

Nicko Reginio Caluya

Augmented Reality • Interactive Learning • Training & Educational Environments
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Birthday: February 14, 1993
Birthplace: Muntinlupa City, Philippines
Nationality: Filipino

Education & Employment

2021-2022 Researcher, Interactive Media Design Laboratory
2018-2022 *Doctor of Engineering*, Interactive Media Design Laboratory
2016-2018 *Master of Engineering*, Interactive Media Design Laboratory
Nara Institute of Science & Technology (NAIST), Japan
2014-2016 Researcher, Ateneo Laboratory for the Learning Sciences
Assistant Instructor, Department of Information Systems & Computer Science
Ateneo de Manila University, Philippines
2013-2014 Junior Programmer, Skillshot Labs, Taguig City, Philippines
2009-2013 *Bachelor of Science* in Computer Science
Specialization in Interactive Multimedia & Games, Minor in Literature-Filipino
Ateneo de Manila University (ADMU), Philippines

Grants, Honors & Awards

2016-2021 Scholarship Recipient (International Priority Graduate Programs)
Ministry of Education, Culture, Sports, Science & Technology, Japan
2016 Merit Scholarship Program Award, Asia Pacific Society for Computers in Education
2009-2013 Scholarship Recipient (Merit B Category), Department of Science & Technology, Philippines
2009-2013 Financial Aid Scholar (100% Tuition Fees, Dormitory Fee, & Allowance)
Ateneo Alumni Scholars Association & Office of Admission & Aid, Ateneo de Manila University
2013 Loyola Schools Awards for the Arts, School of Humanities, Ateneo de Manila University

Teaching

Ritsumeikan University

2024-	31984	<i>PBL2: Team-based Design (G2)</i>
2023-	33318 • 31718	<i>Data Structures and Algorithms</i>
2023-	32296 • 31710 • 31711	<i>Programming Practice 2</i>
2022-	35491 • 33166 • 31884	<i>Computer Graphics</i>
2022-	35601 • 33275 • 31991	<i>Imperative Programming Practice (C)</i>
2022-	32996 • 33198 • 33199 • 31917	<i>Programming Practice 1</i>

Ateneo de Manila University

2016	DGDD 150.1	<i>Special Topics in Game Studies: History in Digital Games</i>
2014b, 2015a	CS 30	<i>Introduction to Information Technology</i>
2014c, 2015b	CS 177	<i>Introduction to Computer Graphics Programming</i>
2014-2015a	CS 179.4	<i>Special Topics in Interactive Multimedia: 3D Modeling & Animation</i>

Programming Knowledge

**recently and/or frequently used*

- 2012- C# for Unity (Games Design & Development)*
- 2012- Python* for Math & Linear Algebra Applications, Pandas (Data Manipulation and Analysis)
- 2016- WebGL, R* for Statistical Analysis
- 2011- C++ for Computer Graphics Programming (OpenGL)
- 2016- SPSS for Statistical Analysis
- 2013- C for ARToolkit, Objective-C for iOS
- 2011- C for Linux/Unix Operating Systems
- 2010- MySQL for Database Management Systems, Java for Data Structures & Algorithms

Languages

- English TOEIC: 990/990 • TOEFL: 104/120
- Japanese Basic Knowledge
- Filipino (Tagalog) First, Native Language

