

# Patricia Acosta-Vargas

Patricia.acosta@udla.edu.ec

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## Brief

Patricia is a PhD student in Computer Science at the University of Alicante. She is currently a Certified Researcher for SENESCYT, collaborates as a reviewer of scientific articles for various journals and conferences. She is a member of the research group "Intelligent & Interactive Systems" of the University of the Americas. In 2016, Patricia was awarded the "Prize for the best scientific article in Computer Science" by the XI Congress of Science and Technology. She is the author of more than 20 articles indexed in Scopus and WOS. She is a university professor and facilitator of continuous updating courses in the area of technology and research.

## Education

Sep 2015-Current	PhD (s) in Computer Science at the University of Alicante, Spain
Feb 2013	Master Degree in Distance Education (E-Learning), Caribbean International University, Willemstad
July 2008	Master's Degree in Teaching in Higher Education Institutions, Escuela Politécnica Nacional, Quito, Ecuador.
May 1997	Computer Science Engineer, Escuela Politécnica Nacional, Quito, Ecuador.

## Research Experience

2018/2020:	A framework as a support tool to improve socio-cognitive skills within the framework of full inclusion for people with intellectual disabilities, regardless of place of residence. INÉDITA (Collaborator in the area of web accessibility)
2018/2019:	Telerehabilitation Platform, INÉDITA (Collaborator in the area of web accessibility)
2018/2019:	Web accessibility metrics and heuristics: case study of Latin American universities, Universidad de Las Américas.
2018/2019	Robust Estimation of Urban Pollution, REDCEDIA, CEPRA XII-2018- (Collaborator in Web Accessibility Evaluations with WCAG 2.0)
2017/2018:	Evaluation of the quality of websites of Latin American universities, University of the Americas. (Project Director)

2017/2018: Tele-rehabilitation system for self-reeducation

## Publications

- 2019 Acosta-Vargas P., Salvador-Ullauri L., Pérez-Medina J.L., Gonzalez M., Jimenes K., Rybarczyk Y. "Improving Web Accessibility: Evaluation and Analysis of a Telerehabilitation Platform for Hip Arthroplasty Patients", (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.
- 2019 Acosta-Vargas P., Salvador-Ullauri L., Pérez-Medina J.L., Zalakeviciute R., Hernandez W. "Heuristic Method of Evaluating Accessibility of Mobile Applications for Air Quality Monitoring", (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.
- 2019 Zalakeviciute R., Alexandrino K., Acosta-Vargas P., Pérez-Medina J.L., Hernandez W. "Evaluation of Smart Phone Open Source Applications for Air Pollution", (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.
- 2019 Pérez-Medina J.L., Jimenes-Vargas K.B., Acosta-Vargas P., Rybarczyk Y., González M. "User Experience Assessment of a Tele-rehabilitation Platform: The Physiotherapist Perspective", (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.
- 2019 Calle-Jimenez T., Tutillo-Sanchez D., Sanchez-Gordon S., Jadán-Guerrero J., Guevara C., Lara-Alvarez >P., Acosta-Vargas P., Salvador-Ullauri L., Nunes I. "Improving Usability with Think Aloud and Focus Group Methods. A Case Study: An Intelligent Police Patrolling System (I-Pat)", (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.
- 2019 Sanchez-Gordon S., Lara-Alvarez P., Jadán-Guerrero J., Guevara C.,

Salvador-Ullauri L., Calle-Jimenez T., Acosta-Vargas P. , “Implementation of controls for insertion of accessible images in open online editors based on WCAG guidelines. Case studies: TinyMCE and Summernote “, (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.

2019 Lara-Alvarez P., Jadán-Guerrero J., Guevara C., Salvador-Ullauri L., Sanchez-Gordon S., Calle-Jimenez T., Acosta-Vargas P., Illescas W. “Application to Guide People with Visual Disability on Internal Buildings, using Beacon Bluetooth Positioning Systems”., (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.

2019 Salvador-Ullauri L., Acosta-Vargas P., Jadán-Guerrero J., Guevara C., Sanchez-Gordon S., Calle-Jimenez T., Lara-Alvarez P. “Development of an Accessible Video Game to Improve the Understanding of the Test of Honey-Alonso”, (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.

