

**Curriculum Vitae – 2020**  
**ANTONIO MIGUEL-CRUZ**  
**NUCLEAR ENGINEER Dr.**  
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## EDUCATION

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- 1998-2003 **Universidad Tecnológica de La Habana José Antonio Echeverría, Cujae, Ciudad Havana, Cuba**  
Dr.Sc In Bioengineering, 2003  
Dissertation: “*Design and implementation of technology management for biomedical devices using system theory approach*”.
- 1995-1998 **Universidad Tecnológica de La Habana José Antonio Echeverría, Cujae, Ciudad Havana, Cuba**  
M.Sc. in In Bioengineering, 1998  
Dissertation: “*Technology management of biomedical devices using a system theory approach*”.
- 1990-1995 **Higher Institute of Nuclear Sciences and Technologies, ISCTN, Ciudad Havana, Cuba**  
B.Sc. in Nuclear Engineering, 1995  
Bachelor research project: “*Design and implementation of a computerized device for measuring anatomical cross-sections to be used in images for the treatment of radiotherapy in patients with cancer*”.

## LANGUAGES

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Spanish: Native speaker  
English: Fluent in written and spoken English

## PROFESSIONAL EXPERIENCE

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### CURRENT EMPLOYMENT

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October 2018- Present     **Department of Occupational Therapy. University of Alberta/Glenrose Rehabilitation Hospital. Edmonton, Canada**

Assistant Lecturer/Lecturer and Program Evaluator (*Full time*)

- Research on teaching: To collaborate with the Associate Chair and other faculty members to design research studies and prepare research grants related to innovations and technologies for teaching the occupational therapy curriculum.
- Research on my own area of expertise: To develop a research program in my own area of expertise (rehabilitation engineering), to apply for grants, and to publish or present the research outcomes.
- Assisted with mentoring and supervising graduate students on the Occupational Therapy Professional Master's Program, on the Thesis Route Programs (in particular Rehabilitation Science), and on the B.Sc. Computing Science Program.
- Taught courses on the Occupational Therapy Master's Program (e.g., 564 – Evaluation of Healthcare Systems and Occupational Therapy Services).
- Collaborated with the Glenrose Rehabilitation Hospital (GRH) to facilitate research by serving as a PI, CI, or collaborator on research grants. In this way, helped build the research capacity at the GRH. Input included obtaining funding, output included publications and presentations.
- Contributed to building partnerships between the GRH and the business sectors in the development and testing/validation of rehabilitation devices.

### PREVIOUS EMPLOYMENT

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March 2007- Aug 2018     **Program of Biomedical Engineering. School of Medicine and Health Sciences. Universidad del Rosario.**

Associate Full-time Professor (March 2007-July 2011)

Titular Professor (Full-time Professor) and Chair (August 2011-July 2018)

- Designed the B.Sc. on the Biomedical Engineering Program (2007-2011). Approved by the Colombian Ministry of Education (Renewal: resolution number 26809, December 29th, 2017).
- Designed the M.Sc. on the Biomedical Engineering Program (2017). Approved by the Colombian Ministry of Education (Res: 26809, November 29th, 2017).
- Led two accreditation processes on the B.Sc. of Biomedical Engineering Program at the School of Medicine and Health Sciences at the Universidad del Rosario in Bogotá, Colombia (2014-2016, 2017-2018).
- Invited professor at Malta University.
- Led the Design and Implementation of the Bioinstrumentation, Internet of Things, and Clinical Engineering Laboratories (2015-2018).
- Led a Research Group in Biomedical Engineering (2014-2018).
- Conducted and led research projects in biomedical technology, rehabilitation, and assistive technologies.
- Taught the B.Sc. courses on the Biomedical Engineering Program: Internet of Things (IoT), technology management of biomedical devices, maintenance of biomedical devices, medical device design, and final projects.
- Supervised graduate and undergraduate theses on the Biomedical Engineering Program and on the M.Sc. Rehabilitation Science Program at the School of

Medicine and Health Sciences at the Universidad del Rosario.

- Taught courses on the B.Sc. Medicine Program and the Pre-Medicine Bridge Program: Physics, Mechanics, and Biophysics

Apr 2014-Sept  
 2018

**Department of Occupational Therapy. University of Alberta, Edmonton, Canada.**

- Adjunct Associate Professor at the Faculty of Rehabilitation Medicine. Mentored two highly qualified personnel (HQP) from AGE-WELL NCE (two Ph.D. students), one Ph.D. student, one M.Sc. student, and one B.Sc. biomedical engineering student.
- High qualified personnel (HQP) from AGE-WELL NCE. Designed and conducted several research projects related to technologies for cognitive assessment and evaluation in older adults with dementia. Supervisor: Dr. Lili Liu. University of Alberta. April 2016-April 2018.
- Postdoctoral Fellow funded by the Mitacs Accelerate Graduate Research Internship Program. Conducted two research projects related to technology assessment for people with diabetes (Technologies for living independently: A technology case study on remote patient monitoring) and dementia (Assessment of Usability of a Locator Device). Supervisor: Dr. Lili Liu. University of Alberta. April 2014-April 2016.

October 2016-  
 2017

**University of Malta**

**Faculty of Engineering. Department of Metallurgy & Materials Engineering**

Guest Professor, October 2016, and October 2017

- Taught a Usability for rehabilitation technologies course, 8 hours
- Taught a course on User-Centered Design, 8 hours

Sept 1995- Aug  
 2006

**Bioengineering Center. Faculty of Electrical Engineering at Universidad Tecnológica de La Habana José Antonio Echeverría, Cujae, Ciudad Havana, Cuba**

Professor and Chair of the Bioengineering Center (September 2002-July 2004)

Professor of the Bioengineering Center (September-1995-August 2006)

- Taught courses on the B.Sc. Biomedical Engineering Program: medical informatics, electronics measurement, data mining, machine learning, C/C++ programming, OO programming, data base design, ORACLE, and SQL.
- Invited Professor at Universities in Venezuela, Colombia, the Dominican Republic, and Chile.
- Conducted a research project on “Application Service Provider for technology management of biomedical devices”.
- Supervised students on their final projects on the B.Sc. Computer Systems Engineering Program.

Nov 2003-Feb  
 2004

**Department of Medical Engineering. Hospital for Sick Children, Toronto, Canada**

Postdoctoral Fellow funded by the Canadian International Agency (CIDA).

Designed and conducted two research projects (Reliability analysis in a defibrillator population, and Cost-Benefit analysis in the Pediatric Clinical Laboratory).

2008-2010

**Santa Fe Foundation Hospital Bogota, Colombia  
 Department of Clinical Engineering.**

- Technology management consulting activity

July-August

**University: Corporación Universitaria Autónoma de Occidente – CUAO, Cali**

- 2001                    **Colombia**  
 Visiting professor.
- Taught technology management and maintenance course in Technology Management Specialization Program, 36 hours
- November 2001        **Ingeniería En Salud Gtz Chile – PTOINGSAL Temuco, Chile**  
 Visiting professor.
- Taught technology management and maintenance course, 36 hours
- 2001                    **University: Universidad Experimental Politécnica Antonio José de Sucre – UNEXPO, Venezuela**  
 Visiting Professor.
- Taught technology management and maintenance course in Technology Management Specialization Program, 36 hours
- July 1999            **University: Universidad Experimental Politécnica Antonio José de Sucre – UNEXPO, Venezuela**  
 Visiting Professor.  
 Taught technology management and maintenance course in Technology Management Specialization Program, 36 hours
- July 1998            **University: Universidad Experimental Politécnica Antonio José de Sucre – UNEXPO, Venezuela**  
 Visiting Professor.  
 Taught technology management and maintenance course in Technology Management Specialization Program, 36 hours
- July 1997            **University: Universidad Experimental Politécnica Antonio José de Sucre – UNEXPO, Venezuela**  
 Visiting Professor.  
 Taught technology management and maintenance course in Technology Management Specialization Program, 36 hours

## AWARDS AND DISTINCTIONS

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- **Order of Merit:** “Order Calatrava”. Universidad del Rosario, Bogota, Colombia, 2018
- Extension Award (application of biomedical and rehabilitation research to community). 2015. Universidad del Rosario, Bogota, Colombia. JOSE MARÍA DEL CASTILLO Y RADA. “Sowing” smiles with a click: An experience of extension of the program of Biomedical Engineering in a population with disability.
- **Age-Well NCE Access Award**, 2017 (travel support to present at RESNA conference in June 2017)
- **Extension Award (application of biomedical and rehabilitation research to community)**. 2015. Universidad del Rosario. JOSE MARÍA DEL CASTILLO Y RADA. “Sowing” smiles with a click: An experience of extension of the program of Biomedical Engineering in a population with disability.
- **DAAD Award**. DIES-International Deans’ Course for Latin America 2013/2014
- **Best strategic action plan Runner Up**. DIES-International Deans’ Course for Latin America, Germany-Spain. 2013/2014
- **Teaching award**. Universidad del Rosario. 2012

- **Clinical Engineering Robert Morris Award.** Miguel-Cruz, A, Usaquén Perilla Sandra, and Vanegas Pabón Nidia Nelly. Aplicación del Modelo de Cox para Estimar el Desempeño de Proveedores de Servicio de Mantenimiento. IFMBE Proceedings 33 IFMBE, pp. 555-558. 2013. V Congreso Latinoamericano de Ingeniería Biomédica (CLAIB2011)
- **Honorable Mention.** National Scientific Competition in Biomedical Engineering of the Cuban Society of Bioengineering. 2005
- **Honorable Mention.** National Forum of Science and Technology. Cuba. 2001
- **Student Paper Finalist.** World Congress of Biomedical Engineering and Medical Biophysics, Chicago, IEEE-EMB. 2000
- **Honorable Mention.** National Biomedical Engineering Scientist competition of the Bioengineering Cuban Society. 1995

