

# Interacción 2017

## Human Computer Interaction AIPO

18th edition of the International Conference promoted by the Spanish Human Computer Interaction Association.

## PROGRAMME

25-27 September 2017

Cancún – México

### Organizers



## GENERAL PROGRAMME

<b>Monday September 25, 2017</b>	
08:00 a. m.	<b>Registration</b>
09:00 a. m.	Opening of Interaccion 2017 Conference (OC)
10:00 a. m.	<b>Plenary conference (PC1) “ ”</b>
11:00 a. m.	Coffee break
11:30 a. m.	Interaccion sessions (S1)
12:30 p. m.	Interaccion sessions (S2)
01:30 p. m.	Lunch
03:00 p. m.	Interaccion sessions (S3)
04:00 p. m.	<b>Plenary conference (PC3) “ ”</b>
05:00 p. m.	Coffee Break
05:30 p. m.	Interaccion sessions (S4)
07:00 p. m.	AIPO meeting
08:00 p. m.	Day 1 closing

<b>Tuesday September 26, 2017</b>	
08:00 a. m.	<b>Registration</b>
09:00 a. m.	Interaccion sessions (S5)
10:00 a. m.	<b>Plenary conference (PC3) “ ”</b>
11:00 a. m.	Coffee break
11:30 a. m.	Interaccion sessions (S6)
12:30 p. m.	Interaccion sessions (S7)
01:30 p. m.	Lunch
03:00 p. m.	Interaccion sessions (S8)
04:00 p. m.	Interaccion sessions (S9)
05:00 p. m.	Coffee Break
05:30 p. m.	Interaccion sessions (S10)
07:00 p. m.	Day 2 closing
08:00 p. m.	Gala dinner

<b>Wednesday September 27, 2017</b>	
08:00 a. m.	<b>Registration</b>
09:00 a. m.	AIPO Competition
10:00 a. m.	Interaccion sessions (S11)
11:00 a. m.	Coffee break
11:30 a. m.	Interaccion sessions (S12)
12:30 p. m.	Interaccion sessions (S13)
01:30 p. m.	Lunch
03:00 p. m.	Interaccion sessions (S14)
04:00 p. m.	Doctoral Consortium (DC1)
07:00 p. m.	Conference closing

**Presentation time:** For Full papers will be 15 minutes plus 5 minutes for questions and for Short Papers: will be 10 minutes plus 5 minutes for questions.

## DAY 1 : SEPTEMBER 25, 2017

### Opening of Interaccion 2017 Conference (OC)

9:00 am – 10:00 am, Monday September 25, 2017

members:

### Plenary Conference “ ” (PC1)

10:00 am – 11:00 am, Monday September 25, 2017

Room:



**Keynote:** Scott Jenson

#### **Abstract:**

**Short bio:** Scott Jenson has been doing user interface design and strategic planning for over 25 years. He worked at Apple on System 7, Newton, and the Apple Human Interface guidelines. He was UX director of Symbian, VP of product design for Cognima, managed mobile UX for Google and was a creative director at frog design in San Francisco. Scott returned to Google in November 2013 to lead the Physical Web project. As a battle-scarred veteran of the software industry, Scott has shipped a consumer spreadsheet, been a part of 2 Mac OS releases, 5 Newton product cycles, 4 commercial website revisions, designed 3 different mobile phone UIs, sworn at innumerable mobile browsers, and has over 20 patents.

#### **Contact:**

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**Presentation of speaker:** Victor Ruiz Penichet (Universidad Castilla la Mancha-España)

## **Interaccion Sessions 1 (S1): Educational Resources 1**

**Date:** Monday September 25 2017, **Room:**

**11:30 – 12:30 chair:** Rosanna Costaguta (Universidad Santiago del Estero, Argentina)

**Jose Rafael Rojano Caceres**, Fernando Ramos and Edgard Benitez Guerrero, Assessing Collaboration from Real Computer Supported Collaborative Learning Sessions. [Full paper](#)

**Blanca-Estela Pedroza-Méndez**, Juan-Manuel González-Calleros, Estela-Lourdes Juárez-Ruiz, Josefina Guerrero, Cesar-Alberto Collazos and José-Federico Ramírez-Cruz., Attach me and dettach me : in interactive device to help to teach Algebra. [Full paper](#)

**Gabriel Mauricio Ramirez Villegas**, Cesar A. Collazos, Fernando Moreira and Carina Gonzalez, Relation between U-Learning, Connective Learning and Standard xAPI: A Systematic Review. [Short paper](#)

