Contact Information

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Research Interests

My research focuses on computer science education, AI-supported interventions, and human-centered computing. I design data-driven systems to improve student engagement and retention, particularly in early CS courses and capstone programs. I also lead interdisciplinary projects using IoT and mobile technologies to advance health, energy efficiency, and equity in underserved communities.

Education

Department of Projects in Engineering - School of Industrial Engineering of Barcelona (ETSEIB)
Polytechnic University of Catalonia (UPC). Barcelona, Spain.

2012 Ph.D., Projects for Technological Innovation. Wellness Design.
2007 M.Sc., Industrial Design and Product Development.
2007 B.Sc., Industrial Engineering. Minored in Information and Computer Sciences.

Employment

10/25 - present. Associate Director for Training Programs
California Institute for Telecommunication & Information Technology (Calit2)
University of California, Irvine.

07/24 - present. Vice-Chair of Professional Programs and Faculty Director of the Master in CS
Department of Computer Science
Donald Bren School of Information and Computer Sciences
University of California, Irvine.

07/24 - present. Associate Professor of Teaching
Department of Computer Science
Donald Bren School of Information and Computer Sciences
University of California, Irvine.

07/18 - 6/24. Assistant Professor of Teaching
Department of Computer Science
Donald Bren School of Information and Computer Sciences
University of California, Irvine.

10/13 - present. Research Associate
California Institute for Telecommunication & Information Technology (Calit2)
University of California, Irvine.
In collaboration with public agencies and industry, I manage multidisciplinary projects to research user experience and engagement in Healthcare and Energy Efficiency, among others. I also mentor students in product design, mechanical and software engineering, and computer and data sciences.

10/12 - 09/13. Postdoctoral Scholar
Joined appointment: Department of Mechanical and Aerospace Engineering & Calit2
University of California, Irvine, CA, US.
To design and implement new digital applications to assist patients undergoing physical rehabilitation after stroke and spinal cord injuries. Designing new interfaces integrating embodied agents to provide continuous guidance and engagement.

04/09 - 09/12 Project Manager
Department of Product and Systems Design
Narada Robotics S.L., Barcelona, Spain.

07/07 - 04/09 Product Engineer
Department of Industrial Design,
Concept to Engineering S.L., Barcelona, Spain.

06/05 - 07/07 Junior Consultant
Department of Transportation
Advanced Logistic Group S.L., Barcelona, Spain.

10/02 - 06/05 Computer Technician and Help Desk
NetLand Computer Systems Integration S.L., Barcelona, Spain.

Journal Publications

J.11 Lim, P. S., Fortier, M. A., Kaplan, S. H., Gago-Masague, S., & Kain, Z. N. (2025, in press). Predictors of postoperative recovery using self-reported HRQoL among children undergoing elective surgery. *Paediatrics & Child Health*. https://doi.org/10.1093/pch/pxaf086

J.10 Peterson, D.J., de Haro, C.M., Kilgore, D.B., Sorkin, D.H., Gago-Masague, S., Billimek, J. (2025). Barriers and Facilitators to Video Telehealth Use in Low-Income Hispanic Patients. *Family and Community Health*, 48(3), 223. DOI: 10.1097/FCH.0000000000000430

J.9 Lim, P.S., Fortier, M.A., Kaplan, S.H., Gago-Masague, S., Kain, Z.N. (2025). Racial/Ethnic and Linguistic Disparities in Self-reported Health-Related Quality of Life Among Children Undergoing Elective Surgery. *Racial and Ethnic Health Disparities,* 1–8. DOI: 10.1007/s40615-025-02468-9

J.8 Lim, P.S., Fortier, M.A., Kaplan, S.H., Gago-Masague, S., Kain, Z.N. (2025). Predictors of Pain Concordance Among Caregiver–Child Dyads Undergoing Elective Surgery. *Pediatric Anesthesia*, 35(5), 359–366. DOI:10.1111/pan.15082

