchers in research missions and workshops.

**C1. First year (2018)**

**Planned missions – Year 1**

Researcher	Status (student, junior, senior)	Institution	Origin	Destination	Planned date	Duration (max. 30 days)	Estimated cost of the trip (€)	Estimate of total <i>per diem</i> (€)	Trip and Mission funding institution <sup>1</sup>	Mission objectives
Dr. César Collazos	Senior. Scientific coordinator.	UC	Popayán, Cauca, Colombia.	Junín, BA, Argentina.	April 2018.	10.	1800.	102 (+780 air tickets).	COLCIENCIAS.	International meeting.
Will be voted by their partners.	Student. Informatics coordinator.	UC	Popayán, Cauca, Colombia.	Junín, BA, Argentina.	April 2018.	10.	1800.	102 (+780 air tickets).	COLCIENCIAS.	International meeting.
Will be voted by their partners.	Student. Design coordinator.	UC	Popayán, Cauca, Colombia.	Junín, BA, Argentina.	April 2018.	10.	1800.	102 (+780 air tickets).	COLCIENCIAS.	International meeting.
Will be voted by their partners.	Senior. Scientific coordinator.	UPEM	París, France.	Junín, BA, Argentina.	April 2018.	10.	2100.	102 (+1080 air tickets).	INRIA.	International meeting.
Will be voted by their partners.	Student. Informatics coordinator.	UPEM	París, France.	Junín, BA, Argentina.	April 2018.	10.	2100.	102 (+1080 air tickets).	INRIA.	International meeting.
Will be voted by their partners.	Student. Design coordinator.	UPEM	París, France.	Junín, BA, Argentina.	April 2018.	10.	2100.	102 (+1080 air tickets).	INRIA.	International meeting.

<sup>1</sup> Each institution will pay for the trip and per diem of its own researchers.

**CONSOLIDATED BUDGET: Year 1**

**Funding requested to the STIC-AmSud Program  
Estimated costs (€)**

	A. Travel costs (air tickets)	B- Maintenance costs ( <i>per diem</i> )	TOTAL
MAEDI France			
CNRS France			
INRIA France	3240.	306.	6300.
Institut Mines-Télécom France			
MINCYT Argentina			
CAPES Brazil			
CONICYT Chile			
CONACYT Paraguay			
CONCYTEC Peru			
ANII Uruguay			
MPPEUCT Venezuela			
SENESCYT Ecuador			
COLCIENCIAS Colombia	2340.	306.	5400.
Total requested funding to STIC-AmSud			
<u>Other funding</u> <sup>2</sup>			
<b>TOTAL</b>	<b>5580.</b>	<b>612.</b>	<b>11700.</b>

**Do you have additional funding sources for this project<sup>3</sup>? (if so please specify the amount and source (s)).**

None.

<sup>2</sup> Specify in additional page.

<sup>3</sup> Reserved for CNRS researchers

## C2. Second year (2019)

Second year funding depends on approval of intermediate progress report.

### Planned missions – Year 2

Researcher	Status (student, junior, senior)	Institution	Origin	Destination	Planned date	Duration (max. 30 days)	Estimated cost of the trip (€)	Estimate of total <i>per diem</i> (€)	Trip and Mission funding institution <sup>4</sup>	Mission objectives
Dr. César Collazos	Senior. Scientific coordinator.	UC	Popayán, Cauca, Colombia.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	Institut Mines-Télécom France.	International meeting.
Will be voted by their partners.	Student. Informatics coordinator.	UC	Popayán, Cauca, Colombia.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	Institut Mines-Télécom France.	International meeting.
Will be voted by their partners.	Student. Design coordinator.	UC	Popayán, Cauca, Colombia.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	Institut Mines-Télécom France.	International meeting.
Mg. Claudia Russo	Senior. Scientific coordinator.	UNNOBA	Junín, BA, Argentina.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	MINCYT.	International meeting.
Will be voted by their partners.	Student. Informatics coordinator.	UNNOBA	Junín, BA, Argentina.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	MINCYT.	International meeting.
Will be voted by their partners.	Student. Design coordinator.	UNNOBA	Junín, BA, Argentina.	París, France.	September 2019.	10.	2100.	102 (+1080 air tickets).	MINCYT.	International meeting.