Scientific Publications & Conferences

- 2025 **Nicko R. Caluya**, Carlos Rhenell Borlado, and Damon M. Chandler, “On the Effects of Video Game Texture Resolution on Navigation Performance,” In Proceedings of *Electronic Imaging* (EI ’25). (Paper)
- 2024 **Nicko R. Caluya**, Eiji Yahara, and Damon M. Chandler, “[The Effect of Stimulus Concurrency on Memorizing Constellations in VR](#),” In Proceedings of of the 32nd *APSCE International Conference on Computers in Education* (ICCE ’24). (Poster)
- 2024 Eric Cesar E. Vidal Jr, **Nicko R. Caluya**, Joan Dominique L. Lee, Kenneth King L. Ko, Jed Laszlo O. Jocson, Gerick Jeremiah Niño N. Go, “[Improving Engagement in Museums Through Virtual Reality Educational Escape Rooms \(VREER\): A Framework and Usability Study](#),” In Proceedings of of the 32nd *APSCE International Conference on Computers in Education* (ICCE ’24). (Workshop Paper)
- 2024 **Nicko R. Caluya**, Carson Cheung, and Damon M. Chandler, “Can Language Learning Happen in Technology-Mediated Translation Aids? ,” In Proceedings of of the 3rd *APSCE International Conference on Future Language Learning* (ICFULL ’24). (Conference Paper)
- 2023 Youssef Alalawi, Damon M. Chandler, and **Nicko R. Caluya**, “[A CNN-Based Arabic Diacritic Symbol Recognition System Using Domain Adaptation](#),” In Proceedings of of the 8th *International Conference on Sustainable Information Engineering and Technology* (SIET ’23). (Conference Paper, Best AI Paper)
- 2023 **Nicko R. Caluya**, Xiaoyang Tian, and Damon M. Chandler, “[Comparison of AR and VR Memory Palace Quality in Second-Language Vocabulary Acquisition](#),” In Proceedings of *Electronic Imaging* (EI ’23). (Invited Paper)
- 2023 Maheshya Weerasinghe, Klen Čopič Pucihar, Julie Ducasse, Aaron Quigley, Alice Toniolo, Angela Miguel, **Nicko R. Caluya**, Matjaž Kljun, “[Exploring the Future Building: Representational Effects on Projecting Oneself Into the Future Office Space](#)” *Virtual Reality* 27, pp. 51-70. (Journal)
- 2021 **Nicko R. Caluya**, Alexander Plopski, Christian Sandor, Yuichiro Fujimoto, Masayuki Kanbara, and Hirokazu Kato, “[Does Overlay Field of View in Head-Mounted Displays Affect Spatial Memorization?](#)” *Computer and Graphics* 102, pp. 554-565. [dx.doi.org/10.1016/j.cag.2021.09.004](https://doi.org/10.1016/j.cag.2021.09.004) (Journal)
- 2021 **Nicko R. Caluya**, Yuichiro Fujimoto, Masayuki Kanbara, and Hirokazu Kato, “[Influencing Driving Speed Using Perception-Based Augmented Reality](#),” In Proceedings of the *Asia Pacific Workshop on Mixed and Augmented Reality* (APMAR ’21). (Workshop Paper)
- 2019 Resty C. Collado, **Nicko R. Caluya**, and Marc Ericson C. Santos, “[Teachers’ Evaluation of Augmented Reality-Based Motion Graphing Motion](#),” *Journal of Physics: Conference Series* 1286, pp. 1-9. [dx.doi.org/10.1088/1742-6596/1286/1/012051](https://doi.org/10.1088/1742-6596/1286/1/012051). (Journal)
- 2019 **Nicko R. Caluya** and Marc Ericson C. Santos, “[Kantenbouki VR: A Virtual Reality Authoring Tool for Learning Localized Weather Reporting](#),” In Proceedings of the *IEEE Conference on Virtual Reality & 3D User Interfaces* (IEEE VR ’19), Osaka, Japan, pp. 866-867. [dx.doi.org/10.1109/VR.2019.8798216](https://doi.org/10.1109/VR.2019.8798216) (Poster)
- 2018 Eric Cesar E. Vidal, Jr., Jayzon F. Ty, **Nicko R. Caluya**, and Ma. Mercedes T. Rodrigo, “[MAGIS: Mobile](#)

Augmented-reality Games for Instructional Support,” *Interactive Learning Environments* 28(6), pp. 895-907. [dx.doi.org/10.1080/10494820.2018.1504305](https://doi.org/10.1080/10494820.2018.1504305) (Journal)