J.7 Kaplan SH, Shaughnessy M, Fortier MA, Vivero-Montemayor M, Gago-Masague S, Hayes D, Stern H, Dai M, Heim L, Kain Z. (2022). The role of parental health and distress in assessing children's health status. Qual Life Res 31, 3403–3412. Doi:10.1007/s11136-022-03186-z

J.6 Kaplan SH, Fortier MA, Shaughnessy M, Maurer E, Vivero-Montemayor M, Gago-Masague S, Hayes D, Stern HS, Dai M, Kain ZN. (2021). Development and initial validation of self-report measures of general health, preoperative anxiety, and postoperative pain in young children using computer-administered animation. *Pediatric Anesthesia* 2021 Feb;31(2):150-159. doi: 10.1111/pan.14068. Epub 2020 Dec 16.

J.5 Hunter JF, Acevedo AM, Gago-Masague S, Kain A, Yun C, Torno L, Jenkins BN, Fortier MA. (2020). A Pilot Study of the Preliminary Efficacy of Pain Buddy: A Novel Intervention for the Management of Children's Cancer-related Pain. *Pediatric Blood and Cancer*. 2020 Oct;67(10):e28278. doi: 10.1002/pbc.28278. Epub 2020 Aug 2.

J.4 Gago Masague, S. (2018). Designing Digital Applications to Promote Physical Activity and Healthy Eating among Young Population. *Journal of Childhood Obesity*, Vol No 3 Iss No 2: 6. doi:10.21767/2572-5394.100046.

J.3 Deshpande, P., Tauber, S., Chang, S., Gago Masague, S. & Jameson, K.A. (2016). Digitizing a Large Corpus of Handwritten Documents Using Crowdsourcing and Cultural Consensus Theory. *International Journal of Internet Science*. Vol 11 (1), 8–32

J.2 Lee, J., Evangelista, L.S., Moore, A.A., Juth, V., Guo, Y., Gago Masague, S., Lem, C.G, Nguyen, M., Khatibi, P., Baje, M. & Amin, A.N. (2016). Feasibility Study of a Mobile Health Intervention for Older Adults on Oral Anticoagulation Therapy. *Gerontology and Geriatric Medicine*. 2016 Oct 7;2:2333721416672970. doi: 10.1177/2333721416672970.

J.1 Fortier, M. A., Chung, W. W., Martinez, A., Gago Masague, S., & Sender, L. (2016). Pain Buddy: A Novel use of m-Health in the Management of Children's Cancer Pain. *Computers in Biology and Medicine*, 76, 202-214. doi:10.1016/j.compbiomed.2016.07.012

Book Chapters

B.4 Gago Masague S., Chen T. & Li G.P. (2016). Promoting Physical Exercise Through Embodied Trainers: A Systematic Literature Review. The Digitization of Healthcare: new challenges and opportunities. *Palgrave MacMillan, Springer International*.

B.3 Jameson, K. A., Benjamin, N. A., Chang, S.M., Deshpande P. S., Gago Masague S., Harris I.G., Jiao, Y., & Tauber S. (2015). Mesoamerican Color Survey Digital Archive. Encyclopedia of Color Science and Technology. *Ronnier Luo, Ed., Springer Berlin Heidelberg*, 1-13. doi:10.1007/978-3-642-27851-8_375-1

B.2 Gago Masague, S., & Lloveras-Macia, J. (2015). User-Centered Design for Emotion: A Case Study in Wellness Products. *Complex Systems Design & Management*, 193-206. doi:10.1007/978-3-319-11617-4_14

B.1 Gago Masague, S., & Lloveras-Macia, J. (2013). Human Emotional Interaction and Hydrotherapy: Industrial Design Keys. *Complex Systems Design & Management*, 259-272. doi:10.1007/978-3-642-34404-6_17

Refereed Conference Proceedings

C.24 Weber, J. L., Maldonado, U., Diaz Cama, A., Chen, J. T. J., Angulo, A. H., Martinez Neda, B., Wong-Ma, J., & Gago-Masague, S. (2025, November). "Lightweight LLM for accurate & accessible automated course support in student forums". To appear in the Proceedings of the 2025 IEEE Frontiers in Education Conference (FIE), Nashville, TN, United States.

