



Juan Carlos Niebles Duque

Clinical Instructor, Medicine - Primary Care and Population Health

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Juan Carlos Niebles received an Engineering degree in Electronics from Universidad del Norte (Colombia) in 2002, an M.Sc. degree in Electrical and Computer Engineering from University of Illinois at Urbana-Champaign in 2007, and a Ph.D. degree in Electrical Engineering from Princeton University in 2011. He is a Senior Research Scientist at the Stanford AI Lab and Associate Director of Research at the Stanford-Toyota Center for AI Research since 2015. He is also an Associate Professor of Electrical and Electronic Engineering in Universidad del Norte (Colombia) since 2011. His research interests are in computer vision and machine learning, with a focus on visual recognition and understanding of human actions and activities, objects, scenes, and events. He is a recipient of a Google Faculty Research award (2015), the Microsoft Research Faculty Fellowship (2012), a Google Research award (2011) and a Fulbright Fellowship (2005).

ACADEMIC APPOINTMENTS

- Clinical Instructor, Medicine - Primary Care and Population Health

HONORS AND AWARDS

- Faculty Research Award, Google (2015)
- Senior Member, IEEE (2015)
- Faculty Fellow, Microsoft Research (2012)
- Research Award, Google (2011)
- Fulbright PhD Fellowship, Fulbright-Colciencias-DNP (2005)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Steering Committee, AI Index (2018 - present)
- Associate Director of Research, Stanford AI Lab-Toyota Center for AI Research (2015 - present)
- Senior Member, IEEE (2015 - present)
- Member, IEEE Computer Society (2014 - present)
- Member, IEEE (2007 - present)

PROFESSIONAL EDUCATION

- Ph.D., Princeton University , Electrical Engineering (2011)
- M.A., Princeton University , Electrical Engineering (2009)
- M.Sc., University of Illinois at Urbana-Champaign , Electrical and Computer Engineering (2007)
- Engineer, Universidad del Norte , Electronics Engineering (2002)

LINKS

- Personal Academic Website: <http://www.niebles.net>
- Stanford Vision and Learning Lab: <http://svl.stanford.edu/>
- Google Scholar Profile: <http://scholar.google.com/citations?user=hqNhUCYAAAAJ>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research work is in computer vision. The goal of my research is to enable computers and robots to perceive the visual world by developing novel computer vision algorithms for automatic analysis of images and videos. From the scientific point of view, we tackle fundamental open problems in computer vision research related to the visual recognition and understanding of human actions and activities, objects, scenes, and events. From the application perspective, we develop systems that solve practical world problems by introducing cutting-edge computer vision technologies into new application domains.

Teaching

COURSES

2019-20

- Computer Vision: Foundations and Applications: CS 131 (Aut)
- Topics in Computer Graphics: Computational Video Manipulation: CS 448V (Spr)

2018-19

- AI-Assisted Care: MED 277 (Aut)
- Computer Vision: Foundations and Applications: CS 131 (Aut)

2017-18

- Computer Vision: Foundations and Applications: CS 131 (Aut)

2016-17

- Computer Vision: Foundations and Applications: CS 131 (Aut)

STANFORD ADVISEES

Master's Program Advisor

Nicolas Sanchez

Publications

PUBLICATIONS

- **Action-Agnostic Human Pose Forecasting**
Chiu, H., Adeli, E., Wang, B., Huang, D., Niebles, J., IEEE
IEEE.2019: 1423–32

- **Interpretable Visual Question Answering by Visual Grounding from Attention Supervision Mining**
Zhang, Y., Niebles, J., Soto, A., IEEE
IEEE.2019: 349–57
- **Learning to Decompose and Disentangle Representations for Video Prediction**
Hsieh, J., Liu, B., Huang, D., Fei-Fei, L., Niebles, J., Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018
- **Finding "It": Weakly-Supervised Reference-Aware Visual Grounding in Instructional Videos**
Huang, D., Buch, S., Dery, L., Garg, A., Li Fei-Fei, Niebles, J., IEEE
IEEE.2018: 5948–57
- **What Makes a Video a Video: Analyzing Temporal Information in Video Understanding Models and Datasets**
Huang, D., Ramanathan, V., Mahajan, D., Torresani, L., Paluri, M., Li Fei-Fei, Niebles, J., IEEE
IEEE.2018: 7366–75
- **Sparse composition of body poses and atomic actions for human activity recognition in RGB-D videos** *IMAGE AND VISION COMPUTING*
Lillo, I., Niebles, J., Soto, A.
2017; 59: 63–75
- **Risky Region Localization with Point Supervision**
Kozuka, K., Niebles, J., IEEE
IEEE.2017: 246–53
- **Visual Forecasting by Imitating Dynamics in Natural Sequences**
Zeng, K., Shen, W. B., Huang, D., Sun, M., Niebles, J., IEEE
IEEE.2017: 3018–27
- **Unsupervised Visual-Linguistic Reference Resolution in Instructional Videos**
Huang, D., Lim, J. J., Fei-Fei, L., Niebles, J., IEEE
IEEE.2017: 1032–41
- **Agent-Centric Risk Assessment: Accident Anticipation and Risky Region Localization**
Zeng, K., Chou, S., Chan, F., Niebles, J., Sun, M., IEEE
IEEE.2017: 1330–38
- **A Hierarchical Pose-Based Approach to Complex Action Understanding Using Dictionaries of Actionlets and Motion Poselets**
Lillo, I., Niebles, J., Soto, A., IEEE
IEEE.2016: 1981–90
- **Title Generation for User Generated Videos**
Zeng, K., Chen, T., Niebles, J., Sun, M., Leibe, B., Matas, J., Sebe, N., Welling, M.
SPRINGER INTERNATIONAL PUBLISHING AG.2016: 609–25
- **DAPs: Deep Action Proposals for Action Understanding**
Escorcia, V., Heilbron, F., Niebles, J., Ghanem, B., Leibe, B., Matas, J., Sebe, N., Welling, M.
SPRINGER INTERNATIONAL PUBLISHING AG.2016: 768–84
- **Connectionist Temporal Modeling for Weakly Supervised Action Labeling**
Huang, D., Li Fei-Fei, Niebles, J., Leibe, B., Matas, J., Sebe, N., Welling, M.
SPRINGER INTERNATIONAL PUBLISHING AG.2016: 137–53
- **Fast Temporal Activity Proposals for Efficient Detection of Human Actions in Untrimmed Videos**
Heilbron, F., Niebles, J., Ghanem, B., IEEE
IEEE.2016: 1914–23
- **Modeling Temporal Structure of Decomposable Motion Segments for Activity Classification** *11th European Conference on Computer Vision*
Niebles, J. C., Chen, C., Li Fei-Fei, F. F.
SPRINGER-VERLAG BERLIN.2010: 392–405