



Canek Peláez Valdés

Curriculum Vitae

Personal information

birth date May 4, 1977
birth place Mexico City, Mexico
nationality Mexican
RFC PEVC 770504 DD2
CURP PEVC 770504 HDF LLN 07
last update June 27, 2018

Academic training

1993–1996 **High school**, *College of Sciences and Humanities, South Campus, Mexico City, Mexico.*
1992–1994 **Technical school**, *Morelos Institute of Computation, Mexico City, Mexico.*
1997–2002 **Bachelor's degree**, *Faculty of Sciences, UNAM, Mexico City, Mexico.*
2005–2007 **Masters degree**, *Computer Science and Engineering Postgraduate Program, UNAM, Mexico City, Mexico.*
2008–2014 **PhD**, *Computer Science and Engineering Postgraduate Program, UNAM, Mexico City, Mexico.*

Master's Thesis

title *Sobre pseudolíneas medianas y configuraciones de puntos*
advisor Jorge Urrutia
description Use of allowable sequences to search for half pseudolines in set points, including an experiment to find the minimum number of half pseudolines in point sets of size 27.

PhD Thesis

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Faculty of Sciences, National Autonomous University of Mexico*
☎ +52 (55) 5622 3899 ext 45773 • 📞 +52 (55) 2214 3838
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- title *Sobre el comportamiento de algunas estructuras geométricas bajo rotación en el plano, y su relación con sucesiones permisibles*
- advisors Jorge Urrutia and Silvia Fernández-Merchant
- description Three problems of computational geometry and combinatorics involving geometric structures on the plane and their rotations.

Work experience

Industry

- 2002–2004 **System Administrator, Programmer and Telephony Technician**, *Simitel SA de RL*, September 2002 to March 2004.
- 2004 **J2EE Programmer**, *Calidad y Productividad en Sistemas de Información (CAPSI) SA de CV/ING Comercial América*, May to October 2004.
- 2005 **Java Servlets/JSPs Programmer**, *Calidad y Productividad en Sistemas de Información (CAPSI) SA de CV/Transportes Marítimos Mexicanos*, January 2005 to April 2005.
- 2008 **Distributed Computing system for 3D animation rendering**, *Olvaid SA de RL*, April to June 2008.
- 2013 **Dr. David Romero assistant, advising the Technical Redistricting Committee**, *Instituto Federal Electoral*, May to December 2013.
- 2014–2015 **New districting system project**, *Instituto Nacional Electoral*, September 2014 to April 2015.
- 2015–2016 **New districting system project**, *Instituto Nacional Electoral*, November 2015 to October 2016.
- 2015–present **Career Associate Professor C**, *National Autonomous University of Mexico, Faculty of Sciences*, August 2015 until now.

Teaching

- 1998–2002 **Laboratory assistant**, *Faculty of Sciences, UNAM*.
Laboratory assistant for courses of the Computer Sciences program
Courses:
 - Discrete Matemáticas (1994 program, 1 semester)
 - Computer Sciences Introduction I (1994 program, 2 semesters)
 - Computer Architecture (1994 program, 1 semester)
- 2000–2005 **Teacher assistant**, *Faculty of Sciences, UNAM*.
Teacher assistant for courses of the Computer Sciences program
Courses:
 - Computer Sciences Introduction I (1994 program, 3 semesters)
 - Logical Analysis (1994 program, 1 semester)
 - Theory of Computation (1994 program, 1 semester)
 - Computer Architecture (1994 program, 1 semester)

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- 2004–2015 **Lecturer, Faculty of Sciences, UNAM.**
Lecturer for courses of the Computer Sciences program
Courses:
- Computing I (1983 program, 1 semester)
 - Computer Sciences Introduction I (1994 program, 5 semesters)
 - Analysis of Algorithms (1994 program, 1 semester)
 - Computer Architecture (1994 program, 1 semester)
 - Computer Sciences Introduction (2013 program, 3 semesters)
 - Data Structures (2013 program, 6 semesters)
 - Modeling and Programming (2013 program, 1 semester)
- 2013 **Lecturer, UAM-Iztapalapa.**
Lecturer for courses of the Computing program
Courses:
- Data Structures (1 trimester)
 - Introduction to Administrative Programming (1 trimester)
- 2015–present **Associate Professor, Faculty of Sciences, UNAM.**
Associate Professor for courses of the Computer Sciences program
Courses:
- Computer Sciences Introduction (2013 program, 6 semesters)
 - Data Structures (2013 program, 6 semesters)
 - Modeling and Programming (2013 program, 2 semesters)
 - Computer Science Seminar B, *Combinatorial Optimization Heuristics* (2013 program, 4 semesters)