<sup>4</sup> Each institution will pay for the trip and per diem of its own researchers.

**CONSOLIDATED BUDGET: Year 2**

**Funding requested to the STIC-AmSud Program  
Estimated costs (€)**

	A. Travel costs (air tickets)	B- Maintenance costs ( <i>per diem</i> )	TOTAL
MAEDI France			
CNRS France			
INRIA France			
Institut Mines-Télécom France	3240.	306.	6300.
MINCYT Argentina	3240.	306.	6300.
CAPES Brazil			
CONICYT Chile			
CONACYT Paraguay			
CONCYTEC Peru			
ANII Uruguay			
MPPEUCT Venezuela			
SENESCYT Ecuador			
COLCIENCIAS Colombia			
Total requested funding to STIC-AmSud			
<u>Other funding</u> <sup>5</sup>			
<b>TOTAL</b>	<b>6480.</b>	<b>612.</b>	<b>12600.</b>

**Do you have additional funding sources for this project<sup>6</sup>? (if so please specify the amount and source (s)).**

No.

<sup>5</sup> Specify in additional page.

<sup>6</sup> Reserved for CNRS researchers

### C3. BUDGET TOTALS

	Year 1	Year 2	Total
Funding requested to MAEDI (France)	/	/	/
Funding requested to INRIA (France)	€ 6.300.	/	€ 6.300.
Funding requested to CNRS (France)	/	/	/
Funding requested to Institut Mines-Telecom (France)	/	€ 6.300.	€ 6.300.
Funding requested to MINCYT (Argentina)	/	€ 6.300.	€ 6.300.
Funding requested to CAPES (Brazil)	/	/	/
Funding requested to CONICYT (Chile)	/	/	/
Funding requested to CONACYT (Paraguay)	/	/	/
Funding requested to CONCYTEC (Peru)	/	/	/
Funding requested to ANII (Uruguay)	/	/	/
Funding requested to SENESCYT (Ecuador)	/	/	/
Funding requested to MPPEUCT (Venezuela)	/	/	/
Funding requested to COLCIENCIAS (Colombia)	€ 5.400.	/	€ 5.400.
Matching funds from the partners	/	/	/
Other sources	/	/	/
<b>TOTAL</b>	<b>€ 11.700.</b>	<b>€ 12.600.</b>	<b>€ 24.300.</b>

## ANNEX

### Coordinator of Technology School-UNNOBA. CV

#### 1/ Personal data

Name: Claudia Cecilia Russo  
Birth date: 17/11/1963  
Professional address: Technology School, National University of the Northwest of Buenos Aires.  
City/Address: Junín (6000), Buenos Aires. Newbery 355.  
Telephone number: +54 236 4673882.  
Cell phone number: +54 236 (9)4673882.  
Email address: crusso@unnoba.edu.ar

#### Current job title and size of the research group:

Researcher and Tenured Professor at National University of the Northwest of the Province of Buenos Aires (UNNOBA). 10 persons.

#### 2/ Highest obtained degree

Master's degree in Office Automation, 02/1996-03/1999, National University of La Plata (UNLP).

#### 3/ Professional activity in the last 5 years

As a researcher, I have worked in image and video processes applied to different disciplines. In the past few years, I worked in the field of educational use of technology: robotics, image processing, simulation, data mining, immersive and ubiquitous systems in mixed realities, among other.

#### 4/ Other duties/ positions

2016 - 2016. Member of the editorial committee *Revibe Magazine*.  
2014 - Present. External reviewer of *Apertura Magazine*.  
2014 - Present. Member of the editorial committee *Vínculos Magazine*.  
2004 - Present. Member of the editorial committee *Journal of Computer Science and Technology*.  
2014 - Present. Institutional Project Evaluator projects or Institutional external evaluator National University of the Northwest of the Province of Buenos Aires Province (UNNOBA).  
2017 - 2017. Articles referee in University of Guadalajara.  
2016 - 2016. Articles referee in CACIC, Nacional University of San Luis (UNSL).  
2016 - Present. Articles referee in Federal council of Engineering Faculties, University of Morón (UM).  
2015 - Presente. Articles referee in Third ICT Conference, National University of La Plata (UNLP).

