# Andrew Toshiaki Nakayama Kurauchi

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| **RESEARCH INTERESTS** | Human-computer interaction; Assistive technology; Eye tracking; Text entry. |

**EDUCATION**

**University of São Paulo**, São Paulo, SP, Brazil — *2007 - 2011*
*B.Sc. in Computer Science*

**Boston University**, Boston, MA, USA — *2014 - 2015*
*Visiting Ph.D. student*

**University of São Paulo**, São Paulo, SP, Brazil — *2012 - 2018*
*Ph.D. in Computer Science*

**AWARDS**

**São Paulo Research Foundation, grant 2013/06791-0** — *2013 - 2016*
*Full Ph.D. scholarship*

**National Science Foundation, PETRA Conference** — *2015*
*Doctoral Consortium Award*

**São Paulo Research Foundation, grant 2014/12048-0** — *2014 - 2015*
*Research internship abroad*

**PUBLICATIONS**

Velloso, E.; Coutinho, F. L.; **Kurauchi, A. T. N.**; Morimoto, C. H. "Circular Orbits Detection for Gaze Interaction Using 2D Correlation and Profile Matching Algorithms". *Proceedings of the 2018 ACM Symposium on Eye Tracking Research & Applications, ETRA'18.* Warsaw, Poland, June 2018. – **Paper of Note Award**

**Kurauchi, A. T. N.**; Feng, W.; Joshi, A.; Morimoto, C. H.; Betke, M. "EyeSwipe: Dwell-free Text Entry Using Gaze Paths". *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, CHI'16.* San Jose, USA, May 2016.

Diaz-Tula, A.; **Kurauchi, A. T. N.**; Coutinho, F.; Morimoto, C. H. "Heatmap Explorer: an interactive gaze data visualization tool for the evaluation of computer interfaces". *Proceedings of the 15th Brazilian Symposium on Human Factors in Computing Systems, IHC'16.* São Paulo, Brazil, Oct. 2016.

**Kurauchi, A. T. N.**; Feng, W.; Morimoto, C. H.; Betke, M. "HMAGIC: Head Movement and Gaze Input Cascaded Pointing". *Proceedings of the 8th ACM International Conference on PErvasive Technologies Related to Assistive Environments, PETRA'15.* Corfu, Greece, Jul. 2015.

**Kurauchi, A. T. N.**; Tula, A. D.; Morimoto, C. H. "Facilitating Accessibility and Digital Inclusion Using Gaze-Aware Wearable Computing". *XIII Brazilian Symposium on Human Factors in Computer Systems, IHC'14.* Foz do Iguaçu, Brazil, Oct. 2014.

**Kurauchi, A. T. N.**; Tula, A. D.; Morimoto, C. H. "Método de Calibração de

Rastreadores de Olhar Móveis Utilizando 2 Planos Para Correção de Paralaxe". *XXIV Brazilian Congress on Biomedical Engineering, CBEB'14*. Uberlândia, Brazil, p.2683-2686, Oct. 2014.

Tula, A. D.; **Kurauchi, A. T. N.**; Morimoto, C. H.; Veitzman, S.; Ianof, J. N. "Sistema Móvel de Baixo Custo Para Rastreamento do Olhar Voltado á Identificação de Disfunções Oculomotoras". *XXIV Brazilian Congress on Biomedical Engineering, CBEB'14*. Uberlândia, MG, Brazil, p.2830-2833, Oct. 2014.

**Kurauchi, A. T. N.**; Morimoto, C. H.; Mardanbegi, D.; Hansen, D. W. "Towards Wearable Gaze Supported Augmented Cognition". *Proc. of the CHI 2013 Workshop on Gaze Interaction in the Post-WIMP World*, Paris, France, Apr. 2013.

Tula, A. D.; **Kurauchi, A. T. N.**; Morimoto C. H. "Facilitating Gaze Interaction Using the Gap and Overlap Effects". *CHI '13 Extended Abstracts on Human Factors in Computing Systems*. Paris, France, Apr. 2013.

**ORAL PRESENTATIONS**  **University of São Paulo (USP)**, Virada Científica, "Interacting without Mouse and Keyboard", São Paulo, São Paulo, Brazil, October, 2015.

**Boston University (BU)**, Image and Video Computing Group, "Eye Tracking Research at USP", Boston, Massachusetts, USA, September, 2014.

**Universidade Bandeirante de São Paulo (UNIBAN)**, Jornada de Tecnologia da Informação, "Introduction to Android app development", São Paulo, São Paulo, Brazil, August, 2011.

**PROJECTS**  **CameraMouseSuite: Camera-Based Mouse Replacement Interface**

Cross-platform software that allows the user to control the mouse pointer by head movements using a webcam.

   Source code:   https://github.com/toshikurauchi/CameraMouseSuite-cross-platform

**Haytham-Linux: Head-Mounted Gaze Tracker**

Linux software for head-mounted gaze trackers using Qt and OpenCV.

   Source code:      https://bitbucket.org/toshikurauchi/haytham-linux/
   Documentation:   http://toshikurauchi.bitbucket.org/Haytham-Linux/

**Pandora's Box Graphics Engine**

Implementation of a graphics engine in C++ with an example application on tensor field visualization.

   Source code:   https://github.com/victorkendy/PandoraBox

**PROFESSIONAL EXPERIENCE**  **Caelum** (http://www.caelum.com.br/), São Paulo, SP, Brazil       2010 - 2012
*Software engineer and instructor*
- Teaching "Java and Object-Oriented Programming" and "Mobile Development with Google Android".
- Java web development with VRaptor.

**TEACHING EXPERIENCE**

**Insper**

*Teaching Assistant*                                  Feb. 2017 - Jun. 2018
Collaborative Agile Development

*Teaching Assistant*                                  Feb. 2017 - Jun. 2018
Computational Robotics

*Teaching Assistant*                                  Feb. 2017 - Jun. 2018
Software Design

*Teaching Assistant*                                  Aug. 2017 - Dec. 2017
Data Science

**University of São Paulo**

*Teaching Assistant*                                  Sep. 2016 - Dec. 2016
Principles of Algorithm Design

*Teaching Assistant*                                  Mar. 2016 - Jun. 2016
Principles of Human-Computer Interaction

*Teaching Assistant*                                  Mar. 2013 - Jun. 2013
Introduction to Computer Graphics

*Teaching Assistant*                                  Sep. 2012 - Dec. 2012
Principles of Algorithm Design

**VOLUNTEER EXPERIENCE**

**2014 Symposium on Eye Tracking Research and Applications**, Safety Harbor, FL, USA                                  Mar. 2012
*Student volunteer.*

**AGENTE**, São Paulo, SP, Brazil                                  2011
*Math teacher* in a preparatory community course for university entrance exams.