## PROFESSIONAL DEVELOPMENT

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- Course (24 hours). R Language for Statistical Computing in Business Analytics for Business Series. University of Alberta. Faculty of Extension (EXGEN 5449, Winter 2020)
- Course (24 hours). Machine learning Foundations. University of Alberta. Faculty of Extension (EXCPE 4787, Fall 2019)
- Course (16 hours). Qualitative Research Methods in Education. Universidad del Rosario, Bogotá, Colombia, 2017.
- Course. Academic and Research Integrity. GPS Ontario Consortium for Graduate Professional Skills, Ontario, Canada, 2017.
- Course. Intellectual Property-an Entrepreneur's Guide. GPS Ontario Consortium for Graduate Professional Skills, Ontario, Canada, 2016.
- Tutorial. Tutorial for Researchers Conducting a Retrospective Review of Health Records. McMaster University and Hamilton Health Sciences, 2016.
- Course (20 hours). International Cooperation Projects. Universidad del Rosario, Bogotá, Colombia, 2015.
- Course. DAAD Award. DIES-International Deans' Course for Latin America, Germany-Spain, 2013/2014.
- Course (16 hours). Evaluation Methods: Rubrics. Universidad del Rosario, Bogotá, Colombia, 2014.
- Workshop (16 hours). Academic Management. Universidad del Rosario, Bogotá, Colombia, 2013.
- Course (20 hours). Academic Writing. Universidad del Rosario, Bogotá, Colombia, 2012.
- Workshop (16 hours). Methods of Evaluation in Medical Education. Universidad del Rosario, Bogotá, Colombia, 2011.
- Course (42 hours). Teaching for Understanding. Wide World Harvard Graduate School of Education. Universidad del Rosario, Bogotá, Colombia, 2010.
- Course (16 hours). Moodle. Universidad del Rosario, Bogotá, Colombia, 2009.
- Course (22 hours). Integration of Curricula in Health Sciences. Universidad del Rosario, Bogotá, Colombia, 2009.
- Workshop (8 hours). The Web 2.0. Universidad del Rosario, Bogotá, Colombia, 2008.
- Course (16 hours). Scientific writing. Universidad del Rosario, Bogotá, Colombia, 2008.
- Workshop (8 hours). University Didactics. Universidad del Rosario, Bogotá, Colombia, 2007.

## CONTRIBUTIONS TO THE UNIVERSIDAD DEL ROSARIO, BOGOTA, COLOMBIA

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January 2015-present	Chair, Universidad del Rosario, BSc of Biomedical Engineering Program, Design and Implementation of Bioinstrumentation and Clinical Engineering Laboratories Committee
January 2016-present	Chair, Universidad del Rosario, Faculty of Engineering Committee
January 2015-2017	Member, Universidad del Rosario, Biomedical Engineering Master Program Committee
August 2015-March 2016	Chair, Universidad del Rosario intellectual Property Policy Committee
August 2010-August 2018	Member of the Faculty Council, School of Medicine and Health Sciences at Universidad del Rosario, Bogota, Colombia
August 2010-August 2018	Member, BSc of Biomedical Engineering Program – Admissions Committee
August 2010-August 2018	Member, Universidad del Rosario- Colombian engineering school “Julio Garavito”, BSc of Biomedical Engineering Program, Steering Committee
August 2010-August 2018	Member, Universidad del Rosario- Colombian engineering school “Julio Garavito”, BSc of Biomedical Engineering Program, Steering Administrative Committee

## TEACHING

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1995-1997	Electronic measurements (EM, 2 Credits)
1997-2005	C++ OO Programming (OOP, 4 Credits)
2005-2006	Medical Informatics (MI, 4 Credits)
2008-2011	Physics, Mechanics (PhM, 4 Credits)
2008-2013	Bio Physics (In a Cellular and molecular biology course, BioPh, 2 Credits)
2011-2015	Introduction to biomedical engineering (IIBM-r, 2 Credits)
2015 Fall	Research Methods (MINV-R, 2 Credits)
2014-2018	Clinical Engineering (INCH-R, 3 Credits)
2014-2018	Maintenance management (GMCH-R, 3 Credits)
2016-2018	PhD, Thesis I and II
2018 Term I	Internships: Internet of Things (IoT)
Jul-Aug-2018	Mixed methods research (OCCTH 563-850(31939) (3 Credits)
April-May 2019	Eval healthcare sys (OCCTH 564) (3 Credits)

## RESEARCH FUNDING

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1. 2020-2021. **Miguel-Cruz (PI)**, David Rawani (co-investigator), Megan Kohls-Wiebe (co-investigator). Measuring the effects of 3D Immersion Technology (3Scape) on mental health outpatients on the START program at Glenrose Rehabilitation Hospital: a feasibility study. Glenrose Rehabilitation Hospital. **AMOUNT GRANTED: \$5,811.88**
2. 2019-2020. **Miguel-Cruz (PI)**, Rios-Rincon, AM (co-investigator). TA 51 – Literature Review on “Experiences of Persons with Disabilities in the Military”. Funding: 2019/2020 Canadian Institute for Military and Veteran Health Research (CIMVHR). **AMOUNT GRANTED: \$42,750.38**
3. 2019-2021. **Miguel-Cruz (PI)**, Rios-Rincon, AM (co-investigator), Guptill, C (co-investigator). Evaluating a new device for hand therapy - the FEPSim™: a feasibility and

- usability study. Funding: 2018/2021 Accelerating Innovation into CarE (AICE) program, Alberta Innovates. **AMOUNT GRANTED: \$150,000**
4. 2019 –2020. Rios-Rincon, AM (PI), **Miguel-Cruz** (co-investigator), Guptill, C (co-investigator). Measuring the effectiveness of a novel treatment of Chronic Lateral Epicondylitis: the ArmLock sleeve. Funding: Mitacs. **AMOUNT GRANTED: CAD \$30,000.** Mitacs – Accelerate Internship Program, \$30,000 for Ann Tran. The award consists of a \$15,000 contribution from ArmLock and \$15,000 from Mitacs
  5. 2019 –2020. Liu, L (PI), **Miguel-Cruz** (co-investigator), Ferworn, A (co-investigator). Technologies for assessment and management of wayfinding risks for persons living with dementia in their communities (AWCAT-2019-137). Funding: AGE-WELL Core Research Program 2020 (CRP Catalyst 2019). **AMOUNT GRANTED: CAD \$30,000**
  6. 2019 –2020. Strougla, E (PI). **Miguel-Cruz** (co-investigator), Rios-Rincon, AM (co-investigator). An Open Platform of Serious Games for Cognitive Assessment and Intervention (AW-PP2019-PP4). Funding: AGE-WELL Core Research Program 2020 (AGE-WELL Platform Project funding stream 2019). **AMOUNT GRANTED: CAD \$30,000**
  7. 2019-2020. **Miguel-Cruz** (PI), Rios-Rincon, AM (co-investigator), Liu, L (co-investigator). Effects of a powered and automated cargo management system on the biomechanical variables of workers during ladder lifting tasks: A pilot study. Funding: Mitacs. **AMOUNT GRANTED: CAD \$30,000.** Mitacs – Accelerate Internship Program, \$30,000 for Jessica Murphy. The award consists of a \$15,000 contribution from RazerLift and \$15,000 from Mitacs
  8. 2019-2020. **Miguel-Cruz** (PI), Roxburgh, M (co-investigator), Liu, L (co-investigator). Characterization of a population of Canadian Forces Veterans receiving multidisciplinary rehabilitation services at the Occupational Performance Analysis Unit (OPAU): An exploratory pilot study. Funding: OPAU. **AMOUNT GRANTED: CAD \$10,000**
  9. 2019-2020. Bremault-Phillips, S (PI), Jetly, C.L (co-investigator), Norbash, A (co-investigator), **Miguel-Cruz, A** (co-investigator), Pike, A (co-investigator), Jones, Ch (co-investigator). Multi-Modal Virtual-Reality Based Treatment for Canadian Armed Forces Members with Combat Related Posttraumatic Stress Disorder: A Computer Assisted Rehabilitation Environment (CAREN) Study. Funding: Canadian Armed Forces. **AMOUNT GRANTED: CAD \$35,000**
  10. 2018—2019. Liu, L (PI), Rios-Rincon, AM (co-investigator), **Miguel-Cruz, A** (co-investigator). Usability of LaceUp, a foot stool that facilitates optimum body posture when putting on footwear: Perspectives of occupational therapists. **AMOUNT GRANTED: CAD \$30,000.** Mitacs – Accelerate Internship Program, \$30,000 for MSc student Emily Wood. The award consists of a \$15,000 contribution from LaceUp and \$15,000 from Mitacs.
  11. 2018—2019. Rios-Rincon, AM (PI), **Miguel-Cruz, A** (co-PI), Dziwenko, G (co-PI), Dang, S-L (Co-PI), Cimolini, M (Co-PI). The effects of playing the Glenrose Grocery Game on the specific mental functions and functioning in inpatient older adults: a feasibility study. 2018 Clinical Research Grant Glenrose Rehabilitation Hospital. Funding: GRH. **AMOUNT GRANTED: CAD \$10,000**