**Laura Patricia Ramirez**, Development of a Reading-writing tools focused on speed reading for preschool children. [Short paper](#)

## **Interaccion Sessions 2 (S2): User Centered Design 1**

**Date:** Monday September 25, 2017, **Room:**

**12:30– 13:30, chair:** Jose Rafael Rojano Caceres (Universidad Veracruzana,México)

**Maria Francesca Roig-Maimó**, I. Scott MacKenzie, Cristina Manresa-Yee and Javier Varona, Evaluating Fitts' Law Performance With a Non-ISO Task. [Full paper](#)

**Miguel Angel Ortiz Esparza**, Jaime Muñoz Arteaga, Juana Canul-Reich, Victor Larios Osorio, Francisco Javier Álvarez Rodriguez and Alfredo Mendoza González, Use of an Architectural Model to Assist Children with Learning Problems in Basic Mathematics. [Full paper](#)

Josefina Guerrero García, Juan Manuel González Calleros, **Adelaida González-Monfil** and David Pinto Avendaño, A Method to Align User Interface to Workflow Allocation Patterns. [Full paper](#)

## **Interaccion Sessions 3 (S3): Emotional HCI 1**

**Date:** Monday September 25, 2017, **Room:**

**15:00 – 16:00, chair:** Rosa Gil (Universidad de Lleida, España)

Jose Maria García-García, Maria Dolores Lozano and **Victor M R Penichet**, Emotion Detection: A Technology review. [Full paper](#)

**Jeferson Arango López**, Jesús Gallardo Casero, Francisco Luis Gutiérrez Vela, Cesar Alberto Collazos Ordoñez, Esperança Amengual, Ramón Valera y Eva Cerezo, Pervasive games: Giving a Meaning Based on the Player Experience. [Short paper](#)

Jose Anibal Arias Aguilar, Maria De La Luz Palacios Villavicencio, Roberto Bretado Gallegos, **María Auxilio Medina Nieto**, Veronica Rodriguez Lopez, Antonio Benitez Ruiz

and Jaqueline Estrada Bautista, Analysis of children – humanoid robot interaction to support social skills development. Short paper

**N. Sofía Huerta-Pacheco**, Genaro Rebolledo-Mendez, Sergio Hernandez-Gonzalez and Claudio Rafael Castro Lopez, Towards Cognitive-Affective Modeling Based on Students' Traits and Preferences. Short paper

## **Plenary Conference “ ” (PC2)**

**16:00 – 17:00**, Monday September 25, 2017

**Room:**



**Keynote:** David Pinto Avendaño

### **Abstract:**

**Short bio:** Prof. David Pinto obtained his PhD in artificial intelligence and pattern recognition at the Polytechnic University of Valencia, Spain in 2008. At present he is a full time professor at the Faculty of Computer Science of the Benemérita Universidad Autónoma de Puebla (BUAP) leading the laboratory and PhD Program of Language & Knowledge Engineering. His areas of interest include clustering, information retrieval, crosslingual NLP tasks, computational linguistics, robotics, augmented reality, virtual reality, mobile devices and complexity theory. He has written more than 100 papers and has developed research projects, whose products have been registered in the Mexican Institute of Industrial Property.

### **Contact:**

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**Presentation of speaker:** Juan Manuel González (Benemérita Universidad Autónoma de Puebla-México)

## **Interaccion Sessions 4 (S4): Educational Resources 2**

**Date:** Monday September 25, 2017, **Room:**

**17:30 – 19:00, chair:** Andres Solano (Univ. Autónoma de Occidente-Cali, Colombia)

**Cecilia Reyes**, Mireya Tovar Vidal and Stephanie Vazquez, Ontology for the Description of a Master's Degree Program in Computer Sciences. [Short paper](#)

Nuria Medina-Medina, **Patricia Paderewski Rodríguez**, Natalia Padilla-Zea, Rafael López Arcos and Francisco Gutiérrez Vela, La aventura gráfica como instrumento para asistir la lectura comprensiva. [Full paper](#)

Luis Hector Montoya, **Pere Ponsa**, Iñaki De Olaizola and Ramon Vilanova, Aprendizaje de Accesibilidad en el Desarrollo de Proyecto Multidisciplinar Académico. [Full paper](#)