Human resources training

- jury Bachelor's Degree Thesis: *Triangulaciones de número cromático mínimo*, Juan Alfredo Cruz Carlón, August 18, 2011, Computer Sciences, UNAM, Mexico
- jury Bachelor's Degree Thesis: *Algunos elementos de la didáctica de la Programación y el pensamiento Computacional*, Cinthia Rodríguez Maya, September 18, 2014, Computer Sciences, UNAM, Mexico
- jury Bachelor's Degree Thesis: *Manual de Prácticas para el Curso de Modelado y Programación*, Jessica Santizo Galicia, February 11, 2016, Computer Sciences, UNAM, Mexico
- jury Bachelor's Degree Thesis: *Sistemas de Validación de Información Censal, implementación de Consistencias Lógicas*, Fernando Estañol Salinas, March 17, 2016, Actuary
- jury Bachelor's Degree Thesis: *Sistema de Monitoreo para un Centro de Contacto*, José Carlos León Pérez, May 18, 2016, Computer Sciences, UNAM, Mexico
- jury Bachelor's Degree Thesis: *Material de apoyo para la enseñanza de programación con Java*, Carlos Gerardo Morales García, November 24, 2016, Ciencias de la Computación, UNAM, México

- jury Bachelor's Degree Thesis: *Polígonos vacíos en conjuntos de puntos coloreados*, Juan Manuel Rosas Gutiérrez, February 23, 2017, Ciencias de la Computación, UNAM, México
- jury Bachelor's Degree Thesis: *Sistema de Diagnóstico Ambiental: Comparativo de dos implementaciones*, Raúl Martínez Hernández, June 21, 2017, Ciencias de la Computación, UNAM, México
- jury Bachelor's Degree Thesis: *Iluminación de polígonos con Θ -módems*, Ricardo López López, August 17, 2017, Ciencias de la Computación, UNAM, México
- jury Bachelor's Degree Thesis: *Galerías de Arte: Polígonos Ortogonales y una Implementación para Iluminar el Plano*, Alejandro Hernández Mora, August 18, 2017, Ciencias de la Computación, UNAM, México
- jury Bachelor's Degree Thesis: *Reconocimiento de palíndromos con brecha en una de sus mitades y su implementación en Java*, Víctor Zamora Gutiérrez, April 18, 2018, Ciencias de la Computación, UNAM, México

Conference talks

National

- 2007 **XXII Coloquio Víctor Neumann-Lara de Teoría de las Gráficas, Combinatoria y sus Aplicaciones**, March 2007, Guanajuato, Mexico.
- 2010 **XXV Coloquio Víctor Neumann-Lara de Teoría de las Gráficas, Combinatoria y sus Aplicaciones**, March 2010, Querétaro, Mexico.
- 2011 **XXVI Coloquio Víctor Neumann-Lara de Teoría de las Gráficas, Combinatoria y sus Aplicaciones**, March 2011, Hidalgo, Mexico.
- 2012 **XXVII Coloquio Víctor Neumann-Lara de Teoría de las Gráficas, Combinatoria y sus Aplicaciones**, March 2012, Tlaxcala, Mexico.
- 2013 **Mexican Conference on Discrete Mathematics and Computational Geometry**, November 2013, Oaxaca, Mexico.
- 2015 **Combinatoria y Matemáticas Aplicadas: una celebración de los primeros 70 años de Gilberto Calvillo y David Romero**, November 2015, Guanajuato, Mexico.
- 2016 **XXXI Coloquio Víctor Neumann-Lara de Teoría de las Gráficas, Combinatoria y sus Aplicaciones**, February-March 2016, Querétaro, Mexico.
- 2016 **XXVII Congreso Nacional de Estudios Electorales**, November 2016, Guanajuato, Mexico.

International

- 2010 **Canadian Conference on Computational Geometry 2010**, August 2010, Winnipeg, Canada.
- 2011 **XIV Spanish Meeting on Computational Geometry**, June 2011, Alcalá de Henares, Spain.

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- 2011 **Canadian Conference on Computational Geometry 2011**, August 2011, Toronto, Canada.
- 2015 **ERPA International Congresses on Education 2015**, June 2015, Athens, Greece.
- 2016 **XI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'2016)**, September 2016, Salamanca, Spain.
- 2017 **International Conference on Optimization and Decision Science (ODS2017)**, septiembre 2017, Sorrento, Italy.

Publications

Papers

- 2016 **Convex blocking and partial orders on the plane**, José Miguel Díaz-Báñez, J. Antoni Sellarès, Marco A. Heredia, Jorge Urrutia, Canek Peláez, Inmaculada Ventura, *Computational Geometry: Theory and Applications*, Volume 51, January 2016, pages 55–66.
- 2016 **Unit testing as a teaching tool in higher education**, Canek Peláez, SHS Web of Conferences, Volume 26, January 2016, ERPA International Congresses on Education 2015 (ERPA 2015).
- 2018 **Elecciones La ciencia al servicio de la democracia**, Canek Peláez Valdés, *¿Cómo ves?*, año 20, número 235, junio 2018, Universidad Nacional Autónoma de México.