C.23 Segura, M. E., Vergés, P., Ky, R., Aragott, R., Garcia, A. K., Trong, T. D., Hyodo, M., Nicolau, A., Givargis, T., & Gago-Masague, S. (2025). "Advancing intoxication detection: A smartwatch-based approach." To appear in the Proceedings of the 11th IEEE World Forum on Internet of Things (WF-IoT), Chengdu, China.

C.22 Martinez Neda B., Singh A., Wang M., Zhang Z., Weber J.L., Gago-Masague S., and Wong-Ma J. "Using Admission Records and Student Survey Responses for Early Prediction of CS1 Performance." To appear in the Proceedings of the 17th International Conference on Educational Technology and Computers (ICETC), Barcelona, Spain, September 18–21, 2025.

C.21 Vergés P., Segura M., Arangott R., Garcia A.K., Reynoso L.G., Nicolau A., Givargis T., and Gago-Masague S. "Smartwatch-Based Prediction of Transdermal Alcohol Levels Using Hyperdimensional Computing." 2024 IEEE 10th World Forum on Internet of Things (WF-IoT), Ottawa, Canada, November 10–13, 2024, pp. 1–6. https://doi.org/10.1109/WF-IoT62078.2024.10811151

C.20 Priyadarshini A., and Gago-Masague S. "Fair Evaluator: An Adversarial Debiasing-based Deep Learning Framework in Student Admissions." 2024 IEEE 6th International Conference on

Cognitive Machine Intelligence (CogMI), Washington, DC, USA, October 28–31, 2024, pp. 152–161. https://doi.org/10.1109/CogMI62246.2024.00029

C.19 Weber J.L., Martinez Neda B., Gago-Masague S., and Wong-Ma J. "Maximizing Individual Learning Goals Through Customized Student-Project Matching (SPM) in CS Capstone Projects." 2024 IEEE Frontiers in Education Conference (FIE), Washington, DC, USA10.1109/EDUCON60312.2024.10578596, October 13–16, 2024, pp. 1–8. https://doi.org/10.1109/FIE61694.2024.10893018

C.18 Segura M., Vergés P., Chen J.T., Arangott R., Garcia A.K., Reynoso L.G., Nicolau A., Givargis T., and Gago-Masague S. "Enhanced detection of transdermal alcohol levels using hyperdimensional computing on embedded devices." 2024 International Joint Conference on Neural Networks (IJCNN), Yokohama, Japan, June 30, 2024, pp. 1–8. https://doi.org/10.1109/IJCNN60899.2024.10650536

C.17 Martinez Neda B., Morales F., Carbajal Juarez K., Wong-Ma J., and Gago-Masague S. "Beyond the Hype: Perceptions and Realities of Using Large Language Models in Computer Science Education at an R1 University." IEEE Global Engineering Education Conference (EDUCON) Kos, Greece. May 8, 2024. https://doi.org/10.1109/EDUCON60312.2024.10578596

C.16 Weber J.L., Martinez Neda B., Carbajal Juarez K., Wong-Ma J., and Gago-Masague S. "Investigating the Role of Socioeconomic Factors on CS1 Performance." IEEE Global Engineering Education Conference (EDUCON) Kos, Greece. May 8, 2024. https://doi.org/10.1109/EDUCON60312.2024.10578863

C.15 Martinez Neda B., Weber J.L., Gago-Masague S., and Wong-Ma J. "Enhancing Learning in CS Capstone Courses through Advanced Project Matching." ACM Journal in Computer Science Coll. 39, 10, 33–39. California State University, Monterey Bay. Seaside, CA, March 30, 2024. https://dl.acm.org/doi/abs/10.5555/3665653.3665657

C.14 Segura M., Hu T., Martinez-Neda B., Xia, L., Randy W., Padma G., Liao S., Li G.P., and Gago-Masague S., "A Smart Patient Initiated Controlled Analgesic Recording Dispenser (PICARD) for Prescription Abuse Prevention" I9th IEEE World Forum on Internet of Things (WFIoT), Aveiro, Portugal, October 12, 2023. https://doi.org/10.1109/WF-IoT58464.2023.10539406