Diego Yanacon-Atia, Rosanna Costaguta and **Maria De Los Angeles Menini**, Detectando habilidades de colaboración para calcular indicadores en Moodle. [Full paper](#)

**Yuliana Puerta**, Cesar A. Collazos, Toni Granollers, Josefina Guerrero Garcia and Juan Manuel Gonzalez Calleros, Structure, Organization and Categorization of Languages of Interaction Patterns. [Short paper](#)

Carlos Perez-Crespo, Maria Martha Perez-Crespo and **Rosanna Costaguta**, JUNE: Un metabuscador basado en agentes para grupos de estudiantes colaborativos. [Full paper](#)

## **AIPO Meeting**

**Date:** Monday September 25, 2017. **Room**

19:00 – 20:00

## DAY 2 : SEPTEMBER 26, 2017

### Interaccion Sessions 5 (S5): HCI for All 1

**Date:** Tuesday September 26, 2017, **Room:**

**9:00 – 10:00, chair:** Manuel Ortega (Universidad Castilla la Mancha, España)

Camila Pérez-Arévalo, **Cristina Manresa-Yee** and Víctor M. Peñeñory Beltrán, Game to Develop Rhythm and Coordination in Children with Hearing Impairments. [Short paper](#)

Sandra Cano, Angielimar Palta, Fabian Posso, **Victor Peñeñory** and César Collazos, Toward designing a serious game for Literacy Learning in Children with Moderate Cognitive Impairment. [Short paper](#)

José Rafael López-Arcos, Francisco Luis Gutiérrez Vela, Natalia Padilla-Zea, Patricia Paderewski and **Nuria Medina Medina**, Introducing an interactive story in a geolocalized experience. [Full paper](#)

### Plenary Conference “ ” (PC3)

**10:00 am – 11:00 am**, Tuesday September 26, 2017

**Room:**



**Keynote:** Alysso Franklin Martins

#### **Abstract:**

**Short bio:** Alysso is a professional specialized in Interaction Design, Usability and Information Architecture, oriented to business results with experience supporting the executive levels of an organization. In IBM Studio Mexico he is acting as a UX Team Lead and User Researcher for Finance and sportainment projects. Within IBM, he has been engaged in assignments for different customers such as IBM Brazil, Application Services, Global Business Services, IBM SmartMarket, IBM Small & Medium Business Center, the Web Content Center of Competency and the IBM CIO Lab. On this assignments he worked

as an UX Researcher & specialist, web developer, Global Team Leader, Subject Matter Expert and Front-End Engineer. At the IBM CIO Lab he supported IBM Brazil commercial accounts and OffShore projects on UX matters, also managing a couple of projects from IBM Brazil, being responsible for teams that supports the Global Technology Services portals and also a hub for daily activities of all IBMers around the globe called Project Marketplace. With experience on the banking industry, he supported customers on UX and Front End matters like Anbima and Sicredi. On the Air cargo Industry, he supported TAM Cargo in the same areas of expertise, being responsible for the whole Usability Assessment and Interface creation.

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**Presentation of speaker:** Alberto Moran González (BUAP-México)

## **Interaccion Sessions 6 (S6): Experiences in HCI**

**Date:** Tuesday September 26, 2017, **Room:**

**11:30 – 12:30, chair:** César Collazos (Universidad del Cauca, Colombia)

**Toni Granollers**, Montse Sendin, Roberto García, Marta Oliva, Rosa Ma Gil, Juan Manuel Gimeno, Juan Enrique Garrido, 25 años de Experiencia docente de HCI en la UdL. [Full paper](#)

**Miguel Angel Ortiz Esparza**, Experiencia Docente de la Interacción Humano-Computadora en la Universidad Autónoma de Aguascalientes. [Short paper](#)

**Andrés Solano**, Experiencia docente de la asignatura Interacción Humano-Computador en la Universidad Autónoma de Occidente de Colombia. [Full paper](#)



## **Interaccion Sessions 7 (S7): Intelligent Systems 1**

**Date:** Tuesday September 26, 2017, **Room:**  
**12:30-13:30, chair:** Julio Hurtado (Universidad del Cauca, Colombia)

**Rosanna Costaguta**, German Lescano, Pablo Santana-Mansilla, Daniela Missio and Patricia Miro, Relacionando habilidades de colaboración con roles de grupo a través de minería de datos. Full paper

Carlos Lara-Alvarez, Maria Alvarado-Hernandez and **Hugo Mitre-Hernandez**, Automatic Evaluation of Learning Objects based on Cross-Entropy of Eye Fixations Minimization. Short paper