#### 5/ Awards, fellowships and external recognition

02/2016 - Present. Representative on the part of UNNOBA in CIC-TIC, Scientific Research Commission of Buenos Aires Province (CICPBA).  
05/2016 - Present. Internal Council Member in Technology Research and Transfer Institute (ITT/UNNOBA).  
07/2016 - Present. Associate Researcher at CIC, Scientific Research Commission of Buenos Aires Province (CICPBA).  
07/2014 - 07/2021. Tenured Professor of *Algorithms and Data Structures*, UNNOBA.  
11/2010 - Present. Assistant Professor *Compression of Data, Images and Videos*, School of Computer Science, Junín Regional Center, National University of La Plata (UNLP).

#### 6/ Ongoing funded research projects with dates, titles, sources of funding. Projects approved in the last 5 years

02/2017 - 03/2018. Director and Researcher at *RALLY UnEscu Project. Tracking science, technology and innovation paths*; executed and financed by UNNOBA, CICPBA.

12/2014 - 12/2017. Project Director *Innovation and Technology Transference in the Northwest Region of Buenos Aires Province: High capacity phenotyping with field data survey*; executed and financed by INTA Pergamino Regional, UNNOBA.

## 7/ Publications

Russo, Claudia; Ramon, Hugo; Benjamin, Cicerchia; Alonso, Nicolas; Esnaola, Leonardo; Tessore, Juan Pablo; *Massive Data Processing Using Machine Learning Techniques*; in WICC 2016; National University of Entre Ríos (UNER); Argentina; 2016.

Russo, Claudia; Sarobe, Mónica; Lombardo, Michel; Ahmad, Tamara; Lencina, Paula; Ramon, Hugo. *Experience of using Ev3D in UNNOBA*; Minute Book XI Congress of Technology in Education and Technology Education; University of Morón; Argentina; 2016.

Germán, Osella Massa; De Vito, Cecilia; Russo Claudia; Ramon, Hugo; *AutoPhyton: A tool for Phyton interactive session automation*; Minute Book XI Congress of Technology in Education and Technology Education; University of Morón; Argentina; 2016.

Germán, Osella Massa; Fernandez David; De Vito, Cecilia; Sarobe Monica; Russo Claudia; *System for the Control, Administration and Programming of Educational Robots*; Book of minutes; CACIC; National University of San Luis (UNSL); Argentina; 2016.

Serrano, Eliana; Russo, Claudia; Sarobe, Mónica; Luengo, Pablo; Becchi, Matías; *5BA: Increased braille for sensory learning*; Innovar 2016; Argentina; 2016.

Esnaola, Leonardo; Alonso, Nicolas; Russo, Claudia; Sarobe, Mónica; *Experiences and methodological strategies applied in the present and b-learning modality of the course of entry in the National University of the Northwest of Buenos Aires Province*; University Editions; McGraw Hill; Argentina; 2016.

Esnaola, Leonardo; Russo, Claudia; Sarobe, Mónica; Ramón, Hugo; Alonso, Nicolas; *Public Policies to Promote Technological Careers*; Memoirs - Fifteenth Ibero-American Conference on Systems, Cybernetics and Informatics (CISCI 2016); Internacional Institute of Informatics and Systemics (IIS), Estados Unidos, 2016.

Russo, Claudia; Charne, Javier; Piergallini, Rosana; Guash, Mercedes; Torriggino, Adriana; Ana, Smail; *Application of space data mining in the health in UNNOBA influence area*; Eighteenth Workshop Investigator in Sciences of the Computing; National University of Entre Ríos (UNER); Argentina, 2016.

Russo, Claudia; Álvarez, Eduardo; Serafino, Sandra; Sarobe, Mónica; Cicerchia, Benjamin; Luengo, Pablo; Jaszczyszyn, Adrian; Ramón, Hugo; *Robotics and High Capability Phenotyping with Field Data Survey. Applications in Precision Agriculture*; Investigator Workshop in Computer Sciences; National University of Entre Ríos (UNER); Argentina; 2016.