C.13 Priyadarshini A., Martinez-Neda B., and Gago-Masague S., "Admission Prediction in Undergraduate Applications: an Interpretable Deep Learning Approach" IEEE International Conference on Transdisciplinary AI (TransAI), Laguna Hills, California, September 25, 2023

C.12 Martinez-Neda B., Wang M., Errahmouni Barkam H., Wong-Ma J., and Gago-Masague S., "Staying Ahead of the Curve: Early Prediction of Academic Probation among First-Year CS Students" 2023 3rd International Conference on Applied Artificial Intelligence (ICAPAI), Halden, Norway, 2023, pp. 1-7, doi: 10.1109/ICAPAI58366.2023.10194020.

C.11 Geleta M, Xu J, Loya M, Wang J, Singh S, Li Z, and Gago-Masague S. Maestro: A Gamified Platform for Teaching AI Robustness. In Proceedings of the 13th Symposium on Educational Advances in Artificial Intelligence (EAAI). , 37(13), 15816-15824. https://doi.org/10.1609/aaai.v37i13.26878 Association for the Advancement of Artificial Intelligence (AAAI), Washington, DC, February 11, 2023.

C.10 Martinez-Neda B, Wang M, Errahmouni Barkam H, Wong-Ma J, and Gago-Masague S, "Revisiting Academic Probation in CS: At-Risk Indicators and Impact on Student Success." *The*

16th Consortium for Computing Sciences in Colleges (CCSC) Southwest Region Conference. Coll. 38, 10, 8–16. Irvine, CA, Apr 1, 2023

C.9 Martinez-Neda B, and Gago-Masague S., "Feasibility of Machine Learning Support for Holistic Review of Undergraduate Applications" International Conference on Applied Artificial Intelligence (ICAPAI), Halden, Norway, May 5, 2022, pp. 1-6, doi: 10.1109/ICAPAI55158.2022.9801571.

C.8 Pixley, J.E., Kunrath, S., Fallman, R.N., Gago-Masague, S. and Li, G.P., Using Feedback on Computer States to Improve Power Management Behaviors and Save Energy. In: Bertoldi, P. (eds) Energy Efficiency in Domestic Appliances and Lighting. Springer Proceedings in Energy. https://doi.org/10.1007/978-3-030-79124-7_19. Beijing, China, November 2019.

C.7 Pixley, J.E., Gago-Masague, S., Fallman R., and Li, G.P. (2018). "Field Test of a New User Interface for Computer Sleep Settings." *Proceedings of ACEEE Summer Study on Energy Efficiency in Buildings*, p 285, Pacific Grove, California, August 2018.

C.6 Xia, L., Klopfer, M., Guo, G., Zhang, Y., Qang, L., Kazmi U., Gago Masague, S., Pixley, J., Levorato, M. & Li, G.P. (2017). Behavior Adaptive Scalable Energy Management for Electronics – a demonstration in Home Appliances and Displays. *Energy Efficiency in Domestic Appliances and Lighting (EEDAL)*, p 865, Irvine, California, September 2017.

C.5 Gago Masague, S., Fallman, R., Xia, L., Klopfer, M. & Li, G.P. (2017). A new approach for residential real-time energy feedback using a low-cost non-intrusive load monitoring framework. *Energy Efficiency in Domestic Appliances and Lighting (EEDAL)*, p 1298, Irvine, California, September 2017.

C.4 Jameson, K. A., Deshpande, P.S., Tauber, S., Chang, S. M. & Gago Masague, S. (2016). Using Individual Differences to better Determine Normative Responses from Crowdsourced Transcription Tasks: An application to the R. E. MacLaury Color Categorization Archive. *International Symposium on Electronic Imaging (EI*), 28, 1-9 , San Francisco, Ca, February 2016.

C.3 Gago Masague, S. & Lloveras-Macia, J. (2011). Design for Emotional Wellness Products. *XV International Congress of Engineering Projects*, 2206-2218, Huesca, Spain, June 2011.