2019 Jadán-Guerrero J., Guevara C., Lara-Alvarez P., Sanchez-Gordon S., Calle-Jimenez T., Salvador-Ullauri L., Acosta-Vargas P., Bonilla-Jurado D.”Building Hybrid Interfaces to Increase Interaction with Young Children and Children with Special Needs”, (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.

Guevara C., Jadán-Guerrero J., Bonilla-Jurado D., Salvador-Ullauri L., Acosta-Vargas P., Calle-jimenez T, Lara-Alvarez P. “Fuzzy model for back posture correction during the walk”, (to be published) in Advances in Human Factors and System Interactions, Proc. Conf on Human Factors and System Interactions, July 24-28, 2019, Washington (USA) Serie Advances in Intelligent Systems and Computing. Springer 2019.

- 2019 Acosta-Vargas, P., Jadán-Guerrero, J., Guevara, C., Sanchez-Gordon, S., Calle-Jimenez, T.: Technical Contributions to the Quality of Telerehabilitation Platforms: Case Study—ePHoRt Project. In: Assistive & Rehabilitation Engineering. pp. 1–22. IntechOpen (2019)
- 2019 Pérez Medina, J., González, M., Pilco, H., Jimenes, K., Acosta-Vargas, P., Sanchez-Gordon, S., Calle-Jimenez, T., Esparza, D., Rybarczyk, Y., “Usability Study of a Web-Based Platform for Home Motor Rehabilitation” IEEE Access, 2019, Volume: 7, Page s: 7932 – 7947
- 2019 Acosta-Vargas, P., Zalakeviciute R., Luján-Mora, S., Hernandez W., “Accessibility Evaluation of Mobile Applications for Monitoring Air Quality “, ICITS 2019, Ecuador.
- 2019 Rybarczyk, Y., Leconte, L., Pérez Medina, J., Jimenes, K., Acosta-Vargas, P., and Esparza D. “Telerehabilitation platform for post-arthroplasty recovery: a Dynamic Time Warping approach.” 3rd IEEE ETCM, Ecuador 2018.
- 2019 Acosta-Vargas, P., Rybarczyk, Y., Pérez Medina, J., González, M., Jimenes, K., Leconte, L., and Esparza D. “Towards Web accessibility in telerehabilitation platforms.” 3rd IEEE ETCM, Ecuador 2018.
- 2019 Guevara C, Jadán J, Rybarczyk Y, Acosta-Vargas P., Esparza W, Gonzalez M, Villareal S, Sanchez-Gordon S, Calle-Jimenez T, Nunes IL A real-time algorithm for movement assessment using fuzzy logic of hip arthroplasty patients, in Advances in Human Factors and System Interactions, Nunes IL (ed) (Proc. Conf on Human Factors and System Interactions, July 22-26, 2018, Orlando, Florida, USA) Vol. 781. Serie Advances in Intelligent Systems and Computing 781, [https://doi.org/10.1007/978-3-319-94334-3\\_27](https://doi.org/10.1007/978-3-319-94334-3_27) Springer. 2019. [https://link.springer.com/chapter/10.1007/978-3-319-94334-3\\_27](https://link.springer.com/chapter/10.1007/978-3-319-94334-3_27)
- 2019 Pilco H, Sanchez-Gordon S, Calle-Jimenez T, Rybarczyk Y, Jadán J, Villareal S, Esparza W, Acosta-Vargas P., Guevara C, Nunes IL (to be published) Analysis and Improvement of the Usability of a Tele-Rehabilitation Platform for Hip Surgery Patients, in Advances in Human Factors and System Interactions, Nunes IL (ed) (Proc. Conf on Human Factors and System Interactions, July 22-26, 2018, Orlando, Florida, USA) Vol. 781. Serie Advances in Intelligent Systems and Computing 781,