Russo, Claudia; Sarobe, Mónica; *Experience of using EV3D in UNNOBA*; *International University Congress on Communication in Profession and Today's University: Content, research, innovation and teaching*; McGraw Hill; España; 2016.

Russo, Claudia; Sarobe, Mónica; Ochipinti, Pedro; López Gil, Fernando; Ramón, Hugo; Dillon, Marcela; *Generic Competences in Education*; Minute Book Argentine Congress of Engineering; Resistencia Regional; Technological National University; Argentina; 2016.

Dillon, Marcela; López Gil, Fernando; Ochipinti, Pedro; Russo, Claudia; Sarobe, Mónica; Ramón, Hugo; *Study on generic competences in education Argentina*; Minutes book; COINCOM 2016; Corporation CIMTED; 2016.

## 8/ Theses oriented and post-doctoral fellows supervised. Finished/defended in the last 5 years

Specialization in Technology Innovation Management, 09/2010 - 02/2017, National University of the Northwest of Buenos Aires Province (UNNOBA).

### 8.2 – Ongoing

Doctoral student in Computer Science Sciences, 02/2010 entry date, National University of La Plata (UNLP).

## **Coordinator of IDIS-UC. CV**

### **1/ Personal data**

**Name:** César Alberto Collazos Ordóñez

**Professional address:** Fiet, Sector Tulcan, Popayan-Colombia, +57-28109800 ext. 2133, ccollazo@unicauca.edu.co

**Current job title and size of the research group:** Full Professor, IDIS Research Group Head (10 people).

**2/ Highest obtained degree (with indication of place and date):** Doctor in Computer Science, 2003, Institution: Universidad de Chile.

### **3/ Professional activity in the last 5 years**

Visiting Professor in Pontificia Universidad Católica de Valparaíso (Chile, 2009), Universidad Nacional de Costa Rica (2009), Universidad Nacional de San Juan (Argentina, 2010), Universidad Tecnológica de Panamá (2011), Universidad de Granada (Spain, 2012), Universidad de la Laguna (Spain, 2011), Universidad Privada Antenor Orrego (Perú, 2012).

### **4/ Other duties/ positions**

Member of the National Program of Electronics, Telecommunications and Informatics, Colciencias, Colombia Colciencias, 2006-2009.

Vicepresident Colombian Computer Science Society.

### **5/ Awards, fellowships and external recognition**

Keynote Talk at V Campus Virtuales, Panamá, Oct. 2014

Keynote Talk at 11° CISSIT, Trujillo, Perú, Nov. 2014.

Keynote Talk at Euro-American Association on Telematics and Information Systems EATIS 2010, Integrating Multicultural Aspects in HCI-Curricula, Panamá, 2010.

Keynote Talk at 6th Colombian Computer Science Congress, Collaborative Systems, Manizales-Colombia, 2011.

Keynote Talk at COREISC-2013, Human-Computer Interaction, Trujillo-Perú, 2013

Keynote Talk at VIII Workshop InternacionalemCiência da Informação (WICI), Computer Supported Collaborative Learning, Brasilia-Brasil, 2012.

Keynote Talk at Congreso Multimedia, Collaborative Systems, Bogotá-Colombia, 2011.

KeynoteTalk at IX Congreso Internacional de Ingeniería de Software, Sistemas de Información, Telecomunicaciones y Redes, Ubiquitous Computing, Trujillo-Perú, 2012.

Marzo 2001 Beca Facultad de Ciencias Físicas y Matemáticas para alumnos de doctorado.

Noviembre 2002 Beca Término de Tesis de Postgrado. Universidad de Chile. Departamento de Postgrado y Postítulo.

### **6/ Ongoing funded research projects with dates, titles, sources of funding. Projects approved in the least 5 years**

ALFA Project: Digital Creation of a digital library of accessible, reusable and interoperable learning objects, oriented to training in Information Technology, 2005-2006. Software Infrastructure for the Management, Distribution, Use and Application of Organizational Knowledge. "Code 4128-14-18008, Funded by COLCIENCIAS (Colombia), 2006.