C.2 Gago Masague, S. & Lloveras-Macia, J. (2010). Trying to globalize the final design of products. *XIV International Congress of Engineering Projects*, 2534-2545, Madrid, Spain, June 2010.

C.1 Gago Masague, S. & Lloveras-Macia, J. (2009). Design Engineering versus Artistic Engineering. *XIII International Congress of Engineering Projects*, 1746-1753, Badajoz, Spain, June 2009.

Government Technical Reports

G.5 Pixley, J., Kunrath S., Gago-Masague S., Fallman R. & Li G.P. (2021). The Power Management User Interface Study. Energy Research And Development Division, California Energy Commission.

G.4 Pixley, J., Gago-Masague, S., Fallman, R. & Kunrath, S. (2019). Software Development Report for the Power Management User Interface Study. Energy Research And Development Division, California Energy Commission.

G.3 Xia, L., Pixley, J., Gago Masague, S. & Li, G.P. (2017) The SIM Home. *Emerging Technologies, Southern California Edison*.

G.2 Gago Masague, S., Fallman, R., Pixley, J., Xia, L., Klopfer, M. & Li, G.P. (2017) The Energy Channel 2.0. *Emerging Technologies, Southern California Edison*.

G.1 Guo, J., Sun Z., Zhang A. Y., Gago Masague S., and Li, G. P. (2014). Display of Smart Meter Information Via Set-Top Box Systems. *Emerging Technologies, Southern California Edison*.

Talks at Conference & invited events

T.37 Weber J.L., Park H., Song D.J., Apillanes J., Martinez Neda B., Wong-Ma J., and Gago-Masague S. "Investigating Autograder Usage in the Post-Pandemic and LLM Era." In Proceedings of the 56th ACM Technical Symposium on Computer Science Education (SIGCSE), Pittsburgh, Pennsylvania, February 26, 2025. https://dl.acm.org/doi/10.1145/3641555.3705208

T.36 Martinez Neda B., Morales F., Carbajal Juarez K., Wong-Ma J., and Gago-Masague S. Impacts of Academic Preparedness on CS1 Performance. In Proceedings of the 55th ACM Technical Symposium on Computer Science Education (SIGCSE). Association for Computing Machinery, New York, NY, USA, 1742–1743. Portland, OR, March 15, 2024. https://doi.org/10.1145/3626253.3635614

T.35 Weber J.L., Martinez Neda B., Carbajal Juarez K., Wong-Ma J., Gago-Masague S., and Ziv H. Measuring CS Student Attitudes Toward Large Language Models. In Proceedings of the 55th ACM Technical Symposium on Computer Science Education (SIGCSE). Association for Computing Machinery, New York, NY, USA, 1846–1847. Portland, OR, March 15, 2024. https://doi.org/10.1145/3626253.3635604

T.34 Gago-Masague S, Ahmed I, and Perez, N. Tailoring Students' Skills Training to Broaden Participation in Software Engineering. Southern California Software Engineering Symposium (SuCSES). Institute for Software Research, University of California, Irvine, CA, May 26, 2023.

T.33 Geleta M, Xu J, Loya M, Wang J, Singh S, Li Z, and Gago-Masague S. Design Factors of Maestro: A Serious Game for Robust AI Education. In Proceedings of the 54th ACM Technical Symposium on Computer Science Education (SIGCSE). Association for Computing Machinery, New York, NY, March 16, 2023. Doi:10.1145/3545947.3576265

T.32 Jameson, K.A., Deshpande, P., and Gago-Masague S. Internet-based solutions with Machine-Learning and Human Choice Behavior. The Center for Theoretical Behavioral Sciences mini-conference on: Internet-based evaluation of decision-theoretic approaches. Institute for Mathematical Behavioral Sciences, University of California, Irvine, CA, January 19, 2023.

T.31 Gago-Masague, S., Smart Spaces, Challenges and Opportunities. Seminar for 35 graduate students in the Master In Electrical Engineering. School of Industrial Engineering of Barcelona (ETSEIB), Polytechnic University of Catalonia (UPC). Barcelona, Spain, September 22, 2022.

