

# Citlalli Gámez Serna

## PhD candidate

## Computer Vision

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Born 1989, Mexican, single



### Research Interests

- Deep learning, convolutional neural networks for object detection and classification.
- Reinforcement learning for autonomous vehicle control.

### Education

- 2015–Present **PhD: Visual perception for path tracking in urban environments**, UNIVERSITY OF TECHNOLOGY OF BELFORT-MONTBELIARD, France.  
Control and Computer vision fields
- 2012–2014 **Master Erasmus Mundus CIMET: Color in Informatics & Media Technology**, UNI. JEAN-MONNET/GJOVIK UNIVERSITY COLLAGE, France/Norway.  
Key subjects : Computer vision - Advanced Video Processing - Color science - Machine learning & pattern recognition - Lighting and Image capture - Image and video compression - Image quality
- 2007–2011 **B.S. Information and Communication Technologies**, INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY (ITESM), Mexico.  
Key subjects : Information security - Computer networks I and II - Wireless networking - Network management - Development of videogames - Programming Languages - Databases

### Experience

- 04/2018–  
06/2018 **Teaching assistant**, UTBM, Belfort, France.  
◦ Practical work guidance for students in course LP24 (Introduction to object conception and programming - JAVA)  
◦ Game project proposals and evaluations.
- 03/2015–  
06/2015 **Web developer**, SIPAY PLUS, Madrid, Spain.  
◦ Development of new web functionalities for smart payments according to customer needs. This development consisted on functional analysis, integration and testing.  
◦ Migration of Bootstrap framework from version 1.1.2 to 3.3.4, updating and adapting JS components.
- 01/2014–  
03/2014 **Researcher (Internship)**, CENTRE DE RECHERCHE ET DE RESTAURATION DES MUSÉES DE FRANCE (C2RMF), Paris, France.  
◦ 3D object reconstruction using photogrammetry technique.  
◦ Development of mapping technology to combine high resolution images with detailed laser scans.
- 01/2012–  
08/2012 **Certification Coordinator**, ITESM, Aguascalientes, Mexico.  
◦ Documentation of B.S. in Information and Communication Technologies through program proofs, institution's installations and services.  
◦ Organization and coordination of events and courses for students and teaching staff.
- 04/2011–  
10/2011 **Videogame Developer Assistant (Internship)**, PHRACTAL STUDIOS, Aguascalientes, Mexico.  
◦ 3D model creations in Maya for a snowboarding game in iphone and ipad. Exotic snowboards and objects related to the environment.  
◦ Texture designs for objects and characters, painting over texture maps.  
◦ Menu interface design.

- 02/2011– **IT Support Assistant (Internship)**, NISSAN MEXICANA, Aguascalientes, Mexico.
- 06/2011
- o Technical IT support to users' requests.
  - o Installation, configuration and maintenance of operating systems and software on PCs (Desktops, Laptops and Workstations).
- 08/2010– **Software Developer (Internship)**, 3D MEDIA, Aguascalientes, Mexico.
- 12/2010
- o Development of sales system through Visual Basic, MySQL and Cristal Reports (interface with different modules, database, automatic ticket impression).

## Awards

- 2015 Conacyt scholarship for PhD program Mexico-France.
- 2012 Erasmus Mundus (Category A) scholarship for CIMET Master program.

## Master's Thesis

- Title *Data fusion of objects using techniques such as Laser Scanning, Structured Light and Photogrammetry for Cultural Heritage Applications*
- Supervisors Researcher Ruven Pillay (C2RMF) & Professor Alain Trémeau
- Description This thesis fuses techniques in order to digitize objects of the Louvre museum providing photo-realistic appearance results together with accurate geometry.

## Publications

- o C. Gámez Serna, and Y. Ruichek. **Traffic Signs Detection and Classification for European Urban Environments**. *IEEE Transactions on Intelligent Transportation Systems* (2019). Under review.
- o C. Gámez Serna, and Y. Ruichek. **Classification of Traffic Signs: The European Dataset**. *IEEE Access* (2018). [[pdf](#)][[project](#)]
- o C. Gámez Serna, and Y. Ruichek. **Dynamic Speed Adaptation for Path Tracking Based on Curvature Information and Speed Limits**. *Sensors* 17, no. 6 (2017): 1383. [[pdf](#)]
- o C. Gámez Serna, A. Lombard, Y. Ruichek, and A. Abbas-Turki. **Gps-Based Curve Estimation for an Adaptive Pure Pursuit Algorithm**. In *Mexican International Conference on Artificial Intelligence* pp. 497-511. Springer, Cham, 2016.
- o C. Gámez Serna, R. Pillay, and A. Trémeau. **Data fusion of objects using techniques such as Laser Scanning, Structured Light and Photogrammetry for Cultural Heritage Applications**. In *International Workshop on Computational Color Imaging* (pp. 208-224). Springer, Cham, 2015.

## Technical (IT) Skills

- Languages Python, MATLAB, Java, HTML, CSS, JavaScript, C++, VB
- Deep learning Keras/Tensorflow, Caffe
- Tools Eclipse, MS Visual Studio, Adobe Photoshop, Maya, Blender, Meshlab
- Others Linux OS, Windows OS, Bootstrap, MySQL

## Soft Skills

- o Teamwork
- o Flexibility
- o Problem solving
- o Communication
- o Self-management
- o Multicultural environments

## Language Skills - ILR scale

- Spanish Native
- English Full professional proficiency
- French Limited working proficiency