- [https://doi.org/10.1007/978-3-319-94334-3\\_27](https://doi.org/10.1007/978-3-319-94334-3_27) Springer. 2019.  
[https://link.springer.com/chapter/10.1007/978-3-319-94334-3\\_21](https://link.springer.com/chapter/10.1007/978-3-319-94334-3_21)
- 2019 Acosta-Vargas P., Esparza W, Rybarczyk Y, Gonzalez M, Villareal S, Jadán J, Guevara C, Sanchez-Gordon S, Calle-Jimenez T, Baldeon J, Nunes IL (to be published) Educational Resources Accessible on the Tele-rehabilitation Platform, in Advances in Human Factors and System Interactions, Nunes IL (ed) (Proc. Conf on Human Factors and System Interactions, July 22-26, 2018, Orlando, Florida, USA) Vol. 781. Serie Advances in Intelligent Systems and Computing 781, [https://doi.org/10.1007/978-3-319-94334-3\\_27](https://doi.org/10.1007/978-3-319-94334-3_27) Springer. 2019.  
[https://link.springer.com/chapter/10.1007/978-3-319-94334-3\\_22](https://link.springer.com/chapter/10.1007/978-3-319-94334-3_22)
- 2019 Rybarczyk Y, Villareal S, Gonzalez M, Acosta-Vargas P., Esparza W, Sanchez-Gordon S, Calle- Jimenez T, Jadán J, Nunes IL (to be published) Interaction with a tele-rehabilitation platform through a natural user interface: a case study of hip arthroplasty patients, in Advances in Human Factors and System Interactions, Nunes IL (ed) (Proc. Conf on Human Factors and System Interactions, July 22-26, 2018, Orlando, Florida, USA) Vol. 781. Serie Advances in Intelligent Systems and Computing 781, [https://doi.org/10.1007/978-3-319-94334-3\\_27](https://doi.org/10.1007/978-3-319-94334-3_27) Springer. 2019.  
[https://link.springer.com/chapter/10.1007/978-3-319-94334-3\\_25](https://link.springer.com/chapter/10.1007/978-3-319-94334-3_25)
- 2019 Calle-Jimenez T, Sanchez-Gordon S, Rybarczyk Y, Jadán J, Villareal S, Esparza W, Acosta-Vargas P., Guevara C, Nunes IL (to be published) Analysis and Improvement of the Web Accessibility of a Tele-rehabilitation Platform for Hip Arthroplasty Patients, in Advances in Human Factors and System Interactions, Nunes IL (ed) (Proc. Conf on Human Factors and System Interactions, July 22-26, 2018, Orlando, Florida, USA) Vol. 781. Serie Advances in Intelligent Systems and Computing 781, [https://doi.org/10.1007/978-3-319-94334-3\\_27](https://doi.org/10.1007/978-3-319-94334-3_27) Springer. 2019.
- 2018 Acosta-Vargas P., Acosta, T. & Luján-Mora, S. Challenges to Assess Accessibility in Higher Education Websites: A Comparative Study of Latin America Universities, in IEEE Access, vol. 6, DOI: 10.1109/ACCESS.2018.2848978 pp. 36500 – 36508, 2018.  
<https://ieeexplore.ieee.org/document/8388714>
- 2018 Acosta-Vargas P., Acosta T. & Luján-Mora S., “Framework for Accessibility