In process

- On the rectilinear convex layers of a planar point set**, Canek Peláez, Adriana Ramírez-Vigueras, Carlos Seara, Jorge Urrutia.
- A Combinatorial Optimization Approach for Political Districting in Mexico**, Canek Peláez, David Romero.
- The thick Steiner forest problem: Heuristic solution and application to political districting**, Canek Peláez, David Romero.

Proceedings

- 2010 **22nd Canadian Conference on Computational Geometry**, *Proceedings*, Greg Aloupis, pp. 103–106, August 2010, Winnipeg, Canadá.
- 2011 **XIV Spanish Meeting on Computational Geometry**, *Proceedings*, Pedro Ramos and Vera Sacristan Adinolfi, pp. 221–224, June 2011, Alcalá de Henares, Spain.
- 2011 **23rd Canadian Conference on Computational Geometry**, *Proceedings*, Greg Aloupis and David Bremner, pp. 15–20, August 2011, Toronto, Canada.
- 2015 **ERPA International Congresses on Education 2015**, *Book of Abstracts*, İsmail Önder, pp. 106–107, June 2015, Athens, Greece.

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- 2016 **XI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'2005)**, *Inteligencia Artificial. Revista Iberoamericana de Inteligencia Artificial*, Roque Marín and Eva Onaindía, 10.31 (2006): 9-10, pp. 399–308, September 2016, Salamanca, Spain.
- 2017 **International Conference on Optimization and Decision Science (ODS 2017)**, *Book of Abstracts of XLVII Annual Meeting Italian Operations Research Society*, Antonio Sforza, Claudio Sterle, Adriano Masone, pp. 141, September 2017, Sorrento, Italy.

Books

- 2008 **Introducción a Ciencias de la Computación: Manual de Prácticas**, Canek Peláez, Elisa Viso, Las prensas de ciencias, 214 pp., ISBN: 978-970-32-5416-3.
- 2012 **Introducción a Ciencias de la Computación con Java**, Elisa Viso, Canek Peláez, Las prensas de ciencias, 451 pp., ISBN: 978-970-32-4268-9.

En proceso

- 2017 **Estructuras de Datos con Java Moderno**, Canek Peláez, 100% progress, waiting review.
- 2018 **Introducción a las Ciencias de la Computación con Java Moderno**, Elisa Viso, Canek Peláez, 75% progress, rewriting of **Introducción a las Ciencias de la Computación con Java**.

Research visits

- 2007 **California State University, Northridge**, Silvia Fernández Merchant, Bernardo Ábrego Lerma, California, US, March to July 2007.
- 2009 **California State University, Northridge**, Silvia Fernández Merchant, Bernardo Ábrego Lerma, California, US, July 2009.
- 2010 **Universitat Politècnica de Catalunya**, Carlos Seara Ojea, Barcelona, Spain, May to June 2010.
- 2010 **Universidad de Sevilla**, José Miguel Díaz Báñez, Sevilla, Spain, July 2010.
- 2011 **Universitat Politècnica de Catalunya**, Carlos Seara Ojea, Barcelona, Spain, June 2011.
- 2011 **Universidad de Sevilla**, José Miguel Díaz Báñez, Sevilla, Spain, July 2011.
- 2011 **Instituto Fields**, *Thematic Program on Discrete Geometry and Applications*, Toronto, Canada, August and September 2011.
- 2011 **California State University, Northridge**, Silvia Fernández Merchant, Bernardo Ábrego Lerma, California, US, July 2011.
- 2016 **Universitat Politècnica de Catalunya**, Carlos Seara Ojea, Barcelona, España, septiembre de 2016.

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2017 **Universitat Politècnica de Catalunya**, *Carlos Seara Ojea*, Barcelona, España, septiembre de 2017.

Courses

- 2009 **Universitat Autònoma de Barcelona**, *DocCourse 2009*, Bellaterra, Spain, January to March 2009.
- 2010 **Centro de Investigación en Matemáticas**, *I Escuela Mexicana de Invierno de Matemáticas Discretas*, Guanajuato, Mexico, February 2010.
- 2011 **Fields Institute**, *Thematic Program on Discrete Geometry and Applications*, Toronto, Canada, August and September 2011.

Other skills

programming languages	Java (J2EE, JSPs and Servlets), C# (.Net), C/C++, Vala, Haskell, Python, Perl, MATLAB, Scheme, and PHP; any other programming language if I have access to compilers and/or interpreters and manuals
operating systems	Linux, Solaris, FreeBSD, SCO Unix
miscellaneous	Web applications, system administration for Unix and Windows NT/2000/XP machines, administration and maintenance of WWW servers (Apache, Tomcat, Resin, SunONE), administration and maintenance of database servers (PostgreSQL, MariaDB, MySQL), object oriented analysis and design, patterns, server/client analysis and design

Languages

Spanish	100%	<i>Native language</i>
English	90%	<i>TOEFL, 105 score</i>