REVVIS: Network of Specialists in Software Verification and Validation, funded by the CYTED program, 2007-2010.

ADACO: Adaptive and Collaborative web based systems, funded by CICYT - Spain, 2005-2007. Environment based on Information and Communication Technologies (ICTs) to monitor and analyze collaborative processes in activities with educational content, AECI, 2008.

Project: Digital Workbook Tool to Support Asynchronous Collaboration, LACCIR, 2009-2012.

Project: Mechanism for the interpretation of emotions in evaluation of usability of virtual learning environments, Ministry of National Education, 2012-2013.

Project: Integration of collaborative processes in learning based on digital games: design methodology and development tools, CICYT, Spain, 2012-2014.

Network Model for Reducing the Digital Population Gap Vulnerable through Multicultural Content Strategies and Capabilities and Integration of Academic Bodies, PROMEP, Mexico, 2014.

Network for the Integration of Universities in the use of ICT for Inclusion in Higher Education. Participating entities: National University of Chilecito - Argentina, National University of Rosario - Argentina, National University of San Juan - Argentina, University of Cauca - Colombia. Financing Entity: Secretariat for Management and Coordination of University Policies - Argentina, 2014. Latin American Collaborator of Distributed Software Engineering (CLAISD). Ministry of University Policies, Ministry of Education of the Nation (Argentina), 2013-2014.

## 7/ Publications

- Padilla-Zea, N., Medina, N, Gutiérrez, F., Paderewski, P, Collazos, C., PLAGER-VG: platform for managing educational multiplayer video games, *Multimedia Tools Appl* (2017). Doi: 10.1007 / s11042-017-4376-8.
- Jurado, J., Collazos, C., Gutierrez, F., Merchan, L., Designing Game Strategies: An Analysis from Knowledge Management in Software Development Contexts, *Serious Games, Interaction and Simulation*, Volume 176 of the series *Lecture Notes of The Institute for Computer Sciences, Social Informatics and Telecommunications Engineering* pp 64-73, doi: 10.1007/978-3-319-51055-2\_9; ISSN: 1867-8211, 2017.
- Jaime Díaz, Cristian Rusu, César A. Collazos, Experimental Validation of a Set of Cultural-Oriented Usability Heuristics: e-Commerce Websites Evaluation, *Computer Standards & Interfaces*, 2016, <http://dx.doi.org/10.1016/j.csi.2016.09.013>, pp. 3-18, ISSN: 0920-5489, 2017.
- Solano, A., Collazos, C., Rusu, C., Fardoun, H., Combinations of Methods for Collaborative Evaluation of the Usability of Interactive Software Systems, *Advances in Human-Computer Interaction, Advances in Human-Computer Interaction*, Volume 2016 (2016), Article ID 4089520, ISSN: 1687-5907, 16 pages <Http://dx.doi.org/10.1155/2016/4089520>.
- Collazos, C., Muñoz, J., Jaramillo, Z., Fardoun, H., Alghazzawi, D., Interaction Design Patterns from a Multicultural Perspective: Case Studies Panama, Colombia and Spain, Volume 9742 of the series *Lecture Notes in Computer Science* (ISSN: 0302-9743), pp. 3-11, June 2016.
- Rusu, C., Rusu, V., Roncagliolo, V., Quiñones, D., Fardoun, H., Alghazawwi, D., Collazos, C., Usability Heuristics: Reinventing the Wheel, Volume 9742 of the series *Lecture Notes in Computer Science* (ISSN: 0302-9743), pp. 59-70, June 2016.
- Cano, S., Collazos, C., Fardoun, H., Alghazawwi, Albarakati, A., Model Based on Learning Needs of Children with Auditory Impairment, Volume 9742 of the series *Lecture Notes in Computer Science* (ISSN: 0302-9743), Pp. 324-334, June 2016.
- Sarmiento, W., Collazos, C., Common-Awareness Artifacts Conceptual Elements to Designing and Evaluating Collaboration in CVE, *Communications in Computer and Information Science*, ISSN: 1865-0929, pp376-381, June-2016.
- Duque, N, Zapata, A., Collazos C., A Learning Object Recommendation Model with User Mood Characteristics, *Social Computing in Digital Education*, pp. 39.48, 206, ISSN: 1865-0929, April, 2016.
- Barajas, A., Alvarez, F., Muñoz, J., Santaolaya, R., Collazos, C., Hurtado, J., Verification and Validation Model for the Production of Serious Short Video Games (Verification and Validation Model for Short Serious Game Production), Volume: 14, Issue: 4, Date: April 2016, *IEEE-LATIN AMERICA*, ISSN: 1548-0992, pp.2007-2012.
- Sanz F., Galvez R., Rusu C., Roncagliolo S., Rusu V., Collazos C., Cofré JP, Campos A., Quiñones D.: "A Set of Usability Heuristics and Design Recommendations for u-Learning Applications ", *Proceedings ITNG 2016, Advances in Intelligent Systems and Computing*, ISSN: 2194-5357, Vol. 448, pp. 983-993, Springer, 2016, DOI 10,1007 / 978-3-319-32467-8\_85.
- Quiñones D., Rusu C., Roncagliolo S., Rusu V., Collazos C.: "Developing Usability Heuristics for Grid Computing Applications: Lessons Learned", *Proceedings ITNG 2016, Advances in Intelligent Systems and Computing*, ISSN: 2194-5357, Vol. 448, pp. 485-495, Springer, 2016, DOI 10,1007 / 978-3-319-32467-8\_43.
- Barría C., Rusu C., Cubillos C., Collazos C., Palma M.: "Analysis of a Training Platform for Digital Battlefield, Based on Semiotics and Simulation", *Proceedings ITNG 2016, Advances in Intelligent Systems and Computing*, ISSN: 2194-5357, Vol. 448, pp. 1283-1286, Springer, 2016, DOI 10,1007 / 978-3-319-32467-8\_114.
- Muñoz, G. R.; Collazos, C. A.; González, C.S. (2016). Proposal for the gamification of collaborative educational activities in CSCM. *Virtual Campus*, 5 (2), 18-28.
- Agredo, V., Collazos, C. A., & Paderewski, P., Case study on mechanisms to evaluate, monitor and improve the collaborative learning process. *Virtual Campus*, ISSN: 2255-1514 Vol. V, Num. 01, March 2016, pp.100-115, 2016.