- Evaluation of Hospital Websites,” 2018 International Conference on eDemocracy & eGovernment (ICEDEG). 2018, pp. 9-15. doi: 10.1109/ICEDEG.2018.8372368. 2018.  
<https://ieeexplore.ieee.org/abstract/document/8372368>
- 2018 Acosta T. , Acosta-Vargas P. , Luján-Mora S., “Accessibility of eGovernment Services in Latin America,” 2018 International Conference on eDemocracy & eGovernment (ICEDEG), Ambato, Ecuador, 2018, pp. 67-74. doi: 10.1109/ICEDEG.2018.8372332  
<https://ieeexplore.ieee.org/abstract/document/8372332>
- 2018 Acosta-Vargas, P., Luján-Mora, S., Acosta, T., & Salvador-Ullauri, L. (2018). Toward a Combined Method for Evaluation of Web Accessibility. In International Conference on Information Theoretic Security (pp. 602-613). Springer, Cham. [https://link.springer.com/chapter/10.1007/978-3-319-73450-7\\_57](https://link.springer.com/chapter/10.1007/978-3-319-73450-7_57)
- 2018 Acosta, T., Acosta-Vargas, P., Salvador-Ullauri, L., & Luján-Mora, S. (2018). Method for Accessibility Assessment of Online Content Editors. In International Conference on Information Theoretic Security (pp. 538-551). Springer, Cham. [https://link.springer.com/chapter/10.1007/978-3-319-73450-7\\_51](https://link.springer.com/chapter/10.1007/978-3-319-73450-7_51)
- 2017 Acosta-Vargas, P., Luján-Mora, S., & Acosta, T. (2017). Accessibility of Portable Document Format in Education Repositories. In Proceedings of the 2017 9th International Conference on Education Technology and Computers (pp. 239-242). ACM. <https://dl.acm.org/citation.cfm?id=3175574>
- 2017 Acosta, T., Luján-Mora, S., & Acosta-Vargas, P. (2017). Method for Accessibility Assessment of Heading in Online Editors. In Proceedings of the 2017 9th International Conference on Education Technology and Computers (pp. 243-247). ACM. <https://dl.acm.org/citation.cfm?id=3175577>
- 2017 Acosta-Vargas P., Luján-Mora S., Acosta, T., & Salvador-Ullauri L.,(2017). Accesibilidad de documentos PDF en repositorios educativos. VIII Congreso Internacional sobre Aplicación de Tecnologías de la Información y Comunicaciones Avanzadas (ATICA2017). ISBN: 978-84-16599-50-9. <http://www.cc.uah.es/Atica/documentos/LibroActasATICA2017.pdf>

- 2017 Acosta-Vargas, P., Luján-Mora, S., & Salvador-Ullauri, L. (2017). Web accessibility policies of higher education institutions. In Information Technology Based Higher Education and Training (ITHET), 2017 16th International Conference on (pp. 1-7). IEEE. <https://ieeexplore.ieee.org/abstract/document/8067808>
- 2017 Acosta-Vargas, P., Luján-Mora, S., & Salvador-Ullauri, L. (2017). Quality evaluation of government websites. In eDemocracy & eGovernment (ICEDEG), 2017 Fourth International Conference on (pp. 8-14). IEEE. <https://ieeexplore.ieee.org/abstract/document/79625072017-2015>
- 2016 Acosta-Vargas, P., Luján-Mora, S., & Salvador-Ullauri, L. (2016). Evaluation of the web accessibility of higher-education websites. In Information Technology Based Higher Education and Training (ITHET), 2016 15th International Conference on (pp. 1-6). IEEE. <https://ieeexplore.ieee.org/abstract/document/7760703>
- 2016 Salvador-Ullauri, L., Luján Mora, S., & Acosta-Vargas, P. (2016). Producción de videojuegos orientados a la enseñanza mediante lenguajes de programación por bloques aplicables a aulas virtuales mediante SCORM. ISBN: 978-84-9921-847-2. <http://rua.ua.es/dspace/handle/10045/61851>
- 2016 Salvador-Ullauri L., Luján-Mora S., and Acosta-Vargas P. (2016). Tecnología, innovación e investigación en los procesos de enseñanza aprendizaje, Escenarios de aprendizaje basados en TIC. Ediciones OCTAEDRO, S.L. Barcelona, pp. 2992 – 3001. ISBN: 978-84-9921-848-9. <https://www.octaedro.com/appl/botiga/client/img/16087.pdf>
- 2016 Salvador-Ullauri L., Luján-Mora S., & Acosta-Vargas P. (2016). Development of serious games using automata theory as support in teaching people with cognitive disabilities. ICERI2016. 9th annual International Conference of Education, Research and Innovation, pp. 4508-4516, ISBN: 978-84-617-5895-1, ISSN: 2340-1095, doi: 10.21125/iceri.2016.2067. <https://library.iated.org/view/SALVADORULLAURI2016DEV>
- 2016 Acosta-Vargas P., Luján-Mora S., & Salvador-Ullauri L. (2016). Web accessibility policies in higher education institutions. ICERI2016, Seville, 14th, 15th and 16th of November, ISBN: 978-84-617-5895-1, 9th annual



International Conference of Education, Research and Innovation, p. 7298-7305, ISBN: 978-84-617-5895-1, ISSN: 2340-1095, doi: 10.21125/iceri.2016.0657.

