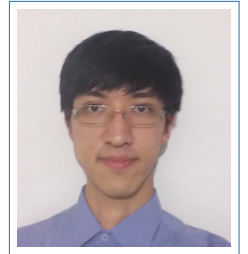# Henrique Morimitsu

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INRIA Grenoble - Rhône-Alpes
655 Avenue de l'Europe
38330 Montbonnot
France

Education

2011 – 2015
PhD in Computer Science, *University of São Paulo*, São Paulo, Brazil.
Thesis: "Multi-object tracking in structured videos using graphs with an application to action recognition"
Advisors: Dr. Roberto Marcondes Cesar Junior and Dr. Isabelle Bloch

2013 – 2014
Internship, *Télécom Paristech*, Paris, France.
Project: "High-level activity characterization in videos using graphs"
Advisor: Dr. Isabelle Bloch

2009 – 2011
MS in Computer Science, *University of São Paulo*, São Paulo, Brazil.
Thesis: "A structural approach for object detection and indoor localization with mobile devices"
Advisor: Dr. Roberto Marcondes Cesar Junior

2005 – 2008
BS in Information Systems, *University of São Paulo*, São Paulo, Brazil.
Scientific project 1: "A user-friendly tool for using neural networks"
Scientific project 2: "Independent Component Analysis for signal separation"
Scientific advisor: Esteban Fernandez Tuesta

Employment

2016
Postdoctoral researcher, *INRIA Grenoble - Rhône-Alpes*, Grenoble, France.
Project: "Deep learning applied to object tracking"
Advisors: Dr. Cordelia Schmid and Dr. Karteek Alahari

2015 – 2016
Postdoctoral researcher, *University of São Paulo*, São Paulo, Brazil.
Project: "Exploring structural information for tracking multiple objects"
Advisor: Dr. Roberto Marcondes Cesar Junior

Languages

Portuguese	Mother tongue
English	Fluent (TOEFL iBT 109/120)
French	Intermediate
Japanese	Basic

Main research interests

Computer vision, object tracking, object detection, deep learning, action and activity recognition, structural pattern recognition.

Technical skills

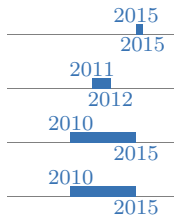|	
Programming	C/C++, Caffe, Java, Matlab, Python, OpenCV, Scikit-learn, Tensorflow

Software

2017	Structured Graph Tracker (`github.com/henriquem87/structured-graph-tracker`)
2017	Online Object Tracking with Proposal Selection (`thoth.inrialpes.fr/research/pstracker/`)

Honors / Awards

Best student of the Information Systems class of 2008.

Activities

2015
2015

Teaching assistant, *Introduction to Computer Programming.*

2011
2012

Teaching assistant, *Introduction to Computer Programming.*

2010
2015

Organizer of the Go club, *Institute of Mathematics and Statistics.*

2010
2015

Network administrator, *Vision laboratory*, Institute of Mathematics and Statistics.

Services

Reviews for: IEEE Transactions on Image Processing (TIP), Journal of Computer Vision and Image Understanding (CVIU), IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE Access, IEEE International Workshop on Mobile Vision (IWMV) and The Conference on Graphics, Patterns, and Images (SIBGRAPI)

Committee member of the Latin American eScience Workshop 2013.

Committee member of the 15th Iberoamerican Congress on Pattern Recognition (CIARP) 2010.

Publications

[1] Henrique Morimitsu, Isabelle Bloch, and Roberto M. Cesar-Jr. Exploring structure for long-term tracking of multiple objects in sports videos. *Computer Vision and Image Understanding*, 159:89–104, 2017.

[2] Marcelo Hashimoto, Henrique Morimitsu, Roberto Hirata-Jr., and Roberto M. Cesar-Jr. Keygraphs: Structured features for object detection and applications. In Amita Pal and Sankar K. Pal, editors, *Pattern Recognition and Big Data.* World Scientific, 2017.

[3] Henrique Morimitsu, Roberto M Cesar Jr, and Isabelle Bloch. Attributed graphs for tracking multiple objects in structured sports videos. In *International Conference on Computer Vision Workshops - CVsports*, pages 34–42, Santiago, Chile, 2015.

[4] Henrique Morimitsu, Roberto M Cesar Jr, and Isabelle Bloch. A spatio-temporal approach for multiple object detection in videos using graphs and probability maps. In Aurélio Campilho and Mohamed Kamel, editors, *Image Analysis and Recognition*, pages 421–428, Vilamoura, Portugal, 2014.

[5] Henrique Morimitsu, Roberto M Cesar Jr, and Isabelle Bloch. A graph-based approach for object detection and action recognition in videos. In *International Conference on Pattern Recognition Workshops - FEAST 2014*, Stockholm, Sweden, 2014.

[6] Henrique Morimitsu, Rodrigo B. Pimentel, Marcelo Hashimoto, Roberto M. Cesar-Jr., and Roberto Hirata-Jr. Wi-fi and keygraphs for localization with cell phones. In *IEEE International Workshop on Mobile Vision*, Barcelona, Spain, 2011.

[7] Henrique Morimitsu, Marcelo Hashimoto, Rodrigo B. Pimentel, Roberto M. Cesar-Jr., and Roberto Hirata-Jr. Keygraphs for sign detection in indoor environments by mobile phones. In Hiaoyi Jiang, Miquel Ferrer, and Andrea Torsello, editors, *Graph-Based Representations in Pattern Recognition*, volume 6658 of *Lecture Notes in Computer Science*, pages 315–324, Münster, Germany, 2011.

[8] Patricia R. Oliveira, Henrique Morimitsu, and Esteban F. Tuesta. Using visual metrics to selecting ICA basis for image compression: A comparative study. In Angle Kuri-Morales and Guillermo Simari, editors, *Advances in Artificial Intelligence – IBERAMIA 2010*, volume 6433 of *Lecture Notes in Computer Science*, pages 80–89, Bahía Blanca, Argentina, 2010.