**Arturo Moquillaza** and Freddy Paz, Applying a User-Centered Design Methodology to Develop Usable Interfaces for an Automated Teller Machine. Short paper

## **Interaccion Sessions 8 (S8): Intelligent Systems 2**

**Date:** Tuesday September 26, 2017, **Room:**  
**15:00-16:00, chair:** Josefina Guerrero (Benemerita Univ. Autónoma de Puebla, México)

Samuel Casanova, David Lopez, Andres Calvo and **Oscar Henao**. Validación estadística de datos cinemáticos de movimientos utilizando aprendizaje de máquina en sistema dinámico articular. Full paper

**Susana Bautista**, Raquel Hervás, Agustín Hernández-Gil, Carlos Martínez-Díaz, Sergio Pascua and Pablo Gervás, AraTraductor: Text to Pictogram Translation using Natural Language Processing Techniques. Full paper

José-Guillermo Hernández-Calderón, Edgard Benítez-Guerrero and **José Rafael Rojano Caceres**, Towards an Intelligent Desk matching behaviors and performance of learners. Full paper

## **Interaccion Sessions 9 (S9): User Centered Design 2**

**Date:** Tuesday September 26, 2017, **Room:**  
**16:00-17:00, chair:** Eva Cerezo (Universidad de Zaragoza, España)

Maria Fernanda Montoya Vega, **Oscar Henao Gallo** and John Edison Muñoz Cardona, Detección de Fatiga Muscular Usando Sensores Wearable. Un Estudio Comparativo del Sensor Myo Armband. Full paper

**Maria Villegas**, William Joseph Giraldo Orozco and Cesar A. Collazos, Activity Taxonomy [ATx]: Roadmap for the Development of Interactive Systems. Full paper

Sandra Baldassarri, **Eva Cerezo** and José Ramón Beltrán, Immertable: A configurable and customizable tangible tabletop for audiovisual and musical control. Full paper

## **Interaccion Sessions 10 (S10): Educational Resources 3**

**Date:** Tuesday September 26, 2017, **Room:**

**17:30-19:00 chair:** Session chair: Patricia Paderewski (Universidad de Granada, España)

**Erica María Lara Muñoz**, Genaro Rebolledo Méndez and José Rafael Rojano Cáceres, The influence of learning styles in collaborative activities. Short paper

**Andrés Saul de La Serna Tuya**, Juan Manuel González Calleros, Estela De Lourdes Juárez Ruiz Impacto del uso de tablets en preescolar. Short paper

Antonio Xohua-Chacón, **Edgard Benítez-Guerrero** and Carmen Mezura-Godoy, TanQuery: A Tangible System for Relational Algebra Learning. Full paper

**Beatriz Grass**, Cesar Collazos and Mayela Coto, Caracterización de las Prácticas Colaborativas con enfoque de género en los Cursos de Programación: Caso de Estudio – Universidad de San Buenaventura. Full paper

**Huizilopoztli Luna García**, Diseño de Interfaces Infotainment de Bajo Costo para la Industria Automotriz. Invited Talk Paper

## DAY 3 : SEPTEMBER 27, 2017

### Interaccion Sessions 11 (S11): HCI for All 2

**Date:** Wednesday September 27, 2017, **Room:**

**10:00-11:00, chair:** William Giraldo (Universidad del Quindío-Colombia)

Cristina Manresa-Yee, **Ramon Mas-Sansó** and Sandra Cano, Juego Serio para entrenar la Discriminación y la Identificación Auditiva en Niños con Discapacidad Auditiva. [Full paper](#)

**Leandro Florez Aristizabal**, Sandra Cano, César Collazos, Andrés Solano and Karin Slegers, Collaborative Learning as Educational Strategy for Deaf Children: A Systematic Literature Review. [Full paper](#)

**Victor Manuel Peñeñory**, Sandra Patricia Cano Mazuera, Cesar Collazos, Cristina Manresa- Yee and Habib M. Fardoun, Propuesta de modelo para el análisis de requisitos y actividades dirigido al diseño de experiencias interactivas dirigidas a la rehabilitación de niños con discapacidad auditiva. [Full paper](#)