## Coordinator of UPEM

### 1/ Personal data

**Name:** Miguel Angel Almiron  
**Birth date:** 03/26/1964  
**Professional address:** Université Paris-Est Marne-la-Vallée. Dépt. CAASN. Bureau 361.  
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### 2/ Highest obtained degree. (Post-doctoral fellows supervised)

**Post-Doctorado**, Institut Charles Cros, groupe de Recherche SISAR (Simulacres, Images, Sons, Arts Relais), under the direction of Didier Arques, director of SISAR. Universidad de Marne La Vallée (Val de Marne).

Research theme: « *The virtual skin* », interface corps/machine, interactive facilities, virtual reality.

Research theory, technique and pratique. The sensitive and the technology.

### 3/ Professional activity in the last 5 years

From september 2008. Conference master / Tenured Professor with exclusive dedication in the Paris University-Est Marnela-Vallée. Tenured Professor in the Chairs of the formations of the Bachelor, Master 1 and 2, and of the Engineering training IMAC (Image, Multimedia, Audiovisual and Communication). Interactivity, History and Aesthetics of the digital arts, Interactivity and virtual reality, Audiovisual realization, Seminar of methodology, Theory and aesthetics of multimedia, Poetics of Interactive installations, Theory and aesthetics of virtual and augmented reality, Theory of Medias, Visual arts.

2004-2008. Conference master / Tenured Professor with exclusive dedication in the Besançon-Montbéliard University. Tenured Professor in the Chairs of the formations IUP, Bachelor, Master 1 and Master 2 Orientation Digital Arts: Multimedia Communication. Design of interactivity in ergonomics. Interactive Environments. Graphic Computing (Image of Synthesis). Virtual Reality and Augmented Reality. Aesthetics of Digital Arts. Semiology. Writing and Multimedia Communication. Tenured Professor in the Chairs of Theatre and New Technologies of the formation Master Sociology especiality Theatre y Culture.