- 2018 **Nicko R. Caluya**, Alexander Plopski, Jayzon F. Ty, Christian Sandor, Takafumi Taketomi, and Hirokazu Kato, “Transferability of Spatial Maps: Augmented Versus Virtual Reality Training,” In Proceedings of the *IEEE Conference on Virtual Reality & 3D User Interfaces* (IEEE VR '18), Reutlingen, Germany, pp. 387-393. [dx.doi.org/10.1109/VR.2018.8447561](https://doi.org/10.1109/VR.2018.8447561) (Conference Paper)
- 2017 Resty C. Collado, **Nicko R. Caluya**, and Marc Ericson C. Santos “Teachers’ Evaluation of Augmented Reality-Based Motion Graphing Motion,” In Proceedings of the *International Conference on Physics Education* (GIREP-ICPE-EPEC '17), Dublin, Ireland. (Conference Paper)
- 2016 Ma. Mercedes T. Rodrigo, **Nicko R. Caluya**, Eric Cesar E. Vidal, Jr., Jenilyn L. Agapito, and Walfrido David A. Diy III. “Usability Study of an Augmented Reality Game for Philippine History,” Paper, In Proceedings of the *International Conference for Computers in Education*, Mumbai, India. (Conference Paper)
- 2016 Eric Cesar E. Vidal, Jr., Jayzon F. Ty, **Nicko R. Caluya**, and Ma. Mercedes T. Rodrigo. “MAGIS: Mobile Augmented- reality Games for Instructional Support,” In Proceedings of the *3rd Asia-Europe Symposium on Simulation & Serious Gaming* (VRCAI '16). ACM, New York, NY, USA, pp. 191-194. (Conference Paper)
- 2015 Ma. Mercedes T. Rodrigo, **Nicko R. Caluya**, Walfrido David A. Diy III, and Eric Cesar E. Vidal, Jr. “Igpaw: Intramuros – Design of an Augmented Reality Game for Philippine History,” Paper, In Proceedings of the *International Conference for Computers in Education*, Hangzhou, China. (Conference Paper)
- 2013 **Nicko R. Caluya** and Juan Carlos G. Mapua. “Developing a Real-time Tactics Game Using an Optimized Cost-Effective Eye-Tracking Device,” *Philippine Computing Science Congress*, Manila, Philippines. (Poster)

Service & Internships

- 2024-2025 Technical Consultant, *A Laboratory and Game Engine/Framework for Tertiary-Level Virtual, Augmented, and Mixed Reality (VAMR) Educational Applications* (Ateneo de Manila University)
- 2024-2025 Reviewer, *Virtual Reality* (Springer Link VR)
- 2023-2025 Reviewer, *Human Factors in Computing Systems* (CHI)
- 2023 Session Chair and Panel Moderator, *Special Session on AR/VR, Human Vision and Electronic Imaging* (HVEI)
- 2023 Reviewer, *IEEE Transactions on Visualization and Computer Graphics* (IEEE TVCG)
- 2022-2024 Reviewer, *International Symposium on Mixed and Augmented Reality* (ISMAR)
- 2021-2024 Reviewer, *Virtual Reality Software and Technology* (VRST)
- 2020,2021 Reviewer, *Interactive Learning Environments*
- 2019 Intern, Humans Interacting with Computers at University of Primorska (HICUP Lab) (Koper, Slovenia)
- 2019, 2020 Student Volunteer and Reviewer, (Osaka, Japan); Reviewer (Virtual); *IEEE Virtual Reality*
- 2017-2021 Organizer (Logistics, Web Design), NAIST Project for Interns (for Ateneo de Manila University)
- 2015, 2018 Student Volunteer and Reviewer, SIGGRAPH ASIA 2015 (Kobe, Japan), 2018 (Tokyo, Japan)
- 2018 Intern, Remote Internships for Young Researchers - Weathernews Inc. (Chiba-shi, Japan)
- 2013 Intern, Ateneo Laboratory for the Learning Sciences (ADMU) &
Interactive Media Design Laboratory (NAIST) Joint Internship for Augmented Reality

Talks & Demonstrations

- Jun 2024 “A Web-Based Real-Time Subtitling Application for HMD-Based Translation”, for the 3rd International Conference on the Future of Language Learning. Areté, Manila, Philippines.
- May 2022 “Newer Fields of View: Perceptual and Performance Effects in XR Across Disciplines”, for the Ateneo Laboratory for the Learning Sciences Lecture Series, online.
- Jun 2016 “The Role of Architecture in an Augmented Reality Game for Philippine History”, for Architectural Students’ Association of the Philippines - UP Chapter, RealityX: A Virtual Reality Experience, Quezon City, Metro Manila, Philippines.
- Sep 2015 “Mixed Reality: Virtual and Augmented Reality Technologies and Applications”, for Manresa School, Parañaque City, Metro Manila, Philippines.
- Feb 2015 “Designing and Developing An Augmented Reality Game for Philippine History”, for Philippine Society of Information Technology Students-Western Visayas (PSITS-WV), Kapis Mansions, Roxas City, Capiz, Philippines.