T.30 Gago-Masague, S., "Engineering Education and Workforce Demand in California" Orientation for 120 graduate students in Engineering programs. Polytechnic University of Catalonia (UPC). Barcelona, Spain, September 21, 2022.

T.29 Martinez-Neda, B., Wang, M., Wong-Ma J., and Gago-Masague, S., Insights into Students' Academic Challenges in Computer Science. UC Tenure-Track Teaching Professor Conference (T3PN) 2022, UC Irvine, CA, Sept 10, 2022.

T.28 Pease HG, Torres LB, Cortes HG, Patel I, Gago-Masague S, Fortier MA. Designing a Social Support Platform for Adolescents Diagnosed with Cancer. American Psychosomatic Society (APS) 79th Annual Scientific Meeting. Long Beach, CA. March 23, 2022.

T.27 Errahmouni Barkam H, Wang M, Martinez-Neda B, and Gago-Masague S. Testing Machine Learning Models to Identify Computer Science Students at High-risk of Probation. In Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE).

Association for Computing Machinery, New York, NY, March 2, 2022. Doi:10.1145/3478432.3499103

T.26 Gago-Masague S. Graduate Paths for Engineering and Computer Science Students. 10th UPC Annual Networking Talent Day, Polytechnic University of Catalonia, Barcelona, Spain. Virtual. July 6, 2021.

T.25 Lee, J., Nguyen, M., Alpesh, A., Gago-Masague, S., Language Specific M-Health APP to Improve Knowledge of ORAL Anticoagulation Therapy. Western Institute of Nursing's 54th Annual Conference (WIN), April 14, 2021.

T.24 Martinez-Neda B, Zeng Y, Gago-Masague S. Using Machine Learning in Admissions: Reducing Human and Algorithmic Bias in the Selection Process. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (pp. 1323-1323). Virtual, Mar 3, 2021

T.23 Chaulagain, A., Fing-Castro, K., Salazar, A., Cervantes, B., Gago-Masague, S., Sorkin, D., Kilgore, D., Billimek, J. Relationship between Economic Instability and Readiness for Behavior Change Among Latinx Hypertensive Patients. The Society for Behavioral Medicine Annual Meeting. San Francisco, CA, April 1, 2020.

T.22 Harris P., Gago-Masague S., Khan J. & Lopez J. "Career Hacking in Computer Science". Seminar for 24 STEM students sponsored by the California Alliance for Minority Participation (CAMP) Program, UCI, Irvine CA.

T.21 Gago-Masague, S., Lim, P., "How IoT and ML improve quality of life". Seminar for 16 electrical engineering students from Japan visiting through the UCI International Program. Calit2-UCI, Irvine CA, September 5, 2019.

T.20 Gago-Masague, S., Lim, P., "Engaging Technology for Health Education". Seminar for 23 medical students from Spain visiting through the UCI International Program. Calit2-UCI, Irvine CA, August 14 2019.

T.19 Gago-Masague, S., "Evaluation of a Real-world Project-based Course as an Active Learning Strategy in STEM" Presented at the 3rd International Conference on Education and Distance Learning (ICEDL), Barcelona, Spain July 2019

T.18 Gago-Masague, S.. "US higher education. New challenges and opportunities" Presented at Context and Cognition mediated by Information and Communication Technologies (COnTIC) in the University of Lleida (UdL), Lleida, Spain, July 2019.

T.17 Pixley, J.E., Gago-Masague, S., Fallman R.N., Kunrath, S. and Li., G.P. (2019). "Power Management User Interface: Sleep, Computer States, and Energy Savings." Presented at the CalPlug Workshop Series (a semiannual research and development conference for academic, industry, and policy stakeholders), Irvine CA, April 2019.

T.16 Pixley, J.E., Gago-Masague, S., Fallman, R.N., Kunrath, S. and Li, G.P. (2018). "A Feedback App that Improves Use of Computer Sleep Settings: Field Test Results." Presented at BECC 2018 (Behavior, Energy, and Climate Change), Washington, D.C., October 2018.

