Pedro Cruz · Curriculum Vitae

Assistant Professor
Art + Design, CAMD
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Education

2010-16 PhD – Doctoral Program in Information Science and Technology, University of Coimbra. Dissertation: Semantic Figurative Metaphors in Information Visualization.

2005-10 Master Degree (MSc) and Bachelor Degree (BSc) in Informatics Engineering, University of Coimbra. Thesis: Information Visualization – towards information aesthetics.

Employment

—2016 Assistant Professor, Department of Art+Design, College of Arts Media and Design, Northeastern University.

2016 Visiting Assistant Professor, Department of Art+Design, College of Arts Media and Design, Northeastern University.

2008-15 Freelancer, FBA. studio, Coimbra.

2010-15 Part-time Invited Assistant Professor, Department of Informatics Engineering, Faculty of Sciences and Technology, University of Coimbra.

2010-15 Research Student, Computational Design and Visualization Lab, Cognitive and Media Systems Group, Centre for Informatics and Systems of the University of Coimbra.

2015 Part-time Lecturer, Porto Business School.

2011-12 Visiting PhD student, Senseable City Lab, Massachusetts Institute of Technology.

2012 Research assistant, Singapore-MIT Alliance for Research and Technology.

2009-10 Teaching Assistant, Department of Informatics Engineering, Faculty of Sciences and Technology, University of Coimbra.

Publications

Book Chapters

Cruz, P., and Machado, P. "City Portraits and Caricatures." In *Decoding the City: How Big Data Can Change Urbanism*, edited by Dietmar Offenhuber and Carlo Ratti, pp. 96–109, Birkhauser Verlag AG, 2014.

Reviewed Journal Articles

Cruz, P. and Machado, P., 2016. Pulsing Blood Vessels: A Figurative Approach to Traffic Visualization. *IEEE Computer Graphics and Applications*, 36(2), pp. 16–21.

Cruz, P. and Machado, P., 2015. Contiguous animated edge-based cartograms for traffic visualization. *IEEE Computer Graphics and Applications*, 35(5), pp. 6–13.

Cruz, P. and Machado, P., 2011. Generative Storytelling for Information Visualization. *IEEE Computer Graphics and Applications*, 31(2), pp. 80–85.

Reviewed Conference Proceedings

Polisciuc, E., Maçãs, C., Machado, Cruz, P. and Amaro, H., 2016. Flow map of products transported among warehouses and supermarkets in Portugal. In IVAPP: International Conference on Information Visualization Theory and Applications. Rome, 177-186.

Maçãs, C., Polisciuc, E., Machado, Cruz, P. and Amaro, H., 2016. Iso-Edges for the Geo-Representation of Consumptions. In IVAPP. Rome, pp. 220-227.

Cruz, P., 2015. Wrongfully right: applications of semantic figurative metaphors in information visualization. In IEEE VIS Arts Program. Chicago, pp. 14–21.

Maçãs, C., Cruz, P. et al., 2015. Swarm systems in the visualization of consumption patterns. In IJCAI'15 International Conference on Artificial Intelligence. Buenos Aires, pp. 2466-2472.

Polisciuc, E., Cruz, P. et al. 2015. Arc and Swarm-Based Representations of Customer's Flows Among Supermarkets. In IVAPP. Berlin, pp. 300-306.

Maçãs, C., Cruz, P. et al. 2015. Time-Series Application on Big Data: Visualization of Consumption in Supermarkets. In IVAPP. Berlin, pp. 239-246.

Cruz, P., Costa, C. and Machado, P., 2014. An Ecosystem of Corporate Politicians. In xCoAx Computation, Communication, Aesthetics and X. Porto, pp. 146–156.

Cruz, P., and Machado, P., 2010. Visualizing the Portuguese Empire Expansion and Decline. In ARTECH: 5th International Conference on Digital Arts, Guimarães, pp. 65–71.

Reviewed Abstracts

Kamolov, R., Machado, P., and Cruz, P., 2013. Musical Flocks. In ACM SIGGRAPH 2013 Posters, Anaheim, p. 93.

Kamolov, R., Machado P., and Cruz, P., 2013. Visualizing the Flow of Users on a Wireless Network. In ACM SIGGRAPH 2013 Posters, Anaheim, p. 114.

Cruz, P., and Machado, P., 2011. Visualizing the Circulatory Problems of Lisbon. In ACM SIGGRAPH 2011 Posters, Vancouver, p. 92.