2004-2005. In charge of Courses and Seminars "Poetics of the digital arts", of the training Master 2 Professional and Research, Marne-la-Vallée University.

2003-2004. In charge of Practical work Multimedia and Audiovisual area. Marne-la-Vallée University, DEUG Art and entertainment Master Science and Technology, Engineering IMAC (Image, Multimedia, Audiovisual and Communication).

### 4/ Other duties/ positions

July 1989 - August 1996. Member of the Career of the Personnel of Support to the Scientific Research of CONICET (National Council of Scientific and Technical Research). Category: Associate Technician. Place of work, Research Center. Cardiovascular. National University of La Plata. 60 and 120, La Plata. Categorization "Researcher Class D", according to the Teacher Incentives Program. Researchers from the Ministry of Culture and Education.

### 5/ Awards, fellowships and external recognition

Imagina 2000, 4ème prix IMAGINA/FNAC, Monte-Carlo.

### 6/ Ongoing funded research projects with dates, titles, sources of funding

2003. Doctorate "Aesthetics, Sciences and Technologies of the Arts", option Digital Image and Virtual Reality, Under the direction of Hervé Huitric, director of the laboratory I.N.R.E.V. (Image Numérique et Réalité Virtuelle), University Paris VIII, Saint-Denis. Thesis title: "The inscription of the body in the Technological art". Qualification and Mention obtained: Outstanding with Honors. The jury unanimously granted the Mention 'CUM LAUDE'. Members of the Thesis Jury: Edmond Couchot, Professor emeritus of the University Paris VIII, President of the jury; Guy Chapouillé, Professor at Toulouse-le-Mirail

University; Diana Domingues, Professor of the Caixas do Sul University (Brazil); Monique Nahas, Professor of the University of Paris VIII; Hervé Huitric, Professor of the University Paris VIII. 2000-01. A.T.E.R. (Temporarily attached to education and research). University Paris VIII (Digital art). 1998 D.E.A. (Diploma of Advanced Studies) 'Aesthetics, Technologies and Artistic Creations', option Digital Images, under the direction of Hervé Huitric and Monique Nahas. University Paris VIII. Title of memoir: "Experiments in computer graphics in view of the elaboration of a work artistic". Qualification and Mention obtained: "Outstanding". 1993. Bachelor in Computer Science, (Computer Science Orientation). National University of La Plata (U.N.L.P) March 1993. Tesina: "Computerized data acquisition and processing system for the evaluation of Myocardial function in open heart animals, in real time".

## **8/ Publications. Publications in cooperation with the project partners**

Stereoscopy and Illusion. Book edited by: Miguel Almiron, Esther Jacopin Giusy Pisano. Press Academics of the Sevenentrion. In realization.

The Subjective Experience in Art and Technology. Miguel Almiron, Guillermo Crosetto. International Journal on Stereo and Immersive Media Editorial.

The Connection between digital body and the Universe. Sana Boukhris, Miguel Almiron. STS Italia Publishing. In publication.

Digital Body living beside screen, Miguel Almiron, Azadeh Nilchiani, University of Coventry, NYU Press, 2017.

The Magical, Digital Body ", (Traducción en 8 idiomas) Cartier Art Magazine, Issue 44, 2016.

Magic Body, Digital Body. "University Press of the Sevenentrion. Article sended.

The emergence of the body in technological art. To send.

In search of lost identities of digital bodies, in Numerical Identities, under the direction of Alexandre Coutant & Thomas Stenger. The Harmattan, 2014.

The digital loan, body suit, Miguel Almiron, in Costumes, Reflections and Illusions, under the direction of Karine Gros. Presses Universitaires de Rennes, 2014, pp 209-224.

El sueño: or the inaccessibility of the real, Day of study in literature and didactics of literature, "The game of fiction and reality, between symbiosis and tensions", 7 April 2012. In publication.