12. 2018—2019. Liu, L (PI), Bremault-Phillips, S (co-investigator), Rios-Rincon, AM (co-investigator), **Miguel-Cruz, A (co-investigator)**. Literature Review on “The Utility of Melatonin Interventions in PTSD”. Funding: CIMVHR. **AMOUNT GRANTED: CAD \$13,500**
  
13. 2018-2020. **Miguel-Cruz, A (PI)**, Aya, PA (Co-PI), Sarmiento-Rojas, JS (Co-PI), Quiroga-Torrez, DA (Co-PI). Internet of Things and its Applications in Health: A Pilot Study. University of Rosario. **AMOUNT GRANTED: COP \$41,000/CAD \$ 18,860.00<sup>1</sup>**
  
14. 2018—2019. Strougla, E (PI), Liu, L (co-PI), **Miguel-Cruz, A (collaborator)**. Automated Assessments of Cognitive Impairment using Environment-based Sensing (6.2 COG-ASSESS). Funding: AGE-WELL. **AMOUNT GRANTED: \$183,622**
  
15. 2016-2017. **Miguel-Cruz, A (PI)**, Aya, PA (Co-PI). Determination of the degree of the technology readiness level "Electronic Smart Pillbox". A Systematic Review of Literature. Universidad del Rosario funding call 2016. **AMOUNT GRANTED: COP \$17,500/CAD \$7,444.80**
  
16. 2016-2017. Quiroga-Torrez, DA (PI), Rios-Rincon, AM(Co-PI), **Miguel-Cruz, A(Co-PI)**. Development of a medical device “*Smart Pen*” to implement the subtest 1 of the Developmental Test of Visual Perception, Second Edition (DTVP-2). Universidad del Rosario funding call 2016. **AMOUNT GRANTED: COP \$17,000,000/CAD \$7,232.09**
  
17. 2016-2017. Chignell, Mark (PI), Liu, Lili (Co-PI). **Miguel-Cruz, A (Collaborator)** WP 6. 1. ICT applications for screening, assessment and interventions to enhance mental health. Funding: AGE-WELL network. Canada. **AMOUNT GRANTED: CAD \$144,700**
  
18. 2015-2016. Rios-Rincon AM (PI), Rodriguez-Duenas, WR (Co-PI), Quiroga-Torrez (Co-PI), DA, **Miguel-Cruz, A (Co-PI)**. Development of a prototype robot that promotes play in children with cerebral palsy. Funding: Universidad del Rosario Call-2015 (FIUR). **AMOUNT GRANTED: COP \$25,000,000/CAD \$10,635.42**
  
19. 2013-2014. Liu, L (PI); **Miguel-Cruz, A (Co-PI)**, A; Buttar (Co-PI), V; Quenting, R (Co-PI); Goertzen (Co-PI), D. 2012 Clinical Research Grant Glenrose Rehabilitation Hospital Foundation. What factors determine therapists’ acceptance of new rehabilitation technologies – a study using the Unified Theory of Acceptance and Use of Technology (UTAUT). Edmonton, Alberta, Canada. **AMOUNT GRANTED: CAD \$5,000**
  
20. 2012-2013. **Miguel-Cruz, A (PI)**, Rios-Rincon AM (Co-PI). What factors are associated with the provision of Assistive Technologies: The Bogotá D.C. Case. Universidad del Rosario Call-2012 (FIUR). **AMOUNT GRANTED: COP \$20,000,000/CAD \$8,508.34**
  
21. 2011-2012. **Miguel-Cruz, A (PI)**, Ortiz-Pabon (Co-PI), E. Development project. Technology management informatics platform (Application Service Provider) for medical devices. SENA Call: 021 de 2011. **AMOUNT GRANTED: COP \$ 53,400,000/CAD \$22,717.26**
  
22. 2009-2010. **Miguel-Cruz, A (PI)**. Measuring the Performance of Maintenance Service Outsourcing using Data mining technique. COLCIENCIAS Health Call Conv 449.

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<sup>1</sup> Rate change \$1CAD≈\$2325 COP

**AMOUNT GRANTED: COP \$38,997.497/CAD \$16,590.19**

23. 2009-2010. **Miguel-Cruz, A (PI)**. Technology management Implementation Model. Santa Fe Bogotá Foundation. Colombia. **AMOUNT GRANTED: COP \$ 91,522,359/CAD \$38,935.16**

## INTELLECTUAL PROPERTY

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### Software

1. Sanchez Villar, MC; **Miguel-Cruz, A**; Rodriguez Denis, E.  
**Title:** Medical Equipment Risk Classification Wizard. 2004.  
File number. N-1402-2004, Requested by Higher Polytechnic Institute “José Antonio Echeverría”, CUJAE, Ciudad Havana, Cuba  
Filing Date, 2004/07/04; Date issued: 2004/08/04
2. **Miguel-Cruz, A**; Sanchez Villar, MC; Rodriguez Denis, E.  
**Title:** Computer Aided Maintenance System. 2000. "SMACOR V- 3.1"  
File number. N-05130-5130, Requested by Higher Polytechnic Institute “José Antonio Echeverría”, CUJAE, Ciudad Havana, Cuba  
Filing Date: 2000/03/02; Date issued: 2000/05/05.
3. **Miguel-Cruz, A**  
**Title:** Computer Assisted Maintenance System Oriented to the Control of Risks of Medical Equipment (SYSMANCOR V- 5.2)  
File number. N. 13-17-221, Requested by Miguel-Cruz, A. Bogotá, Colombia  
Filing Date: 2006/12/06; Date issued: 2006/12/06

### Patents

1. Rios-Rincon, AM, **Miguel-Cruz, A**, Quiroga-Torrez, DA, Dueñas-Rodriguez, W.R, Bernal Munoz, H.A.  
**Title:** Free play method for children with disabilities using a robot  
Requested by Universidad del Rosario, Bogotá, Colombia  
In progress, Date issued: NA, Filing Date: 2018/01/31
2. Quiroga-Torrez, DA, Rios-Rincon, AM, **Miguel-Cruz, A**  
**Title:** High-precision tracking device for to implement the subtest 1 of the Developmental Test of Visual Perception, Second Edition (DTVP-2)  
Requested by Universidad del Rosario, Bogotá, Colombia  
Registered, Date issued: NA, Filing Date: 2017/08/07

## PUBLICATIONS

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### Peer Reviewed Research Articles

*Note: Students under Antonio Miguel-Cruz's mentorship are underlined.*

1. Azad-Khaneghah, P., Neubauer, N., Miguel Cruz, A., Liu, L. Mobile Health App Usability and Quality Rating Scales: A Systematic Review. Disability and Rehabilitation: Assistive Technology. Doi: 10.1080/17483107.2019.1701103 (*in press*)
2. **Miguel Cruz, A.**, Gregory L.H. (2019). Determinants of maintenance performance: A resource-based view and agency theory approach. Journal of Engineering and Technology Management Journal. Volume 51, January–March 2019, Pages 33-47
3. **Miguel-Cruz, A.**, Bohórquez, AF, Aya-Parra, PA. What does the literature say about using electronic pillboxes for the elderly? a systematic literature review. (2018). Disability and Rehabilitation: Assistive Technology. Doi: <https://www.tandfonline.com/doi/full/10.1080/17483107.2018.1508514>
4. Noelannah, N.; Khaneghah, P.A.; Miguel-Cruz, A., Liu, L. What do we know about strategies to manage dementia-related wandering?: A scoping review. (2018). Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring 10 (2018) 615-628.
5. Liu, L; **Miguel-Cruz, A.**; Ruptash, T; Barnard, S; Juzwishin, D. (2018). Caregivers as proxy for responses of dementia clients in a GPS technology acceptance study. Behaviour & Information Technology. Volume 37 (6): 634-645
6. Lapierre, N., Neubauer, N., Miguel-Cruz, A., Rios Rincon, A., Liu, L., Rousseau, J., (2018). The state of knowledge on technologies for fall detection: a scoping review. International Journal of Medical Informatics. Volume 111:58-71
7. Neubauer, N., Lapierre, N., Miguel-Cruz, A., Ríos-Rincón, A., Rousseau, J., Liu, L. (2018). What do we know about technologies for wandering? A scoping review. Can J Occup Ther. 2018 Jun;85(3):196-208. doi: 10.1177/0008417418777530..
8. **Miguel-Cruz, A.,** Ríos Rincón, A.M., Rodríguez Dueñas, W.R., Quiroga Torres, D.A., Bohórquez Heredia, A.F. (2017). What does the literature say about using robots on children with disabilities? Disability and Rehabilitation: Assistive Technology, 12(5), 429-440. DOI: <http://dx.doi.org/10.1080/17483107.2017.1318308>
9. Juzwishin D, Mueen M, **Miguel-Cruz, A.,** Ruptash T, Barnard S, Sebastiani M, Esmail R, Liu L. (2017). Characteristics of a successful collaboration in evaluation of a health care innovation: lessons learned from GPS locator technology for dementia clients. Innovation and Entrepreneurship in Health. Volume 4:1-8 DOI <https://doi.org/10.2147/IEH.S124773>
10. Liu, L., A. **Miguel-Cruz, A.,** Ruptash, T, Barnard S, and Juzwishin, D. (2017). Acceptance of global positioning system (GPS) technology among dementia clients and family caregivers. Journal of Technology in Human Services. Volume 35 (2): 99-119. DOI <http://dx.doi.org/10.1080/15228835.2016.1266724>
11. **Miguel-Cruz, A.;** Guarín, M.R (2017). Determinants in the number of staff in hospitals' maintenance departments: a multivariate regression analysis approach. Journal of Medical Engineering & Technology. Feb;41(2):151-164