Duro, L., Cruz P., and Machado, P., 2011. Abstract Ocean Waves. In ACM SIGGRAPH 2011 Posters, Vancouver, p. 11.

Cruz, P., and Machado, P., 2010. Visualizing Empires Decline. In ACM SIGGRAPH 2010 Posters, Los Angeles, p. 154.

Other

Wihbey, J., Beaudet, M., and Cruz, P., 2017. There are huge holes in how the U.S. states investigate politicians' conflicts of interest. Washington Post/Monkey Cage. Online here.

Cruz, P., Robinson P., and Ratti, C., 2012. Deciphering the Signature of Humanity. Ericsson Business Review, 2, pp. 50-51.

Cruz, P., Robinson, P., and Ratti, C., 2012. The Signature of Humanity. Ericsson Traffic and Market Report, 6, pp. 25-26.

Cruz, P., Machado, P., and Bicker, J., 2010. Visualización del Tráfico en Lisboa. Mediateca Expandida. Habitar, LABoral Centro de Arte y Creación Cultural, pp. 86-87.

Creative activity

2017   Lisbon as the Ibero-American Capital of Culture 2017, MUDE, April 22–July 2, Lisbon.
        Work: An Ecosystem of Corporate Politicians.
2016   London Design Biennale, Somerset House, September 7–27, London.
        Work: UN/BIASED.
2015   The Art of Networks II, New York Hall of Science – NYSCI, March 26-May 31, New York. Work:
        An Ecosystem of Corporate Politicians.
2014   4th Ibero-American Biennial of Design, Central de Diseño de Matadero, November 25–February
        28, Madrid. Work: An Ecosystem of Corporate Politicians.
2013   Nightime-Dreamreal, Power Station of Art, December 3–March 30, Shanghai.
        Work: Traffic in Lisbon.
2012   MOVE: The Transportation Expo, Institute Without Boundaries and Evergreen Canada, Evergreen
        Brick Works, May 24–Oct 8, Toronto. Work: Lisbon Traffic.
—   The Art of Networks, Foosaner Art Museum, March 8, Melbourne FL.
        Work: Traffic in Lisbon.
—   CES Consumer Electronics Show, Ericsson's Keynote, January 11, Las Vegas.
        Work: Signature of Humanity.
—   SMART Future Urban Mobility Symposium, Visual Explorations of Urban Mobility, National
        University of Singapore, January, Singapore. Work: Data lenses.
2011   European Researchers' Night, Science Museum, September 23, Coimbra.
        Several works exhibited.
—   Talk to Me: Design and the Communication between People and Objects, MoMA Museum of
        Modern Art, July 24–November 7, New York. Work: Visualizing Lisbon's Traffic.
—   Design+Multimedia, Department of Informatics Engineering, May 16-20, Coimbra.
        Several works exhibited.
—   Enter 5: Datapolis, international art sci tech biennale, National Technical Library, April 14-17,
        Prague. Work: The Morphing City.
—   Electronics Alive VI, University of Tampa, January 21–February 24, Tampa.
        Work: Visualizing Empires Decline.
2010   Smirnoff Nightlife Experience, Castelinho, September 31–October 17, São Paulo.
        Work: Sync/Lost.
—   ACM SIGGRAPH Computer Animation Festival, Electronic Theatre, August 26-28, Los Angeles.
        Work: Visualizing Empires Decline.
—   Mediateca Expandida: Habitar, LABoral Art and Industrial Creation Centre, May 27–November 8,
        Gíjon. Work: Aesthetics and visualization of Lisbon's traffic.

