

# Curriculum Vitae

Carlos Roberto Arias  
Associate Professor of Computer Science  
Chair of Computer Science Department  
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## EDUCATION

Theology Integration Fellows, Seattle Pacific Seminary, Seattle, WA, 2025

Ph.D. in Information Systems and Applications, National Tsing Hua University, Hsinchu, Taiwan, 2012  
Dissertation: *Network Based Disease Gene Prioritization*

M.S. in Computer Science, Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras, 2003,  
Instituto Tecnologico y de Estudios Superiores de Monterrey, Monterrey, Mexico, 2003  
Thesis: *Using Data Mining to Analyze Students' Enrollment in UNITEC*

B.S. Computer Science, Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras, 1999

## ACADEMIC EXPERIENCE

- Seattle Pacific University, Seattle, WA, USA
  - Associate Professor in Computer Science, Department of Engineering and Computer Science.
  - 9/2017 – 8/2022: Assistant Professor in Computer Science, Department of Engineering and Computer Science. Courses taught: UCOL 1000, CSC1130, CSC 1230, CSC 2330, CSC 2430, CSC 2431, CSC 3221, CSC 3310, CSC 3430, CSC 4210, CSC 4151, CSC 4152, CSC 4250, CSC 4410, CSC 4800. Independent studies and Projects: CSC 3221, CSC 3310, CSC 3430, CSC 4900, CSC 4930, CSC 4960
- Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras
  - 2012 – 2017: Research Professor, Computer Science Department
  - 2012 – 2017: Graduate School Professor, Graduate School
- Pacific American School, Hsinchu, Taiwan
  - 2011 – 2012: Computer and Math Teacher (High School and Middle School)
- National Tsing Hua University, Hsinchu, Taiwan
  - 2010 – 2011: Lecturer, Computer Science Department
  - 2007 – 2008: Lecturer, Foreign Languages Department
- Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras
  - 1999 – 2007: Full-time Lecturer, Computer Science Department

## ADMINISTRATIVE RESPONSIBILITIES

- 2019 – Present: Computer Science Chair, Seattle Pacific University, Seattle, WA
- 2018 – 2020: Computer Science Lab Manager, Seattle Pacific University, Seattle, WA
- 2015 – 2017: Director of Research, Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras
- 2004 – 2007: Chair of Computer Science Department, Universidad Tecnologica Centroamericana, Tegucigalpa, Honduras

- 1998 – 1999: Database and Development, Information Technology Innovators, Tegucigalpa, Honduras

### **INSTITUTIONAL SERVICE**

- Students for Life Club Advisor
- Third-year review committee and Chair for Andy Cameron
- Pre-Tenure Committee and Chair for Andy Cameron and Dennis Vickers 2024
- Pre-Tenure Committee for Yuri Rodrigues and Lin Liu 2024
- Promotion and Tenure Committee for Dung Nguyen
- Search Committee Member for:
  - ETM Associate Director 2022
  - Tenure Track Computer Science Assistant Professor 2018, 2019, 2020
  - Tenure Track Computer Engineering Assistant Professor 2019, 2020, 2021
  - Tenure Track Electrical Engineering Assistant Professor 2019, 2020
- Game Studio Summer Camp planning and execution (2019, 2021, 2022)
- Erickson Conference Committee (2018 – 2022)
- Admission's events support (Falcon Fridays, Urban Day, S.P.A.C.E., Interviewer for Distinguished Scholars)
- Support Admissions with Webinars and Welcome to ECS Meeting Summer 2020, 2021, 2022
- Support Admissions with New Student Advising 2019-2025
- Invited Speaker for Health School (2017, 2018): *Bionformatics for Health Professionals*
- Panelist for the Day of Common Learning: SPU 2020

### **SERVICE OUTSIDE OF SPU**

- Master Class Lecturer, UNITEC/Honduras 2024, 2025, 2026
- PhD Candidate Test Committee, UNITEC/Honduras, 2020, 2022, 2024
- "Café Científico" (Research Talk ~ Scientific Coffee), UNITEC/Honduras, June 2020
- Editors Committee Innovare Journal:  
<https://www.camjol.info/index.php/INNOVARE/about/editorialTeam>

### **CHURCH SERVICE**

- St. Elizabeth Ann Seton Parish (Bothell, WA)
  - English Lector Coordinator (2025 – present)
  - Mass Lector (2019 – present)
  - Sacramental Catechist (2018 – present)
  - Good Samaritan Ministry (2017 – 2018)
- St. Anne Parish (Seattle, WA)
  - Mass Lector (2017 – 2018)