12. L. Liu, D. Juzwishin, **Miguel-Cruz, A.**, and T. Ruptash. (2016). GPS devices for dementia clients: Ethical considerations. *Gerontechnology*;15 (suppl) 112s. ;  
doi:10.4017/gt.2016.15.s.768.00
13. Liu, L., Strolia, E., Nikolaidis, I, **Miguel-Cruz, A.**, and Ríos Rincón, A. (2016). Smart homes and home health monitoring technologies for older adults: A systematic review. *IJMI*, 91(1), 44-59. DOI: 10.1016/j.ijmedinf.2016.04.007
14. **Miguel-Cruz, A.**, Ríos Rincón, A.M., Rodríguez Dueñas, W.R., Florez Luna, N., and Quiroga Torres, D.A. (2016). The Impact of an Introductory Biomedical Engineering Course on Students' Perceptions of the Engineering Profession. *International Journal of Engineering Education*, 32(1A), 136–149.
15. Khaneghah, PA, **Miguel-Cruz, A.**, Bentley, P., Liu, L., Stroulia, E, and Ferguson-Pell, M. (2016). Users' attitudes towards personal health records A cross-sectional pilot study. *Applied Clinical Informatics*. Vol. 7: (2), pp 573-586
16. Ríos Rincón, A, **Miguel-Cruz, A.**, Guarín M.R., Caycedo Villarraga P.S. (2014). What factors are associated with the provision of assistive technologies: the Bogotá D.C. case. *Disabil Rehabil Assist Technol*, 9(5), 432-44. DOI: 10.3109/17483107.2014.936053
17. Liu, L., **Miguel-Cruz, A.**, Ríos Rincón, A., Buttar, V., Ranson, Q., and Goertzen, D. (2015). What factors determine therapists' acceptance of new technologies for rehabilitation – a study using the Unified Theory for Acceptance and Use of Technology (UTAUT). *Disability and Rehabilitation*, 37(5), 447-55. DOI: 10.3109/09638288.2014.923529.
18. **Miguel-Cruz, A.**, and Ríos Rincón, A. (2014). Application of Multilinear Regression Model for Measuring the Impact of Maintenance Service Providers' Quality on Overall Healthcare Service Quality. *Biomedical Engineering Research* Dec. 2014, Vol. 3 Iss. 4, PP. 88-95
19. **Miguel-Cruz, A.**, Ríos Rincón, A, and Haugan Gregory. (2014). Outsourcing versus the in-house maintenance of medical devices: a longitudinal empirical research. *Pan American Journal of Public Health*. 35(3):193-199
20. **Miguel-Cruz, A.**, Ríos Rincón, A, and Gregory, H. (2014). The effects of asset specificity on maintenance financial performance: an empirical application of Transaction Cost Theory to the medical device maintenance field. *European Journal of Operational Research*, Volume 237, Issue 3, 16 September 2014, Pages 1037-1053
21. **Miguel-Cruz, A.** (2013). Cómo publicar artículos de gestión en salud en revistas de gerencia de alto índice impacto. *Revista Ciencias de la Salud*. 11(3):349-365
22. **Miguel-Cruz, A.**, Ríos Rincón, A, and Gregory, H. (2013). Measuring the Performance of Maintenance Service Outsourcing. *Biomedical Instrumentation and Technology*. 47 (6): 524-531
23. **Miguel-Cruz, A.** (2013). Evaluating Service Request of Medical Devices Using Association Discovery & Clustering Techniques. *Expert Systems with Applications*. 40 (13): 5292-5305.

24. **Miguel-Cruz, A.** (2012) ¿Disenso entre pares revisores? no se preocupe, que a fin de cuentas el editor siempre tiene la última palabra. *Revista Ingeniería Biomédica*. 6 (11): 22-29
25. **Miguel-Cruz, A,** and Ríos Rincón, A. (2012). Medical device maintenance outsourcing: Have operation management research and management theories forgotten the medical engineering community? A mapping review. *European Journal of Operational Research*. 221 (1); 186–197
26. Ríos Rincón, A, **Miguel-Cruz, A**, Rodríguez Cheu, LE, and Chaparro, J. (2010). La ingeniería biomédica en Colombia: una perspectiva desde la formación del pregrado, *Revista Ingeniería Biomédica*, 4 (7): 18-29
27. **Miguel-Cruz, A**, Usaquén Perilla, SP, Vanegas Pabón, NV, and Lopera, C. (2010). Aplicación de técnicas de clustering para caracterizar proveedores de servicios de mantenimiento. *Revista Salud Publica Universidad Nacional*, 12 (3): 464-473.
28. **Miguel-Cruz, A**, Usaquén Perilla, SP, and Vanegas Pabón, NV. (2010). Clustering Techniques. Measuring the Performance of Contract Service Providers, *IEEE Engineering in Medicine and Biology Magazine*, 29 (2): 119-126.
29. **Miguel-Cruz, A.** (2010). Una mirada a la ingeniería clínica desde las publicaciones científicas, *Revista Biomédica*, 30 (2): 188-198.
30. **Miguel-Cruz, A**, Presiga Lucena, AM, and Rodríguez Cortes, IC. (2009). Medición de la eficiencia del método Datum para seleccionar tecnologías biomédicas, *Revista Salud Publica Universidad Nacional*, 11 (5): 766-773.
31. **Miguel-Cruz A**, Aguilera Huertas, WA, Días Mora, DA. (2009). Estudio comparativo de los servicios de mantenimiento utilizando técnicas de minería de datos, *Revista Salud Publica Universidad Nacional*, 11 (4): 653-654.
32. **Miguel-Cruz A**, Cameron Barr, and Puñales-Pozo, E. (2008). A New Predictor for Measuring Corrective Maintenance Turnaround Time Calculation Based on Multiple Linear Regression Techniques. *Revista de Salud Publica, Universidad Nacional*, 10 (5). 808-817
33. **Miguel-Cruz A**, Cameron Barr, and Castilla Casado, N. (2008). Evaluación de las solicitudes de mantenimiento correctivo usando técnicas de agrupamiento y reglas de asociación, *Revista Ingeniería Biomédica*, 2 (3): 65-76.
34. **Miguel-Cruz, A;** Barr, C. and Moreno, J. L. (2008). A new method based on fuzzy-logic to evaluate the contract service provider performance. *Journal of Medical Engineering & Technology*. 32(4):305-14.
35. **Miguel-Cruz A**, Rodríguez Denis E, And Cameron Barr. (2007). Offering Integrated Medical Equipment Management in an Application Service Provider, *Biomedical Instrumentation and Technology*. 41 (4) (November/December): 479-90.
36. **Miguel-Cruz A;** and Barr Cameron. (2007). Improving Corrective Maintenance Efficiency in clinical engineering departments. *IEEE Engineering in Medicine and Biology Magazine*, 26 (3): 60-5.

37. **Miguel-Cruz A.** (2006). A neural-network-based model for the removal of biomedical equipment from a hospital inventory. *Journal of Clinical Engineering*. 31 (3): 140-144.
38. **Miguel-Cruz A;** and Rodriguez Denis, E. (2005). A fuzzy inference system to evaluate the contract service provider performance. *Biomedical Instrumentation and Technology*. 39(4):320-5
39. **Miguel-Cruz A;** Rodriguez Denis, E, Sanchez Villar, and Mc, and Ileana, I. (2003). Measured effects of user and clinical engineering training using a queuing model. *Biomedical Instrumentation and Technology*. 37 (6): 405-21
40. **Miguel-Cruz A;** Rodriguez Denis, E, Sanchez Villar, MA, and Manuel Luis. (2002.). An event-tree-based mathematical formula for the removal of biomedical equipment from a hospital inventory. *Journal of Clinical Engineering*. 27 (1): 63–71
41. **Miguel-Cruz A;** Rodriguez Denis, E, Sanchez Villar. (2002). Management of Service Contracts Using an Independent Service Provider (ISP) as Support Technology. *Journal of Clinical Engineering*. 27 (3): 202–209.

*In review*

*Note: Students under Antonio Miguel-Cruz's mentorship are underlined.*

1. Liu, L., Ríos Rincón, A.M., Esmail, S., Taylor, E., **Miguel-Cruz, A.** (2017) (*In preparation*). Students' acceptance of mobile information and communication technologies for learning in an occupational therapy masters in science program. *Computers & Education*.