Presentations

2016   Indexical Design – A symposium on the experience of information and materiality of data, Fenway Center, June 25, Boston. Presentation: UN/BIASED.
—   The Broad Institute, May 26, Boston. Presentation: Semantic Figurative Metaphors in Information Visualization.
2015   Zer0 – the future of knowledge-intensive based art, Municipal Library of Tavira, September 5, Tavira, Portugal. Presentation: Semantic figurative metaphors in visualization.
2014   4th Ibero-American Biennial of Design, awarded works presentations, Central de Diseño de Matadero, November 26, Madrid. Presentation: An Ecosystem of Corporate Politicians.
—   16th Festival CCP, Creatives Club of Portugal, ETIC, May 16, Lisbon.
          Presentation: Metaphors and visualization.
—   Seminar: Data, digital methods and mapping social complexity, ENSCI, May 15, Paris.
          Organization: médialab (Sciences Po), IFRIS (ESIEE Paris).
          Lecture: Storytelling, metaphors and visualization.
—   Transparency Hackday, Maus Hábitos, February 22, Porto.
          Presentation: Intervention and expressiveness in data visualization.
2013   Interaction South America'13, IxDA, November 14, Recife.
          Lecture: Portraits, Visualization, Information.
          Workshop: Using physics to design computationally.
—   Polytechnic Institute of Cávado and Ave, September 27, Barcelos.
          Lecture: Portraits and caricatures in information visualization.
—   Laboratory of Visuality and Visualization, Fine Arts School, Federal University of Rio de Janeiro, July 17, Rio de Janeiro.
          Lecture: Exploring portraits and caricatures in information visualization.
2012   Barabási Lab, CCNR, Northeastern University, October 26, Boston.
          Lecture: Exploring Portraits and Caricatures in Data Visualization.
2011   Harvard Graduate School of Design, Urban Planning and Design, November 11, Cambridge.
          Lecture: Information visualization: expressiveness and accuracy.
—   Design+Multimedia talks, Science Museum, May 3, Coimbra.
          Presentation: My work and my path.
—   Youth Week, Loures City Council, Ceramics Museum, March 30, Loures
          Presentation: Visualizing Empires Decline.
—   International colloquium: Image in Science and Art, Calouste Gulbenkian Foundation, February 18, Lisbon. Lecture: Visualization of complexity: expressiveness and accuracy.
—   Faculty of Humanities/University of Coimbra, European Masters degree in European Heritage, Digital Media and the Information Society, January 7, Coimbra.
          Lecture: Computers and graphics – a data visualization point of view.

<u>Projects</u>

2016   Collaborator, School of Journalism, Northeastern University.
Project: The State Financial Disclosure Project, led by John Whibey and Mike Beaudet. I I led the visualization component of the project while supervising one student.

—   Co-creator with Marta de Menezes. Project: UN/BIASED – Organic visualizations for the duality of social utopia and dystopia. Work commissioned by Cultivamos Cultura for the London Design Biennale 2016, and curated by Manuel Lima.

2014-15   Project leader, Information technology and Systems Laboratory, Instituto Pedro Nunes – Association for Innovation and Development in Science and Technology.
Project: Visualization for Big Data: retail sales and Portuguese behavioral patterns.

Awards and distinctions

2016   Excellence in Teaching Award, College of Arts, Media and Design, Northeastern University.

—   Communication Arts Award of Excellence in Typography, Poster category.
Work: Indexical Design Symposium Poster, designed with Thomas Starr.

2015   Nominee, Innovative Nation National Award (SIC Notícias and Audi), Lisbon.

2014   Award for Design and Social Movements, 4th Ibero-American Biennial of Design, Madrid.
Work: An ecosystem of corporate politicians.

2013   One of the ten most significant information designers in the world, La Lettura, Corriere della Sera, p.8-9 (October 27), Milan.
Panel: Jer Throp, Naomi Robbins, Alberto Cairo, Paolo Ciuccarelli, Andy Kirk, Carlo Ratti.

2011   Semi-finalist, ACM SIGGRAPH Student Research Competition, graduate category, Vancouver.
Work: Visualizing the Circulatory Problems of Lisbon.

—   Honorable mention, MiniMax Mapping Context, École Polytechnique Fédérale de Lausanne.
Work: Lisbon's Blood Vessels.

—   National Award Seeds of Science Junior, Ciência Hoje: Magazine of science, technology and entrepreneurship, Figueira da Foz.

2010   Winner, ACM SIGGRAPH Student Research Competition, graduate category, Los Angeles.
Work: Visualizing Empires Decline.

—   Jury selection, ACM SIGGRAPH Computer Animation Festival, Los Angeles.
Work: Visualizing Empires Decline.

Service to the Profession

Since 2016	Member of program committee, IEEE VIS 2016 Arts Program.
—	Member of program committee, Expressive 2016: Computational Aesthetics – International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging.
2012-2015	Member of program committee, evomusart – International conference on biologically inspired music, sound, art and design.
2015	Member of program committee, Narrative Visualization, iV2015 – 19th International Conference on Information Visualisation.
2012	Invited Reviewer, Journal of Genetic Programming and Evolvable Machines – Special Issue: Evolutionary Computation in Art, Sound and Music, Springer, 3, 2013.

March, 2017