### **RESEARCH**

- Research Assistant 2007 – 2012  
 Institute of Information Systems and Applications  
 National Tsing Hua University, Hsinchu, Taiwan  
*Worked with the bioinformatics team in the design and building of tools for the detection of cancer-related genes using bioinformatics tools. The research entailed studies of microarray data analysis, protein interaction networks, graph analysis, social network analysis, random walks, web services, and data integration.*

- Intern 2009  
FoxConn Optomechanical Research Facility  
Taipei, Taiwan  
*Worked on real-time hand and body movement detection.*

## CERTIFICATIONS OR PROFESSIONAL REGISTRATIONS

- Java Certified Programmer, SUN 2001

## CURRENT MEMBERSHIP IN ORGANIZATIONS

- Faith Perspectives on Artificial Intelligence Founder Member: <https://aiandfaith.org/>
- Innovare Journal Editorial Committee Member

## PUBLICATIONS

### Dissertation

**CR Arias**: Network Based Disease Gene Priorization, Ph.D. Dissertation, National Tsing Hua University, Hsinchu, Taiwan, 2012

### Refereed Journal Papers

Discua Cruz, A., Reyes Hernandez, J.M. and **Arias Arevalo, C.R.** **Mind the queue: understanding challenges of introducing e-government policies for entrepreneurs during Covid-19 in a Latin American country.** Information Technology & People, 2022

**Carlos Roberto Arias**, Jorge Antonio García, Alejandro Corpeño. **Population as Auditor of an Election Process in Honduras: The Case of the VotoSocial CrowdSourcing Platform.** Policy & Internet, 2015

**Carlos Roberto Arias**, Hsiang-Yuan Yeh, and Von-Wun Soo. **Biomarker identification for prostate cancer and lymph node metastasis from microarray data and protein interaction network using gene prioritization method.** The Scientific World Journal, 2012

Liang-Chun Chen, Hsiang-Yuan Yeh, Cheng-Yu Yeh, **Carlos Roberto Arias**, and Von-Wun Soo. **Identifying co-targets to fight drug resistance based on a random walk model.** BMC Systems Biology, 2012.

**Carlos Roberto Arias** and Von-Wun Soo. **Computing all pairs shortest paths on graphs with articulation points.** Journal of Computer Technology and Application, 2011.

Hsiang-Yuan Yeh, Cheng-Yu Yeh, **Carlos Roberto Arias**, and Von-Wun Soo. **Pathway detection from protein interaction networks corresponding to gene expression data using color-coding methods and a\* search algorithms.** The Scientific World Journal, 2011

### Book Chapters

**Carlos R. Arias** (2024). **Automated Mobility and Virtue.** In Elias Kruger & Brian Sigmon (Authors), Faithful AI: Stories of Hope from 2045.

**Carlos R. Arias** (2022). **An Introduction to Artificial Intelligence.** In M. J. Paulus & Langford, Michael D. (Eds.), AI, Faith, and the Future (pp. 15–51). Pickwick Publications.

Nadina Mazzoni Pizzati, **Carlos R. Arias**, and Allan Discua Cruz. Family Firms in Latin America, chapter **Popa Group: The International Presence of an Information Technology Family Business in Central America**. Routledge, New York, USA, 2018

**Carlos Roberto Arias**, Hsiang-Yuan Yeh, and Von-Wun Soo. Bioinformatics, chapter **Disease Gene Prioritization**. INTECH, Rijeka, Croatia, 2011.

Refereed Conference Proceedings

**Carlos R. Arias**, Reyna M. Duron, Antonio V. Delgado-Escueta: **Identification of New Epilepsy Syndromes using Machine Learning**. In: The proceeding of the 39th IEEE Central America and Panama Convention. (2019)

David Discua, **Carlos R. Arias**, Reyna M. Duron, Julia N. Bailey, Chris Patterson, Antonio V. Delgado-Escueta: **Implementation of a Global Online Platform with Microservices Architecture for Studies on Genetic Epilepsies**. In: The proceeding of the 39th IEEE Central America and Panama Convention. (2019)

Carlos Eduardo Morazan, **Carlos Roberto Arias**: **Using Technology to Enhance Class Participation**. In: The proceeding of the Fifteenth LACCEI Latin American Conference for Engineering and Technology. (2017)

**Carlos Roberto Arias**: **Facebook in Higher Education: The UNITEC Case**. In: The proceeding of the Thirteenth LACCEI Latin American Conference for Engineering and Technology. (2015)