## **Books**

1. Miguel-Cruz, Antonio. *Gestión Tecnológica Hospitalaria. Un enfoque Sistémico*. Editorial: Universidad del Rosario. Colección de Textos de Ciencias de la Salud. ISBN: 978-958-738-094-1. Bogotá. Colombia. 2010

## **Book chapters**

1. Liu, L, **Miguel-Cruz, A**, Ríos Rincón, A.M. (2019). Technology acceptance, adoption, and usability: Arriving at consistent terminologies and measurement approaches In: *Everyday Technologies in Healthcare*. CRC. Taylor and Francys Groups
2. **Miguel-Cruz, A;** Cameron Barr. The ASP technology in the healthcare environment. In: K. BALI, DR. RAJEEV; ASHISH DWIVEDI, DR. (Org.). "Healthcare Knowledge Management: Issues, Advances and Successes". New York, 2007.
3. **Miguel-Cruz, A,** & Gomez, AI. Ingeniería Biomédica, biotecnología y bioingeniería. En: *Educación médica: diseño e implementación de un currículo basado en resultados del aprendizaje*: Universidad del Rosario. P 47-56. Bogotá. Colombia. 2012

## **Technical reports**

1. **Miguel Cruz, A**, Rios Rincon, AM, Liu, L. (2020). The effects of a powered and automated cargo management system on the biomechanical variables of workers during

ladder lifting tasks: A pilot study. Mitacs. University of Alberta. Canada

2. Lili Liu, **Miguel-Cruz, A**, Ríos Rincón, A.M, Daum, C. (2018). The Utility of Melatonin Interventions in PTSD”, STATEMENT OF WORK -Task Authorization – 43 (CIMVHR)
3. **Miguel-Cruz, A**, Aya, PA. Determination of the degree of the technology readiness level "Electronic Smart Pillbox". A Systematic Review of Literature. Universidad del Rosario
4. Peyman Azad Khaneghah, MSc, Pamela Bentley, PhD, Martin Ferguson-Pell, PhD, Lili Liu, PhD, Yasir Malik, PhD, **Miguel-Cruz, A** PhD, Adriana Rios Rincon, PhD, Eleni Stroulia, PhD. Monitoring of patients with type 2 diabetes. Study of the telus personal health record as a monitoring tool for chronic disease management. Phase 2E Final Report. April 15, 2015
5. Juzwishin,D; Liu, L, Raadik-Ruptash, T; Barnard, S; **Miguel-Cruz, A**; Rabel, K, Greenhough, C; Mills, J; Nabuurs, K, Matichett, T; Azad Khaneghah, T, Arora, P Usability of locator technology among home care clients at risk for wandering. 2015
6. Liu, L; **Miguel-Cruz, A**; Buttar, V; Quenting, R; Goertzen, D.2012 Clinical Research Grant Glenrose Rehabilitation Hospital Foundation. What factors determine therapists' acceptance of new rehabilitation technologies – a study using the Unified Theory of Acceptance and Use of Technology (UTAUT)
7. **Miguel-Cruz, A**, Rios-Rincon AM. What factors are associated with the provision of Assistive Technologies: The Bogotá D.C. Case. Universidad del Rosario Call-2012 (FIUR)
8. **Miguel-Cruz, A**. Measuring the Performance of Maintenance Service Outsourcing using Data mining technique. COLCIENCIAS Health Call Conv 449

#### Peer Reviewed Conference Proceedings – 4 or more pages

*Note: Presenter is indicated with \* and students under Miguel-Cruz's mentorship or supervision are underlined.*

1. Adriana Rios-Rincon, Lili Liu, Christine Daum, Antonio Miguel-Cruz, Eleni Stroulia. Impact of playing a mobile word search game on cognitive function, engagement and mood of an older adult with dementia. Conference Paper. June 24-28 RESNA 2019. Toronto. Canada
2. Golestan, S\*, Diaz-Romero, D., **Miguel-Cruz, A.**, Liu, L., & Stroulia, E. (2019). Sensor-enabled Functional-Mobility Assessment. IEEE 5th World Forum on Internet of Things (pp. 1-8). 15-18 April. Limerick, Ireland: IEEE
3. **Miguel Cruz A**; Sarmiento Rojas, JS; Aya Parra, PA; Quiroga-Torres, DA; and Amador Arevalo, DA. (2018). Design and implementation of an Internet of things (IoT) architecture for the acquisition of relevant variables in the study of failures in medical equipment: a case study. International Conference on Industrial Internet of Things and Smart Manufacturing. 5-6 September 2018 in Imperial College London, London, United Kingdom.
4. Quiroga-Torres D.A.\*, Lara J.S., **Miguel-Cruz A.**, Ríos-Rincón A.M. (2019). Prototype

- Measurement System for the Eye-Hand Coordination Test of the Developmental Test of Visual Perception. In: Lhotska L., Sukupova L., Lacković I., Ibbott G. (eds) World Congress on Medical Physics and Biomedical Engineering 2018. IFMBE Proceedings, vol 68/1. Springer, Singapore
5. **Miguel – Cruz\***, A, Aya Parra, P.A, Camelo Ocampo, A.F, Plata Guao,V.S, Correal, H, Córdoba Hernández, N.P, Núñez Cruz, N.C, Sarmiento Rojas, J.S, Rodríguez-Dueñas, W.R., Quiroga Torres, D.A. (2019) Using the Monte Carlo Stochastic Method to Determine the Optimal Maintenance Frequency of Medical Devices in Real Contexts. In: Lhotska L., Sukupova L., Lacković I., Ibbott G. (eds) World Congress on Medical Physics and Biomedical Engineering 2018. IFMBE Proceedings, vol 68/3. Springer, Singapore.
  6. **Miguel – Cruz\***, A, Aya Parra, P.A, Camelo Ocampo, A.F, Plata Guao,V.S, Correal, H, Núñez Cruz, N.C, Sarmiento Rojas, J.S, Quiroga Torres, D.A, Rodríguez-Dueñas, W.R. (2019). Using Data Mining Techniques to Determine Whether to Outsource Medical Equipment Maintenance Tasks in Real Contexts. In: Lhotska L., Sukupova L., Lacković I., Ibbott G. (eds) World Congress on Medical Physics and Biomedical Engineering 2018. IFMBE Proceedings, vol 68/3. Springer, Singapore
  7. Aya Parra, PA, Bohorquez, AF, and **Miguel-Cruz, A\*** ¿Qué dice la literatura sobre el uso de pastilleros electrónicos para adultos mayores? (2017). IBERDISCAP 2017. Nov 22-24, 2017. Bogotá, Colombia.
  8. Ríos Rincón\*, AM, Morales, GL, Ortega, MA, Puerta, MC, Rodríguez Dueñas, WR, Quiroga Torres, DA, and **Miguel-Cruz, A**. Virtual reality, serious games and socially assistive robotics. (2017). IBERDISCAP 2017. Nov 22-24, 2017. Bogotá, Colombia.
  9. **Miguel-Cruz, A\***, Díaz Romero, D.J, Stroulia, E, Rios Rincon, AM, and Liu, L. Juegos Serios como Herramienta para Valoración e Intervención de la Función Cognitiva en Adultos Mayores con Demencia. (2017). IBERDISCAP 2017. Nov 22-24, 2017. Bogotá, Colombia.
  10. Sanabria Solano\*, A.J, **Miguel-Cruz, A**, and Rios Rincon, AM. Intervenciones tecnológicas para el merodeo en pacientes con Alzheimer: una revision sistematica de la literatura. (2017). IBERDISCAP 2017. Nov 22-24, 2017. Bogotá, Colombia.
  11. **Miguel-Cruz, A\***, Rios-Rincon, AM, Rodríguez-Dueñas, WR, Flores-Luna, N, Quiroga-Torres, DA Does the project-based-learning (PBL) strategy change freshman students' perceptions of the engineering profession? (2017). The 7th Research in Engineering Education Symposium. Bogota. Colombia. Jul 6-8, 2017
  12. **Miguel-Cruz, A\***, Rios-Rincon, AM, Rodríguez-Dueñas, WR, Quiroga-Torres, DA. Mapping the motivation of biomedical engineering students: A cross-sectional study. (2017). The 7th Research in Engineering Education Symposium (REES). Bogota. Colombia. Jul 6-8, 2017
  13. **Miguel-Cruz\***, A, Quiroga Torrez, DA, Rodriguez Dueñas, WR, and Rios Rincón, AM. Medición del rendimiento un estudio piloto: ¿Qué dicen los estudiantes, los empleadores, las notas, y las pruebas estatales sobre los resultados de aprendizaje de los estudiantes. (2017). Encuentro Internacional de Educación en Ingeniería (EIEI). ACOFI 2017. 26 al 29 de septiembre de 2017 Cartagena de Indias, Colombia.

14. **Miguel-Cruz, A\***, Rodríguez, W.R, Florez Luna, N, and Quiroga Torres D.A Does the project-based-learning (PBL) strategy change first-year students' perceptions of the engineering profession? (2017, July 6-8). The 7th Research in Engineering Education Symposium. Bogota, Colombia
15. Rodríguez, W.R.\*, Ríos Rincon, A.M., **Miguel-Cruz, A.**, (2016, October 26-28). *How Can Biomedical Engineering and Health Science Students Learn Together?* Oral presentation at the VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia. I. Torres et al. (eds.), Springer Nature Singapore, p 50 – 54. DO I: 10.1007/978-981-10-4086-3\_13. 2016.
16. **Miguel-Cruz, A\***, Quiroga Torres D.A., Presiga A.M., Flórez Luna N. (2017) How do our students learn clinical engineering? A pilot study. In: Torres I., Bustamante J., Sierra D. (eds) VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016. IFMBE Proceedings, vol 60. Pp 22-25. Springer, Singapore
17. Quiroga Torres D.A\*, Presiga A.M., Flórez Luna N, **Miguel-Cruz, A.** (2017) Teaching maintenance of medical devices in simulation centers: a pilot study. In: Torres I., Bustamante J., Sierra D. (eds) VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016. IFMBE Proceedings, vol 60. Pp 30-33. Springer, Singapore
18. **Miguel-Cruz, A\***, Rodriguez Dueñas W.R. (2017) Estimation of the optimal maintenance frequency of medical devices: A Monte Carlo simulation approach. In: Torres I., Bustamante J., Sierra D. (eds) VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016. IFMBE Proceedings, vol 60. 9-12. Springer, Singapore
19. Ríos Rincón, A.M., Quiroga Torres, D.A., Castellanos, J., Gómez Medina, M.F., **Miguel Cruz, A.**, Rodríguez\*, W.R. (2015, June 7-12). *Testing a mobile robot toy for children with disabilities*. World Biomedical Engineering and Medical Physics. World. IFMBE Proceedings Volume 51, 2015, pp 1163-1166 Toronto. Canada.
20. Liu, L.\*, Esmail, S., Taylor, E., Ríos Rincón, A.M., **Miguel-Cruz, A.** (2015, October 11-16). Health Professional Students' Acceptance of Mobile Information Communication Technologies for Learning - a Study Using the Unified Theory of Acceptance and Use of Technology (UTAUT). ICCGI 2015: The Tenth International Multi-Conference on Computing in the Global Information Technology. St. Julians, Malta. pp, 108-113.
21. Rios, A.\*, **Miguel-Cruz, A.**, Guarín, M., Caycedo, P., Vargas, M.C. (June 20-24, 2013.). *What factors influence the assistive technologies provision service in a developing country: The Bogota case*. Oral presentation at the RESNA Annual Conference. Bellevue, WA. USA
22. **Miguel-Cruz, A**, Usaqué Perilla Sandra\*, And Vanegas Pabón Nidia Nelly. Aplicación del Modelo de Cox para Estimar el Desempeño de Proveedores de Servicio de Mantenimiento. IFMBE Proceedings 33 IFMBE, pp. 555-558. 2013. V Congreso Latinoamericano de Ingeniería Biomédica (CLAIB2011)