Body and Identity in the Digital Age, Miguel Almiron, in Performing Arts Métis Identities. Françoise Quillet, The Harmattan Body-incomplete, incomplete, uninhabited in the digital age, Miguel Almiron. Archée. <http://archee.qc.ca>

Anamorphosis and corpgraphy. International Colloquium "The borrowing habit" Universidad Paris-Est-Créteil, 9-11 June 2011.

Not in vain is a nomad. Miguel Almiron. In Red Nómade, Speech in Transit. Polytechnic University of Valencia. The result of Belles Arts in Sant Carles. 2005. PP 8-10.

New extents of the body: the digital network, J. Lafon, M. Almiron, Art, Science and Technology, under the Direction of Stéphane Becuwe and Natalie Garreau. Proceedings of the international meetings 22, 23 and 24 November 2000.

House of the Sciences of Man and Society, University of La Rochelle NetArt, MUSEUMS and LIBRARIES magazine, September 2000, Madrid, 12: (115): 32-34 (2000).

Body-incomplete, incomplete, uninhabited in the digital age, Miguel Almiron. ANOMALY 1 digital\_arts, (Paris), 14-17, (2000).

Art on the Net. The transformation of the body: from the archive to the calculation, Almiron Miguel, Lafon Jacques. Imaginative Passage, III WorkShop on Multimedia Art, "La Caixa" Cultural Center, Barcelona. Proceedings of the Congress, February 15-19, 2000.

Prevalence of arterial hypertension in a rural population of Buenos Aires. Susana M De Lena, Cingolani HE, Almiron MA, Echeverria R. Medicina (Buenos Aires), 55: 225-230 (1995).

Prevalence of Hypertension in Young Women and Men, according to recent guidelines. S.Graff-Iversen MD, S. De Lenq PhD, M.D., M.A. Almiron Lic, and H.E. Singingani PhD, M.D. Journal of Women's Health 1996, 5: 61-67.

Differences in prevalence of diastolic arterial hypertension in 1423 young individuals in two different interviews. Susana M De Lena MD, Oscar A GEnde PhD, Miguel A Almiron Lic, Horacio E Cingolani MD. Can J Cardiol 1994; 10 (7): 753-760.

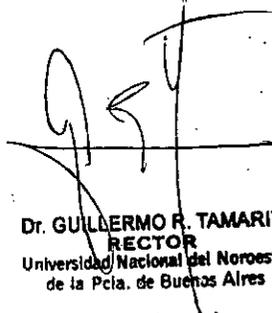
Considerations on the definition of hypertension from a prevalence study in 1423 young people. Suzanne De Lena de Ruotulo, G.J.Rinaldi, M.A. Almiron, O.A. Gende, H.E.Cingolani. "Medicine" (Buenos Aires), 52: 119-130 (1992).

May 10, 2017 Junín, Buenos Aires, Argentina

Messrs. Evaluators

STIC-AmSud 2017 Program

We are pleased to inform that Universidad Nacional del Noroeste de la Provincia de Buenos Aires (UNNOBA) the Proposal "Awakening of scientific-technical vocations in children through ICT" to be submitted to the SticAmsud 2017 grant.



Dr. GUILLERMO R. TAMARIT  
RECTOR  
Universidad Nacional del Noroeste  
de la Pcia. de Buenos Aires



Universidad  
del Cauca

**TO WHOM IT CONCERNS**

We are pleased to inform that University of Cauca accompanies the Proposal "Awakening of scientific-technical vocations in children through ICT" to be submitted to the SticAmsud 2017 grant.

Date: May - 10 - 2017

Signature:

Phd. CESAR COLLAZOS  
IDIS Research Group Head  
Universidad del Cauca-Colombia

Fdo.: CESAR ALBERTO COLLAZOS



UNIVERSITÉ PARIS-EST  
MARNE-LA-VALLÉE

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12/04/2017

We are pleased to inform that University of Paris-Est Marne-la-Vallée support the Proposal « Awakening of scientific-technical in children through ICT » to be submitted to the SticAmsud 2017 grant.

A handwritten signature in blue ink, appearing to read 'M. Almiron', is written over a circular stamp or seal.