**Carlos Roberto Arias**, Jorge Antonio García, José Evelio Serrano: **Evaluation of Social Public Policy: Department of Social Development in Honduras**. In: The proceeding of the First Conference on E-Democracy and E-Government. (2014)

**Carlos Roberto Arias**: **Biological Network Exploration Tool: BioNetXplorer**. In: The proceeding of the Twelfth LACCEI Latin American Conference for Engineering and Technology. (2014)

**Carlos Roberto Arias**, Jorge Antonio García, Alejandro Corpeño: **Population as Auditor of an Election Process in Honduras: VotoSocial**. In: The proceeding of IPP2014: Crowdsourcing for Politics and Policy. (2014)

**Carlos Roberto Arias**: **Implementation of Online Collaborative Learning using Wiki**. In: The proceeding of the Eleventh LACCEI Latin American Conference for Engineering and Technology. (2013)

Liu, H.C., **Arias, C.R.**, Soo, V.W.: **Bioir: An approach to public domain resource integration of human protein-protein interaction**. In: The proceeding of the Seventh Asia Pacific Bioinformatics Conference (2009)

Conferences Abstracts, Posters And Presentations

**Carlos R. Arias**, Ruth Ediger, Karen Park. **GeoQuizzes: from Transparency & Paper Based Geographic Quizzes to a Canvas Integrated Online Platform**. ETUG 25th Anniversary Conference 2019.

**Carlos R. Arias**, Ruth Ediger, Karen Park. **GeoQuizzes: from Transparency & Paper Based Geographic Quizzes to a Canvas Integrated Online Platform**. Council of Christian Colleges and Universities, Commission on Technology Conference 2019.

David Discua, Reyna M. Duron, Iris E. Martinez, Viet Huong Nguyen, Christopher Patterson, Julia N. Bailey, Miyabi Tanaka, Adriana Ochoa, Aurelio Jara Prado, Maria Elisa Alonso, Minerva López Ruiz, Marco T. Medina, Laura Guilhoto, Elsa Marcia Yacubian, René Silva, Evelyn Alvarez, **Carlos Arias**, Antonio V. Delgado-Escueta. **A New Database Platform for Clinical and Genetic Investigation of Epilepsies and the New ILAE Classification and JME genes**. Proceedings. Latin American Epilepsy Congress. Oct 2018.

Reyna M. Durón, **Carlos Arias**, Iris E. Martínez-Juárez, Christopher Patterson, Julia N. Bailey, Miyabi Tanaka, Adriana Ochoa, Aurelio Jara-Prado, María Elisa Alonso, Marco T. Medina, Viet-Huong Nguyen, Antonio V. Delgado-Escueta. **Analyzing Phenotypes using Artificial Intelligence Tools in Subgroups of Absence and Myoclonic Epilepsies**. Proceedings. Latin American Epilepsy Congress. Oct 2018.

David Discua, Reyna M. Duron, Iris E. Martinez, Viet Huong Nguyen, Christopher Patterson, Julia N. Bailey, Miyabi Tanaka, Adriana Ochoa, Aurelio Jara Prado, Maria Elisa Alonso, Minerva López Ruiz, Marco Medina, Laura Guilhoto, Elsa Marcia Yacubian, René Silva, **Carlos Arias**, Antonio V. Delgado-Escueta. **A New Database Platform for Clinical and Genetic Investigation of Epilepsies and the New ILAE Classification** (P2.261). Neurology Apr 2018, 90 (15 Supplement) P2.261.

Reyna M. Durón, **Carlos Arias**, Iris E. Martínez-Juárez, Christopher Patterson, Julia N. Bailey, Miyabi Tanaka, Adriana Ochoa, Aurelio Jara-Prado, María Elisa Alonso, Marco T. Medina, Viet-Huong Nguyen, Antonio V. Delgado-Escueta. **Analyzing Phenotypes Using Artificial Intelligence Tools in Subgroups of Absence and Myoclonic Epilepsies** (P2.344). Neurology Apr 2018, 90 (15 Supplement) P2.344.

#### **HONORS AND AWARDS**

- IEEE COPIMERA 2015 Keynote Speaker
- TEDx Speaker, Tegucigalpa 2015
- Professor of the Year, Computer Science Department, Universidad Tecnológica Centroamericana, 2013

#### **PEER REVIEW EXPERIENCE**

- Theology and Science
- Information Technology & People
- International Journal of Bioinformatics Research and Applications (IJBRA)
- Internet in Policy and Politics (IPP)
- LACCEI Latin American Conference for Engineering and Technology
- PeerJ Computer Science