23. Rodriguez Denis, E\*; **Miguel-Cruz, A**; Caridad Sanchez, Maria. A new proposal of quality indicators for clinical engineering. In: 25th Annual International Conference of the IEEE Engineering In Medicine and Biology Society, 2003, Cancun. IEEE Engineering in Medicine and Biology Society. ISBN: 0-7803-7790-7. 2003.
24. **Miguel-Cruz\*, A**; Rodriguez Denis, Ernesto; Caridad Sanchez, Maria SV. A proposal of standardization to calculate count, turnaround and response time of work orders and their application in a queuing model. In: 25th Annual International Conference of the IEEE Engineering In Medicine and Biology Society, 2003, Cancun. IEEE Engineering in Medicine and Biology Society. ISBN: 0-7803-7790-7. 2003.
25. Torres Limia A, **Miguel-Cruz\*, A**; Rodriguez Denis, E; Caridad Sanchez, M. In: 25th Annual International Conference of the IEEE Engineering In Medicine and Biology Society, 2003, Cancun. IEEE Engineering in Medicine and Biology Society. ISBN: 0-7803-7790-7. 2003.
26. Ríos Rincón, A.M., Quiroga Torres, D.A., Castellanos, J., Gómez Medina, M.F., **Miguel-Cruz, A**. Rodríguez\*, W.R. (2015, June 7-12). Testing a mobile robot toy for children with disabilities. World Biomedical Engineering and Medical Physics. World. IFMBE Proceedings Volume 51, 2015, pp 1163-1166 Toronto. Canada.

#### Peer Reviewed Conference Proceedings – Short abstracts

*Note: Presenter is indicated with \* and students under Miguel-Cruz's mentorship or supervision are underlined.*

1. **Miguel Cruz, A**, Daum, C, Neubauer, N, Comeau, A, Guevera, J, Liu, L. Usability of information and communication technologies for dementia: A Systematic Literature Review. (2020). 2020 CADTH Symposium at the Sheraton Centre in Toronto, ON
2. P. Azad-Khaneghah\*, **A. Miguel Cruz**, E. Stroulia, S. King, M. Sayed, L. Liu. A mobile app for unlicensed support personnel who care for older adults with dementia. Gerontechnology 2020;19(Suppl.):<page>. The 12th World Conference of Gerontechnology. Trondheim, Norway. May 18-20
3. Murphy, J\*, Chohan, A, Liu, L, Rios Rincon, AM, **Miguel Cruz, A**. (2020). Worker acceptance and usability of a new cargo management system. CAOT Conference 2020. May 6-9. Saskatoon, SK, Canada.
4. **Miguel Cruz, A\***. Roxburgh, N, Liu, L, Guevara, J, Brintnell, S. (2020). Effectiveness of rehabilitation service for veterans of the Canadian Armed Forces. CAOT Conference 2020. May 6-9. Saskatoon, SK, Canada.
5. Liu, L, Ferworn, A, **Miguel Cruz, A**, Neubauer, N, Hanna, D, Daum, C. (2019). Technologies for assessment and management of wayfinding risks for persons living with dementia in their communities (Poster Presentation) AGE-WELL's 5th Annual Conference. October 22 - October 24. Moncton, New Brunswick

6. Stroulia, E, Ríos Rincón, A, **Miguel-Cruz, A**, Daum, Ch, Liu, L. (2019). An Open Platform of Serious Games for Cognitive Assessment and Intervention. (Poster Presentation) AGE-WELL's 5th Annual Conference. October 22 - October 24. Moncton, New Brunswick
7. Rios-Rincon, A\*, **Miguel-Cruz, A**, Liu, L, Daum, C, Capeland, H, Stroulia, E. Assessing mood, engagement and cognitive functions in a tablet-based game for older adults with and without cognitive impairment: a single-case design. (Oral Presentation). AGE-WELL's 5th Annual Conference. October 22 - October 24. Moncton, New Brunswick
8. Rios-Rincon, A\*, **Miguel-Cruz, A**, Cimolini, M, Suly, D, and Dziwenko, G. 2019. The effects of playing the Glenrose Grocery Game on the specific mental functions and functioning in inpatient older adults: preliminary results of a feasibility study. (Oral Presentation). AGE-WELL's 5th Annual Conference. October 22 - October 24. Moncton, New Brunswick
9. Wickins A\*, Daum, Ch, Rios-Rincon, A, **Miguel-Cruz, A**, Liu, L. Poster presentation. Flow in older adults: observations as an alternative to self-report. Canadian Association of Occupational Therapists conference in Niagara Falls May 31, 2019.
10. Liu, L; Ríos-Rincón, A; Daum, C; **Miguel-Cruz, A**; Neubauer, N. Digital storytelling and older adults with dementia: A systematic literature review. AGE-WELL's 4th Annual Conference. Innovation in Action. October 16-18, 2018. Vancouver, British Columbia
11. Liu, L; Ríos-Rincón, AM; Daum, C; **Miguel-Cruz, A**; Stroulia, E. Computer games for older adults – engagement as an outcome. AGE-WELL's 4th Annual Conference. Innovation in Action. October 16-18, 2018. Vancouver, British Columbia
12. Stroulia, E, Ríos-Rincón, A\*, Daum, Ch, **Miguel-Cruz, A**, Chelsea Altura, K, Pertschy, D, Liu, L. Promoting engagement in playing serious games in older adults: a usability study. Oral presentation at the 47th Annual Scientific and Educational Meeting of the CAG. Saturday, October 20, 2018. Vancouver, British Columbia.
13. Liu, L, Ríos-Rincón, A\*, Daum, Ch, **Miguel-Cruz, A**, Chelsea Altura, K, Stroulia, E. Two measures of engagement developed for older adults living with dementia. Symposium presentation (What does engagement in dementia look like?) at the 47th Annual Scientific and Educational Meeting of the CAG. Saturday, October 20, 2018. Vancouver, British Columbia.
14. Stroulia, E, Daum, Ch, Pertschy, D, Ríos-Rincón, A\*, **Miguel-Cruz, A**, Liu, L. Designing serious games to cognitive maintenance in older adults: qualitative findings. Poster presentation at the 47th Annual Scientific and Educational Meeting of the CAG. Friday, October 19, 2018. Vancouver, British Columbia.
15. Gomez Medina, MF\*, Castellanos, J, Rios-Rincon, A, **Miguel – Cruz**, Adams, K. Testing a low cost mobile robot using inclination and switch interfaces to support play in children with physical disabilities. RESNA Conference. July 13 - 15, 2018. Hyatt Regency Arlington, VA
16. Daum, C\*. Rios-Rincon, A, **Miguel-Cruz, A**, Pertschy, D, Altura, Ch, Guana, V, Stroulia, E, Liu, L. (2018). Computer games for older adults: Findings of a usability study. Poster presented at the CAOT Conference. Jun 23-29, 2018. Vancouver, British Columbia. Canada