- Feb 2015 “3D Modeling & Animation”, for University of the Philippines Association of Computer Science Majors (UP CURSOR) Computer Science Summit 1.0, Quezon City, Metro Manila, Philippines.
- Oct 2014 “Computer Games & Affective Computing”, for Immaculate Conception Academy, Mandaluyong City, Philippines.
- May 2013 “Authoring Editable AR Content on Paper Bills”, Nara Institute of Science & Technology, Nara, Japan.
- Feb 2013 “Developing a Real-time Tactics Game Using an Optimized Cost-Effective Eye-Tracking Device.”, Ateneo de Davao University, Davao City, Philippines.

(Miscellaneous) Literary Publications & Workshops

- 2022 **Nicko Reginio Caluya** translates Edgar Calabia Samar, “No Deity of Fire”, “Corner”, “Folktale”, *ANMLY 35 - Kognisyon: Contemporary Philippine Literature in Translation*.
- 2022 **Nicko Reginio Caluya**, “Katawan Ko ang Eskaparate at Kalansay ng Aking Nakaraan ang Laman”, *Heights* Vol. LXIX No. 2, Quezon City: Ateneo de Manila University.
- 2021 **Nicko Reginio Caluya**, “Mga Nagpapahinga / Bodies at Rest / 静止している物体”, “Pagkilatis kay Derek”, *TLDTD Issue No. 2*.
- 2021 **Nicko Reginio Caluya**, “Riddle”, *49 Philippine-Language Poets in Translation, The Loch Raven Review*.
- 2020 **Nicko Reginio Caluya**, #NOVISION2020 for Curare Art Space.
- 2020 **Nicko Reginio Caluya**, *Nasa Loob ang Kulo: Selected Haikai, 2013-2019*.
- 2018 **Nicko Reginio Caluya**, “Kinakalinga”, *In Sight of Sharks: A Literary and Artistic Collection for Shark Awareness*, Makati City: Marine Wildlife Watch of the Philippines.
- 2017 **Nicko Reginio Caluya**, “Soneto 80”, “Inhenyeriya”, “Arrangements”, *Heights Vol. LXV No. 1*, Quezon City: Ateneo de Manila University.
- 2014 **Nicko Reginio Caluya**, “Umuulan sa Lupang Arenda”, “Alinlangan”, *Heights Vol. LXI No. 2*, Quezon City: Ateneo de Manila University.
- 2013 **Nicko Reginio Caluya**, “Local Express”, “Shinsaibashi-suji”, “Ligaw na Salin”, “Mga Usa ng Todaiji”, “Takayama”, *Heights Vol. LXI No. 1*, Quezon City: Ateneo de Manila University.
- 2013 **Nicko Reginio Caluya**, “Regular Expressions”, “Tanaw Mula sa Punta Fuego”, “Pasintabi kay Feynman”, “Balanse”, *Heights* Vol. LX No. 4, Quezon City: Ateneo de Manila University.
- 2012 Nicko Reginio Caluya, “Gemini”, *Heights* Vol. LX No. 2, Quezon City: Ateneo de Manila University.
- 2012 **Nicko Reginio Caluya**, “Manman”, “Babala”, “Dayuhan”, “Being Erasure”, *Heights* Vol. LX No. 1, Quezon City: Ateneo de Manila University.
- 2012 **Nicko Reginio Caluya**, “[I believe in nothing. Just.]”, “Digmaan”, *Heights* Vol. LIX No. 2, Quezon City: Ateneo de Manila University.
- 2012 Fellow, 11th Ateneo National Writers’ Workshop. Quezon City, Metro Manila, Philippines.
- 2012 **Nicko Reginio Caluya**, “Aquarius”, “Aquarius”, “Erehe”, “Paliwanag”, *Heights* Vol. LIX No. 1, Quezon City: Ateneo de Manila University.
- 2010 **Nicko Reginio Caluya**, “7 Minuto ng Kasalanan”, *Heights* Vol. LVII No. 2, Quezon City: Ateneo de Manila University.
- 2010 Fellow, 16th Ateneo Heights Writers’ Workshop. Antipolo City, Rizal, Philippines.