

# Fernando Wario Vázquez

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WOS ResearcherID: E-4588-2018

## Academic Qualifications

**Ph.D.** in Computer Science (magna cum laude) 14/02/2018

Department of Mathematics and Computer Science

Freie Universität Berlin - Germany

**Thesis title:** "A Computer Vision Based System for the Automatic Analysis of Social Networks in Honey Bee Colonies"

**M.Sc.** in Electronics and Computer Science Engineering (100/100) 07/09/2011

University of Guadalajara - Mexico

**Thesis title:** "Learning Automata Algorithms Applied to Computer Vision Problems" (in Spanish)

**Bachelor's Degree** in Electronics and Communication Engineering (100/100) 28/11/2008

University of Guadalajara - Mexico

**Thesis title:** "Video Segmentation Algorithm for Real-Time Detection of Mobile Objects" (in Spanish)

## Professional Experience

### Research

Associate Researcher at Institute for Cognitive Sciences and Technologies 11/2019 – ongoing

Individual postdoctoral grant (CONACYT - Mexico)

PhD student at Freie Universität Berlin 10/2012 – 12/2017

Individual PhD scholarship (DAAD - Germany)

### Teaching

Lecturer at University of Guadalajara, Mexico 08/2018 – 10/2019

**Taught courses:** Communication systems I & II

Control engineering, Control theory II

Lecturer at University of Guadalajara, Mexico 02/2009 – 07/2012

**Taught courses:** Operating systems

## Languages

**Mother tongue:** Spanish

Other languages	Writing	Reading	Speaking	Listening
English	C1	C1	C1	C1
German	B2	C1	B2	C1
Italian	A2	B1	A2	B1

## Citation Metrics (15/12/2020)

Source	Citations	h-index
Google Scholar (GS)	199	7
Scopus (SC)	109	5
Web of Science (WOS)	69	5

## Publications

Title/Author	GS	Cited by SC	WOS	Year
<b>Journals</b>				
Tracking all members of a honey bee colony over their lifetime using learned models of correspondence F Boenish, B Rosemann, B Wild, <b>F Wario</b> , T. Landgraf Frontiers in Robotics	16	5	6	2018
Automatic detection and decoding of honey bee waggle dances <b>F Wario</b> , B Wild, R Rojas, T Landgraf PloS one 12(12)	21	7	6	2018
Automatic methods for long-term tracking and the detection and decoding of communication dances in honey bees <b>F Wario</b> , B Wild, MJ Couvillon, R Rojas, T Landgraf Frontiers in Ecology and Evolution 3, 103	47	12	2	2015
Fast algorithm for multiple-circle detection on images using learning automata E Cuevas, <b>F Wario</b> , V Osuna-Enciso, D Zaldivar, M Pérez-Cisneros IET Image Processing 6 (8), 1124-1135	41	30	19	2012

Circle detection on images using learning automata E Cuevas, <b>F Wario</b> , D Zaldivar, M Pérez-Cisneros IET computer vision 6 (2), 121-132	20	12	12	2012
Automatic multiple circle detection based on artificial immune systems E Cuevas, V Osuna-Enciso, <b>F Wario</b> , D Zaldívar, M Pérez-Cisneros Expert Systems with Applications 39 (1), 713-722	38	37	24	2012
Detección de primitivas circulares usando un algoritmo inspirado en el electromagnetismo E Cuevas, D Oliva, V Osuna-Enciso, <b>F Wario</b> Ingeniería, investigación y tecnología 12 (4), 469-485	1	-	-	2011
Segmentación y detección de glóbulos blancos en imágenes usando Sistemas Inmunes Artificiales E Cuevas, V Osuna-Enciso, D Oliva, <b>F Wario</b> , D Zaldivar Revista mexicana de ingeniería biomédica 31 (2), 119-134	1	-	-	2010
<b>Book Chapters</b>				
Bioinspired Algorithms <sup>1</sup> <b>F Wario</b> , O Avalos-Alvarez, J Gálvez-Rodríguez In: Torres-García. (eds) Biosignal Processing and Classification Using Computational Learning and Intelligence Biomedical Engineering, Elsevier	-	-	-	2020
Circle detection on images using learning automata E Cuevas, <b>F Wario</b> , D Zaldívar, M Pérez-Cisneros In: Yang XS. (eds) Artificial Intelligence, Evolutionary Computing and Metaheuristics, 545-570 Studies in Computational Intelligence, vol 427, Springer, Berlin, Heidelberg	8	5	-	2013
<b>Conference Proceedings</b>				
Motion Dynamics of Foragers in Honey Bee Colonies <b>F Wario</b> , B Wild, D Dormagen, T Landrag, V Trianni International Conference on Swarm Intelligence (ANTS 2020) Lecture Notes in Computer Science, 2020, 12421 LNCS, 203-215	-	-	-	2020
Visual Registration and Tracking for Traffic Monitoring S Vega-Maldonado, <b>F Wario</b> , J Arámburo-Lizárraga, M Pérez-Cisneros, M Cedano-Olvera 2015 IEEE First International Smart Cities Conference (ISC2), 1-6	2	1	-	2015

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<sup>1</sup>Accepted for publication.

### Referee Activity

- Applied Mathematical Modelling - Elsevier
- Applied Soft Computing - Elsevier
- Biomedical Engineering - Elsevier
- Swarm Intelligence - Springer
- Mathematical Problems in Engineering - Hindawi
- Living Machines: Conference on Biomimetic and Biohybrid Systems
- IEEE International Conference on Robotics and Automation (ICRA)

### Individual Grants

- **CONACYT - Mexico** (01/11/2019 - 31/10/2021) - Postdoc
- **DAAD STIBET-Program - Germany** (01/09/2017 - 30/11/2017) - Research assistant
- **FU-Bright Mobility - Germany** (12/09/2016 - 28/10/2016) - Research stay abroad
- **DAAD - Germany** (01/10/2012 - 30/06/2016) - Ph.D. Scholarship
- **CONACYT - Mexico** (01/06/2010 - 31/08/2010) - Research stay abroad
- **CONACYT - Mexico** (01/09/2008 - 31/08/2010) - M.Sc. Scholarship

### Professional Presentations

- Proseminar in Neuroscience – Unisersity of Guadalajara (MX), 11/11/2020
- Twelfth International Conference on Swarm Intelligence – ANTS 2020 (ES), 28/10/2020
- Collective Information Processing, Workshop – Humboldt University (DE), 04/03/2020
- Seminar on Ecology – National Autonomous University of Mexico (MX), 29/08/2019
- Seminar on Engineering – ITESM (MX), 04/10/2018
- ISTC Seminar – Institute for Cognitive Sciences and Technologies-CNR (IT), 18/10/2016
- Proseminar in Neuroscience – Unisersity of Guadalajara (MX), 10/12/2014
- International Seminar on Computer Science – Complutense University of Madrid (ES), 12/05/2011
- International Seminar on Computer Science – National Polytechnic Institute of Mexico (MX), 16/12/2010
- International Conference on Computer Science and Informatics – ANIEI (MX), 03/10/2008

### **Dissemination Activity**

- Mexican Week of Science and Technology – Mexican Embassy (DE), 06/07/2016
- Biotech Covention – University of Hamburg (DE), 10/10/2015
- HPI Future SOC Lab Day – Hasso Platner Institute (DE), 21/06/2013