17. Christine Daum, Adriana Rios-Rincón, Antonio Miguel-Cruz, Danielle Pertschy, Chelsea Altura, Victor Guana, Eleni Stroulia, Lili Liu. (22 June, 2018). Computer games for older adults: Findings of a usability study (Podium presentation). Canadian Association of Occupational Therapists. Vancouver.
18. Ríos Rincón\*, A, **Miguel-Cruz, A**, Liu, L, and Stroulia, E. Engagement During Computer Serious Games: A rapid literature review. (2017). 46th Annual Scientific and Educational Meeting of the CAG. October 19-21, 2017. Winnipeg, Manitoba. Canada
19. Díaz Romero, DJ, Stroulia, E, Liu, L\*, Ríos Rincón, A, **Miguel-Cruz, A**. Measuring emotions using Emotiv Epoc+ while playing serious games. (2017). 46th Annual Scientific and Educational Meeting of the CAG. October 19-21, 2017. Winnipeg, Manitoba. Canada
20. Ríos Rincón, A, **Miguel-Cruz, A**, Liu, L, and Stroulia, E. Engagement During Computer Serious Games: A rapid literature review. (2017) 46th Annual Scientific and Educational Meeting of the CAG. October 19-21, 2017. Winnipeg, Manitoba. Canada
21. Díaz Romero, DJ, Stroulia, E, Liu, L, Ríos Rincón, A\*, **Miguel-Cruz, A**. Measuring emotions using Emotiv Epoc+ while playing serious games. (2017). 46th Annual Scientific and Educational Meeting of the CAG. October 19-21, 2017. Winnipeg, Manitoba. Canada
22. Ríos Rincón, A.M.\*, **Miguel-Cruz, A.**, Liu, L. (2016). Digital storytelling with older adults: a literature review. Oral presentation at the CAG conference. October 18, 2016. Montreal. Canada.
23. **Ríos Rincón, A.M.\***, Miguel-Cruz, A., Liu, L. (2016). How digital storytelling is used among older adults: A systematic literature review. Poster presented at the Age-Well annual meeting. October 18, 2016. Montreal. Canada.
24. Lapierre, N.\*, Neubauer, N., **Miguel-Cruz, A.**, Ríos-Rincón, A., Liu, L., Rousseau, J. (2016). What is known about technologies to detect falls? A scoping review. Poster presented at the CAG conference. October 18, 2016. Montreal. Canada.
25. Neubauer, N.\*, Lapierre, N., **Miguel-Cruz, A.**, Ríos-Rincón, A., Rousseau, J., Liu, L. (2016). What do we know about technologies for wandering? A Scoping Review. Poster presented at the CAG conference. October 18, 2016. Montreal. Canada.
26. Liu, L., Ríos Rincón, A.M.\*, Esmail, S., Taylor, E., **Miguel-Cruz, A**. (2016). Usability of mobile technologies in an occupational therapy program. Presented at the Canadian Association of Occupational Therapists National Conference. April 19-22, Banff, AB. Canada.
27. L. Liu\*, D. Juzwishin, **A. Miguel-Cruz**, T. Ruptash. (2016). GPS devices for dementia clients: Ethical considerations. The 10th World Conference of Gerontechnology. September 28-30, Nice, France,
28. Liu L\*, Juzwishin J, Rutash, T., **Miguel-Cruz, A**. (2016). Can Global positioning system (GPS) devices help people with dementia stay in the community and give their caregivers peace of mind? 10th World Conference on Gerontology. September 18-21. Nice, France

29. Liu, L\*, **Miguel-Cruz, A**, Barnard, S, Juzwishin, D, Ruptash, T. (2016). Wearable GPS devices for dementia clients: A usability study. (2016). CAOT Conference. 2016. April 19-22, Banff, AB. Canada.
30. Liu, L\*, Ríos Rincón, A.M, Esmail, S, Taylor, L, **Miguel-Cruz, A**. (2016). Usability of mobile technologies in an occupational therapy program CAOT Conference. 2016. April 19-22, Banff, AB. Canada.
31. Ruptash, T\*, Barnard, S, Liu, L, **Miguel-Cruz, A**, Juzwishin, D, Aloisio, B. (2015). GPS Technology-Guiding us Home: enhancing the lives of clients with dementia and their family caregivers with GPS technology. 44th Annual Scientific and Educational Meeting, Canadian Association on Gerontology. October 23-25, 2015. Calgary, Alberta. Canada
32. Liu, L\*, **Miguel-Cruz, A**, Ruptash, T, Barnard, S, Juzwishin, D. (2015). Caregivers as proxy for responses of dementia clients in a technology acceptance study. 44th Annual Scientific and Educational Meeting, Canadian Association on Gerontology. October 23-25, 2015. Calgary, Alberta. Canada.
33. **Miguel-Cruz\***, Liu, L, Ruptash, T, Barnard, S, Juzwishin, D. (2015). What factors affect acceptance of global positioning system (GPS) technology among dementia clients and their caregivers? 44th Annual Scientific and Educational Meeting, Canadian Association on Gerontology. October 23-25, 2015. Calgary, Alberta. Canada.
34. Liu, L., Strolia, E., Nikolaidis, I., **Miguel-Cruz, A.**, Ríos Rincón, A.\* (2015). Smart homes and home health monitoring technologies for older adults: A systematic review. CAG Conference. October 23-25, 2015. Calgary, Alberta. Canada.
35. Liu, L. Tracy Raadik-Ruptash, **Antonio Miguel-Cruz. (2015)**. Usability of GPS technology to support people with dementia living in the community: client and caregiver experiences. e-Health Making Connections. May 31-Jun 3. Toronto. Canada
36. Khaneghah, PA\*, **Miguel-Cruz, A.**, Bentley, P., Liu, L., Stroulia, E, and Ferguson-Pell, M. (2015). Usability Evaluation of Online Personal Health Records in Monitoring and Management of Patients with Type II Diabetes. e-Health Making Connections. May 31-Jun 3.
37. Ríos Rincon, A.\* , Quiroga Torres, D.A., Castellanos, J., Gómez Medina, M.F., **Miguel-Cruz, A.**, **Rodríguez, W.R.** (2015). Design of a Robot for Play in Children with Disabilities. Oral presentation at the International Workshop on Assistive Technology. February 2-6, 2015. Vitoria, Brazil.
38. Liu, L.\* , **Miguel-Cruz, A.**, Ríos Rincón, **A.**, Buttar, V., Ranson, Q., Goertzen, D. (2014) Acceptance of new technologies by rehabilitation therapists. Oral presentation at the WFOT 2014. June 18-21, 2014, Yokohama, Japan.

## KNOWLEDGE TRANSLATION

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1. Hadjistavropoulos, T, Liu, L , Stroulia, E , Taati, B , Chignell, M , Moussavi, Z , Knoefel, F , Venkataramanan, V , Neubauer, N, Rios-Rincon, A, Miguel-Cruz, A , Daum, Ch, Fernandez,

- V, Gallant, N , Browne, E, (2019). Improving older adults' quality of life through user-friendly advanced technologies: An epic knowledge translation event, 29, 7.
2. **Regina Brain Awareness Week 2018.** Public, rapid fire presentations during Regina Brain Awareness Week. Antonio Miguel Cruz - The Smart Condo™ Platform for Observing and Measuring Activities of Daily Living
  3. **Regina Brain Awareness Week 2018.** Antonio Miguel Cruz - The Smart Condo™ Platform for Observing and Measuring Activities of Daily Living. Technology demonstrations as a part of Regina Brain Awareness Week. Presented the following demonstrations to older adults, care partners, health service providers, health administrators and members of the general public at Wascana Rehabilitation Centre.
  4. **Workshop at IBERDISCAP 2017.** Selecting, designing and experimenting with robots for free play interventions with children with disabilities. Rios-Rincon, A, **Miguel-Cruz, A**, Rodriguez Duenas, W.R, Quiroga-Torres, D.A.
  5. **Workshop at RESNA Conference 2017.** Aging Track: Rios-Rincon, A, **Miguel-Cruz, A**, Wilkinson, A. Computer-Based Assessments and Interventions for Cognitive Health. June 26-30, 2017 at the Hilton Riverside in New Orleans, LA
  6. **Workshop at ACOFI Conference 2017. Cartagena de Indias, Colombia. Miguel-Cruz, A**, Rodriguez-Cheu, L.E, Cifuentes, C. Impact and social commitment of Biomedical Engineering in Colombia. September 28, 2017

#### BROADCAST INTERVIEWS & MEDIA (recent selected list)

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March 14-15, 2019	Improving Older Adults' lives through user-friendly advance technologies <a href="https://www.youtube.com/watch?v=LGo7bw8VXTQ&amp;feature=youtu.be">https://www.youtube.com/watch?v=LGo7bw8VXTQ&amp;feature=youtu.be</a>
May 2018	A GPS THAT GIVES ALZHEIMER'S PATIENTS AUTONOMY. (2017). Divulgación Científica ISSN: 2590 - 924X <a href="https://revistas.urosario.edu.co/index.php/RDC/article/view/6661/5766">https://revistas.urosario.edu.co/index.php/RDC/article/view/6661/5766</a>
August 2017	Antonio Miguel Cruz, new assistant professor at the University of Alberta. <a href="http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Antonio-Miguel-Cruz-nuevo-profesor-adjunto-de-la/">http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Antonio-Miguel-Cruz-nuevo-profesor-adjunto-de-la/</a> Accessed: December 12, 2017
December 2017	Rosaristas immersed in the knowledge of biomaterials. Nova et vetera. <a href="http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Salud/Rosaristas-inmersos-en-el-conocimiento-de-los-biom/">http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Salud/Rosaristas-inmersos-en-el-conocimiento-de-los-biom/</a> Accessed: December 12, 2017
July 2016	Rosarista student got a scholarship from the University of Alberta. <a href="http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Estudiante-Rosarista-becado-por-la-Universidad-de/?page=1">http://www.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Estudiante-Rosarista-becado-por-la-Universidad-de/?page=1</a> Accessed: December 12, 2017
September 2016	UR Biomedical Engineering on the top of the biomedical engineering programs of the country [Colombia]. <a href="http://summerschool.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Ingenieria-Biomedica-UR-en-el-top-del-pais/">http://summerschool.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/Ingenieria-Biomedica-UR-en-el-top-del-pais/</a> Accessed: December 12, 2017
November 2016	Erasmus + scholarships for the Biomedical Engineering program. <a href="http://summerschool.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-">http://summerschool.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-</a>

- [Rosarista/Becas-Erasmus-del-programa-de-Ingenieria-Biomedica/](#)  
Accessed: December 12, 2017
- July 2015 Anecdotes On the teacher's day. <http://summerschool.urosario.edu.co/Periodico-Nova-Et-Vetera/Actualidad-Rosarista/En-el-dia-del-profesor,-anecdotes-de-estudio/>  
Accessed: December 12, 2017
- April, 2011 Nuclear power plants. <http://unradio.unal.edu.co/nc/detalle/cat/el-coloquio/article/antonio-miguel-cruz//page/1.html>  
Accessed: December 12, 2017

## SUPERVISION THESIS AND MENTORING ACTIVITIES

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### PhD

1. Supervisor (With Co supervisor PhD Adriana Maria Rios Rincon.). Alfredo José Sanabria Solano. Biomedical Sciences PhD Program. Universidad del Rosario. Design and development of an ubiquitous system for monitoring of wandering in people with dementia. 2016- *in progress*.
2. Mentoring Ph.D. Student Noelannah Neubauer. PhD Rehabilitation Science, University of Alberta). 2016- *in progress*.
3. Mentoring Ph.D. Student Nolwenn Lapierre (University of Montreal under the AGE-WELL Network). 2016- *in progress*.
4. Mentoring Ph.D. Student Noelannah Neubauer. PhD Rehabilitation Science, University of Alberta). 2016- *in progress*.