T.15 Pixley, J.E., Gago-Masague, S., Fallman, R.N. and G.P. Li. 2018. "Field Test of a New User Interface for Computer Sleep Settings." Presented at ACEEE Summer Study, Pacific Grove, CA, August 2018.

T.14 Fortier, M.A., Chung, W.W., Cortes, H.G. & Gago Masague, S. (2017). Preliminary efficacy testing of Pain Buddy: A web-based symptom management intervention for children with cancer. *The*

International Society for Research on Internet Interventions (ISRII) 9th Scientific Meeting, Berlin, Germany, October 2017.

T.13 Gago Masague, S. (2017). Monitoring Technology for Persuasive Health Care. NurSci 222C Doctoral Seminar in Clinical and Translational Sciences. Sue & Bill Gross School of Nursing, University of California at Irvine, CA, June 5, 2017.

T.12 Gago Masague, S. (2017). The Role of Technology in Healthy Aging. *STEM at Osher Lifelong Learning Institute (OLLI),* University of California at Irvine, CA, March 3, 2017.

T.11 Gago Masague, S. (2017). User-Centric IoT – How technology can empower quality of life. IBM IoT Lecture Series 2017*,* University of California at Irvine, CA, February 1, 2017.

T.10 Gago Masague, S. & Li, G.P. (2016). Energy Channel – New Generation of Home Energy Displays. *California Plug Load Research (CalPlug) Semiannual Workshop #9,* University of California at Irvine, CA, May 2016.

T.9 Chung, W.W., Martinez, A., Gago Masague, S. & Fortier, M.A. (2016). A Mobile Intervention for Improving Symptom Management and Quality of Life in Children with Cancer: Development and Efficacy Testing of Pain Buddy. *International Society for Quality of Life Research (ISOQOL)*, Copenhagen, Denmark, October 2016.

T.8 Chung, W.W., Martinez, A., Gago Masague, S. & Fortier, M.A. (2016). Feasibility Testing of an Intervention for Pain Management in Children Undergoing Cancer Treatment: Pain Buddy. *Annual Meeting of the American Society of Anesthesiologists (ASA)*, Chicago, IL, October 2016.

T.7 Chung, W.W., Martinez, A., Gago Masague, S. & Fortier, M.A. (2016). Pain Buddy: An Interactive, Mobile Intervention for Pain and Symptom Management in Children with Cancer. *International Society for Research on Internet Interventions (ISRII),* Seattle, WA, April 2016.

T.6 Deshpande, P., Jameson, K.A., Tauber, S., Chang, S., Gago Masague, S. & Narens, L. *(2015).* A Cultural Consensus Theory Analysis of Crowdsourced Transcription Data. *Applications of Mathematical Psychology in Industry*, Newport Beach, 2015.

T.5 Gago Masague, S., Levorato M. & Li, G.P. (2015). Energy Disaggregation and Plug Loads Modeling. *California Plug Load Research (CalPlug) Semiannual Workshop #8,* University of California at Irvine, CA, October 2015.

T.4 Gago Masague, S. & Li, G.P. (2015). Humanizing Digital Health. *Seminar #1 Summer Undergraduate Research Fellowship in the Internet of Things (SURF-IoT),* University of California at Irvine, Irvine, CA, July 2015.

T.3 Gago Masague, S., Benjamin, N. & Reinkensmeyer, D.J. (2014). A Virtual Agent to Provide Feedback and Motivate Patients During Rehabilitation Training of the Hand. *Medicine 2.0: Social Media, Mobile Apps 2.0 in Health, Medicine and Biomedical Research*, Maui, HI, November 2014.

T.2 Zhang, A.Y., Gago Masague, S., Martinez, A. & Fortier, M.A. (2014). Pain Buddy: Using Virtual Characters to Improve Home-Based Therapy for Children Suffering from Cancer. *Medicine 2.0: Social Media, Mobile Apps 2.0 in Health, Medicine and Biomedical Research*, Maui, HI, November 2014.

T.1 Gago Masague, S., Zhang, A.Y. & Li, G.P. (2014). The Wall of Power Interface: Improving residential Energy Efficiency. *The Information Architecture Summit*, San Diego, CA, March 2014.