<https://library.iated.org/view/ACOSTAVARGAS2016WEB>

2016 Salvador-Ullauri L., Luján-Mora S., & Acosta-Vargas P. (2016). Improving the performance of web servers for educational multiplayer serious videogames. 8th International Conference on Education and New Learning Technologies. Edulearn16. ISBN: 978-84-608-8860-4, ISSN: 2340-1117, pp. 8000-8010, doi: 10.21125/edulearn.2016.0756. <https://library.iated.org/view/SALVADORULLAURI2016IMP>

2016 Acosta-Vargas P., Luján-Mora S., & Salvador-Ullauri L. (2016). Evaluation of the Accessibility of Higher Education Institutional Web Pages. 8th International Conference on Education and New Learning Technologies. Edulearn16, pp. 7583-7590. ISBN: 978-84-608-8860-4. ISSN: 2340-1117. doi: 10.21125/edulearn.2016.0666. <https://library.iated.org/view/ACOSTAVARGAS2016EVA>

2016 Acosta-Vargas, P., Luján-Mora, S., & Salvador-Ullauri, L. (2016). Evaluación de la accesibilidad de las páginas web de las universidades ecuatorianas. XI Congreso de Ciencia y Tecnología (ESPE 2016), Revista Congreso de Ciencia y Tecnología, Vol. 11, p. 181-187. ISSN: 1390-4663. [http://ciencia.espe.edu.ec/wp-content/uploads/2016/06/Revista\\_08\\_06\\_2016-F.pdf](http://ciencia.espe.edu.ec/wp-content/uploads/2016/06/Revista_08_06_2016-F.pdf)

2015 Más información revisar <http://saccec.com/PatriciaAcosta/publicaciones-2/> y Scholar Google: [https://scholar.google.com/citations?hl=es&user=16\\_omfwAAAAJ](https://scholar.google.com/citations?hl=es&user=16_omfwAAAAJ)

## Funding and Awards

- 2018 Best Facilitator of Escuela Politécnica Nacional, CEC-EPN.
- 2016 Award to the best scientific article in Computer Science at the XI Congress of Science and Technology. At the University of the Armed Forces, June 24, 2016.
- 2016 Scholarship granted by Fundación para la Actualización Tecnológica de Latinoamérica, Expert in Educational Technology.
- 2016 Scholarship granted by Fundación para la Actualización Tecnológica de Latinoamérica, Expert in Electronic Commerce.
- 2015 Scholarship granted by Fundación para la Actualización Tecnológica de Latinoamérica, Expert in Digital Media.



- 2013 Scholarship awarded by Escuela Politécnica Nacional to Master's Studies in Teaching in Higher Education Institutions, Escuela Politécnica Nacional, Quito.
- 2009 Scholarship granted by Fundación para la Actualización Tecnológica de Latinoamérica, Expert in E-learning processes.

## Teaching Experience

- 2006-Current Universidad de Las Américas (2006-Current), Professor of Digital Language, Ethics for Architecture, Applied Computing, Information Technologies, Electronic Business, Physics, Introduction to Calculus, Digital Journalism.
- 2009 Laureate International Universities, virtual tutor since 2009 -Actual.
- 1998-2000 Escuela Politécnica Nacional, Teacher of Applied Computing, Programming at Delphi.
- 1999-2015 Escuela Politécnica Nacional, Teacher Training, Website Design, Office Automation, Web 2.0 Tools, Blog Design, Quipux, Public Procurement. ICT tools.
- 2000-Current Escuela Politécnica Nacional, Certified Facilitator by the Center for Continuing Education, Presential and Virtual Modality (2000- Current) Facilitator of Advanced Excel and Macros, Electronic Commerce, Teacher Training, Ms Project, Database, Public Procurement, ICT Tools.
- 2012-2017 Universidad Central del Ecuador, Teacher of the Master's Degree in Quality Management. Teacher Training.
- 2010-2013 Universidad Central del Ecuador, Teacher Training, ICT Tools, Moodle, Sakai.
- 2013-2016 Universidad Técnica Particular de Loja, Virtual module of Electronic Commerce, Excel and Macros.
- 2012-2017 Universidad Técnica de Ambato collaboration in seminars and conferences in various careers.
- 2013-2014 Universidad Indoamérica, Operating Systems, various Conferences.

2000-2012

Universidad Politécnica Salesiana, Facilitator of seminars.