### Masters

1. Capstone project. Supervisor (Co-supervisors: Lili Liu, Adriana Ríos Rincón. Professor). Jessica Murphy. Effects of a powered and automated cargo management system on the biomechanical variables of workers during ladder lifting tasks: A pilot study. 2018- 2019 *in progress*.
2. Capstone project. Co-supervisor (Supervisor: Lili Liu, Co-supervisor, Adriana Ríos Rincón. Professor). Emily Wood. Usability of LaceUp, a foot stool that facilitates optimum body posture when putting on footwear: Perspectives of occupational therapists. 2018- 2019 *in progress*.
3. Thesis. Co-supervisor (Supervisor: Adriana Ríos Rincón. Profesor, Co-supervisor William Ricardo). Diana Carolina Rincón. Correlation between Flow state Scale and EEG signals during playing serious game. 2018- *in progress*.
4. Thesis. Supervisor. (With Co supervisor PhD Adriana Maria Rios Rincon, and Sandra Forero). Laura Catalina Izquierdo Martínez. Usability of new technologies in rehabilitation. Master in Rehabilitation Sciences Program. Universidad del Rosario. 2018- *in progress*.
5. Thesis. Supervisor. (With Co supervisor PhD Adriana Maria Rios Rincon.). Daniel Alejandro Quiroga. Master in Rehabilitation Sciences Program. Universidad del Rosario. 2018- *in progress*.

6. Thesis. Co-Supervisor (With supervisor PhD Adriana Maria Rios Rincon.). Arbelaez-Huerta, F. Master in Rehabilitation Sciences Program. Universidad del Rosario. 2018- *in progress*.
7. Thesis. Co-Supervisor (With supervisor PhD Adriana Maria Rios Rincon.). Laura Camila Osorio. Master in Epidemiology. Universidad del Rosario. 2017- *in progress*
8. Mentoring Master Student. Pranshu Arora. Reliability and validity of the Hindi version of Falls Efficacy Scale – International (FES-I) among older adults. Master Science in Occupation Therapy. University of Alberta. Edmonton, Canada.
9. Master degree dissertation: Gonzalez Didier. (2004). Design and development of a prototype of electrical safety analyzer. Higher Technical Institute “Jose Antonio Echeverria” (ISPJAE). La Habana, Cuba
10. Master degree dissertation: Gonzales Ariel and Limia Torrez ALEJANDRO. (2008). Design and Development of an Intelligent algorithm for preventive maintenance schedule. Higher Technical Institute “Jose Antonio Echeverria” (ISPJAE). La Habana, Cuba
11. Master degree dissertation: Valdez Reiner and Gipsy Chaviano (2008). Design and Development of an module for the management of work orders for maintenance a computerized maintenance system. Higher Technical Institute “Jose Antonio Echeverria” (ISPJAE). La Habana, Cuba
12. Master degree dissertation: Ferro Damile. (2003). Electrical safety analyzer design. Higher Technical Institute “Jose Antonio Echeverria” (ISPJAE). La Habana, Cuba

#### **Committee Member for PhD and MSc Theses**

1. Antonio Ricardo Gonzalez (2018). Identification of a radiologically compatible structure with glioblastoma multiforme, IDC-CO 9440/3, WHO grade iv, in magnetic resonance by means of a multivariable space classification model with self-organized kohonen maps (PhD Engineering, *candidacy examiner*)
2. Orlando Harker Sánchez (2018). Model of retinal blood irrigation for early detection of pathological stages of diabetic retinopathy. (PhD Engineering, *candidacy examiner*)
3. Antonio Ricardo González (2017). Multivariable classification model for the identification of the halo sign in computed tomography. (PhD Engineering, *candidacy examiner*)

#### **Undergraduate**

##### **BSc in Biomedical Engineering. Universidad del Rosario**

1. Thesis. Paula Lorena Molina Cuevas. Design of a model of PIPELINE OF TECHNOLOGY: FOCUS CARDIOVASCULAR. Research Internship at the Cardioinfantil Hospital. Bogota. Colombia. 2018
2. Thesis. David Alejandro Amador Arévalo. Measurement of environmental variables in a hospital area using the Internet of Things (IoT). Department of Clinical Engineering of Mederi Hospital. Research Internship at the Mederi Hospital. Bogota. Colombia. 2018

3. Thesis. Andrés Felipe Camelo Ocampo. Evaluation of Maintenance Performance in the Department of Clinical Engineering of Mederi Hospital. Research Internship at the Mederi Hospital. Bogota. Colombia. 2017
4. Thesis. Viena Sofia Plata. Evaluation of Maintenance Performance in the Department of Clinical Engineering of Mederi Hospital. Research Internship at the Mederi Hospital. Bogota. Colombia. 2017
5. Thesis. Co-Supervisor of Camilo Perafán (student at the Universidad del Rosario) - With Dr. Kim Adams (University of Alberta) and Dr. Adriana Maria Rios Rincon (Universidad del Rosario). Research Internship at the Assistive Technology Labs – University of Alberta. Brain-Computer Interface Based on Detection of User's Upper Limb Motion. 2017.
6. Internships Project. Co-Supervisor of Dillam Josue Díaz Romero (student at the Universidad del Rosario) - With Dr. Lili Liu and Dr. Eleni Stroulia (University of Alberta) and Dr. Adriana Maria Rios (Universidad del Rosario). Research Internship at the Department of Occupational Therapy and Department of Computing Science – University of Alberta. Assessing Engagement, Arousal and Valence using Electroencephalography. 2017.
7. Thesis. Nathalia Salazar Ramírez, Alexandra Marroquín Alonso, Vanessa Cuchía Bautista. Technical and financial evaluation of the structuring of a workshop in the electromedicine department. Bogota. Colombia. 2016
8. Thesis. Santiago José Cifuentes Suárez. Characterization of the electrical safety parameters of a population of ECG monitors and mechanical ventilators of a third level clinic. Bogota. Colombia. 2016
9. Internships project. Diaz Jaime Yeimy Melissa. Pipeline of the cardiovascular focus technology. Bogota. Colombia 2017.
10. Internships project. Gamba Salas Jaime Alejandro. Implementation of the general quality system and accreditation of medical metrology laboratory. Bogota. Colombia 2017
11. Thesis. Medina Nieto Martha Lorena. Synthesis and characterization of Hydroxyapatite doped with different ions. Bogota. Colombia 2017.
12. Internships project. Caycedo Amado Ruben Eduardo and Bathrobe Larrota Maria Alejandra. Response time assessment of maintenance service at fourth level hospital. Bogota. Colombia 2017.
13. Internships project. Dominguez King William Andres. Technical and financial evaluation for the acquisition of new biomedical technologies. Bogota. Colombia 2017.
14. Internships project. Linda Stephanie Feliciano Villalba. Failure modes and effects analysis (FMEA) in an Intensive Care Units. Bogota. Colombia 2017.
15. Internships project. Anyi Daniela Macías González. Oscar Danilo Pinzón Cadena. Failure modes and effects analysis (FMEA) of biomedical technology at the hospital Corporation Juan Ciudad. Bogota. Colombia 2018

## REVIEWER ROLES/SERVICE

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1. Referee in the National research contest: Otto de Greiff, Colombia (2017)
2. International Journal of Production Economics (2017)
3. Expert systems with application Journal (2017)
4. National Competition: Best Thesis Dissertation Otto de Greiff, Universidad Nacional, Bogota, Colombia, September 25, 2017
5. Referee in the National program of projects for the strengthening of research, creation and innovation in postgraduate programs. Universidad Nacional de Colombia, Bogota, Colombia (2015)
6. Occasional Reviewer European Journal of Operations Research (EJOR)
7. Occasional Reviewer BMC Medical Informatics and Decision Making
8. Occasional Reviewer Colloids and Surfaces B: Bio interfaces
9. Colciencias, Colombia. Research and Development Programs (2008, 2009, and 2010)
10. Colciencias, Colombia. Research and Development Bi-Centenario Program (2010)
11. Fulbright Scholarships Program (2010)
12. CITED Program European Community (2007 and 2010)
13. Doctoral Committee of Medicine School and Health Sciences
14. Ad-Hoc Committee for Cost Benefit analysis of Nuclear Magnetic Resonance acquisition process at Universidad del Rosario

## REFERENCES

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