### Interaccion Sessions 12 (S12): Interactive Systems 1

**Date:** Wednesday September 27, 2017, **Room:**

**11:30-12:30, chair:** Francisco L. Gutiérrez (Universidad de Granada-España)

**César Restrepo**, Luis Jimenez, Julio Hurtado and César Collazos, Integrando la ingeniería de la colaboración en los procesos de software: Un enfoque de Análisis Visual. [Full paper](#)

**Manuel Ortega**, Miguel A. Redondo, Ana I. Molina, Crescencio Bravo, Carmen Lacave, Yoel Arroyo, Santiago Sánchez, M. Ángeles García, César A. Collazos, Javier Jiménez Toledo, Huizilopoztli Luna-García, J. Ángel Velázquez-Iturbide, Raul Abad Gómez-Pastrana, iProg: Desarrollo de Sistemas Inmersivos para el Aprendizaje de la Programación. [Invited Talk Paper](#)

**Paulo Realpe Muñoz**, Cesar Collazos, Toni Granollers, Jaime Muñoz Arteaga and Eduardo Fernandez, Design Process for Usable Security and Authentication Using a User-Centered Approach. [Full paper](#)

### Interaccion Sessions 13 (S13): Usability Evaluation

**Date:** Wednesday September 27, 2017, **Room:**

**12:30-13:30, chair:** Antoni Granollers (Universidad de Lleida-España)

**Victor M. González**, Héctor Hugo Huipet Hernández, Cassandra Pratt and Guillermo Garduño, A Case study of Usability Evaluation of an InfoVis Tool for Analyzing Twitter. [Full paper](#)

**Ana María Chimunja**, César Collazos and Julio Ariel Hurtado, Analizando la Capacidad de Aprendizaje como Subcaracterística de Usabilidad, en el Modelo ChildProgramming. [Full paper](#)

**Gustavo Bañuelos Ochoa**, Ricardo Briones Cortés, Jorge Armando Gómez AcaThe Augmented Reality applied in the educational field. [Short paper](#)

Guillermo Arturo Hernández-Tapia and Ana Lilia Reyes-Herrera, E-mail management system for blind people in Spanish language. [Short paper](#)

## **Interaccion Sessions 14 (S14): Interactive Systems 2**

**Date:** Wednesday September 27, 2017, **Room:**

**15:00-16:00, chair:** Huizilopoztli Luna-García (Universidad Autónoma de Zacatecas)

J. Emmanuel Vazquez-Valencia, Manuel Martin-Ortiz, Ivan Olmos-Pineda, J. **Arturo Olvera-Lopez** and David Pinto-Avenidaño, Automatic Gesture Recognition for Wheelchair Control. [Full paper](#)

Teresita De Jesús Álvarez Robles, Cristian Rusu, Francisco Javier Álvarez Rodríguez, Edgard Benitez-Guerrero and **Alma Laura Esparza Maldonado**, Applying usability evaluation methods with blind users: A systematic mapping study. [Short paper](#)

**Laura Martínez García**, A user modeling approach to personalized sightseeing tours. [Full paper](#)

**Luz Palacios-Villavicencio**, Ana Lilia Laureano Cruces, Anibal Arias-Aguilar, Implementation of a cognitive-affective model for the interaction of children with autism spectrum disorder and a humanoid robot [Short paper](#)

## **Doctoral Consortium (D1):**

**Date:** Wednesday September 27, 2017, **Room:**

**16:00-18:30, chair:** Alberto Moran González (BUAP-México), Josefina Guerrero García (BUAP-México)

Guillermina Sanchez, Proposal of development methodology on Tutoring System for developing algorithmic abilities

José Andrés Vázquez Flores, A Computational Model for Automatic Generation of Domain-Specific Dialogues using Machine Learning

Raúl Casillas Figueroa, Espacios personales de estimulación multisensorial como apoyo para recuperar/restablecer pacientes con discapacidad cognitiva

Luz Palacios-Villavicencio, Ana Lilia Laureano Cruces, Anibal Arias-Aguilar, Implementation of a cognitive-affective model for the interaction of children with autism spectrum disorder and a humanoid robot

Dafne I. Pinedo Rivera, Experiencias de adopción de aplicaciones lúdicas móviles para asistir la lectoescritura en niños con necesidades educativas especiales: Estudio de caso sobre el programa USAER de Aguascalientes.

Andrés Saul de La Serna Tuya, Juan Manuel González Calleros and Estela De Lourdes Juárez Ruiz , Level of educational attainment by the use of the Tablets as a didactic-digital resource, the competence of language and communication in the third year kindergarten.

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