Records of Invention

I.5 Gago-Masagué, S., Nicolau, A., Givargis, T., Segura, M., Vergés, P., Hyodo, M., & Saitou, J. (2024). StressDX: Wearable-Based Software for Chronic Stress Estimation and Notification. University of California, Irvine, CA, U.S. Software/Copyright Disclosure. UC Case 2024-XXX.

I.4 Kaplan, S. & Gago-Masague, S. (2023). Child Health Rating Inventories (CHRIS). University of California, Irvine, CA, U.S. UCI Case 2023-771. (CHRIS App/Web)

I.3 Donovan, R., Li, G.P., Gago-Masague, S., & Ren, Y. (2020). Non-Intrusive Workflow Assessment (NIWA) for Manufacturing Optimization. *University of California, Irvine, CA, U.S. Patent No. US 2020/0104779 A1*

I.2 Fortier, M. & Gago-Masague, S. (2019). Pain Buddy. University of California, Irvine, CA, U.S. UCI Case 2019-536. (PB App/Web)

I.1 Padma, G., Randy, W., Li, G.P., Xia, L., Gago-Masague, S. & Salomon, L. (2018). Patient-Initiated Controlled Analgesic Recording Dispenser. *University of California, Irvine, CA, U.S. Patent No. US 2018/0082408 A1*

Honors & Awards

Best Presentation Award, 2025. 7th International Conference on Educational Technology and Computers (ICETC), Barcelona, Spain.

Dean's Honoree Award, UCI Celebration of Teaching, 2025: Recognized for excellence in teaching and student success in the Donald Bren School of Information and Computer Sciences.

Honorable Mention, Dr. De Gallow Professor of the Year Award, UCI Celebration of Teaching, 2024: Selected as a campus-wide finalist for outstanding pedagogy and impact on undergraduate education.

ICS Dean's Research Award, 2023. Awarded for the project "Broaden Participation in Software Engineering via Industry-Sponsored Projects" (PI with Iftekhar Ahmed).

Dean's Awards in the Donald Bren School of Information and Computer Sciences. Dean Award for Excellence in Teaching. 2023

Dean's Awards in the Donald Bren School of Information and Computer Sciences. Dean Award for Excellence in Service. 2021

Provost Faculty Fellow. The Office of the Vice Provost for Teaching and Learning at UC Irvine, 2020-2022: *Proactively preventing students' academic failure via machine learning and tailored support.*

Best Poster at the International Society for Research on Internet Interventions Conference, 2016: *Pain Buddy: An Interactive, Mobile Intervention for Pain and Symptom Management in Children with Cancer*.

Postdoctoral Fellowship. The Balsells Foundation, 2012-2016, Catalonia – California Engineering Innovation program: Using embodied trainers for home therapies.

Best Interactive Technology at Mobile World Congress 2012: Embodied Assistants Systems, Narada Robotics SL, Barcelona, Spain.

Current Grants

Sponsor	Title	Role	Total Funds	Duration
NSF-REU	Enhancing AI-Driven Insights Within IoT-Enabled Ecosystems (AIoT-Sys).	PI	$537k	8/1/25 -7/30/28
Asahi Group Holdings	Advancing Wellness Tracking: AI-Driven Body Status Detection (StressDX)	PI	$300K	4/1/24 - 6/30/26
UCI/ICS	Dean's Research Award: The Daily Smirk – Lightweight, High-Frequency, Contextualized Peer Assessment	Co-PI	$75k	3/11/24 - 6/30/25
NSF-IUSE/HSI	Increasing Computer Science Undergraduate Retention through Predictive Modeling and Early, Personalized Academic Interventions	PI	$500k	4/1/24 - 3/30/27
UCI/DTEI	Measuring the pedagogical impact of generative AI through effective prompt engineering in ICS GE & U/U courses	PI	$10k	07/01/23 - 06/30/24
UCI/ICS	Dean Research Award: Broaden URGs Participation in Software Engineering via Industry-sponsored Projects	PI	$75k	05/01/23 - 06/30/25
Asahi Group Holdings	Evaluating the Accuracy of Wearable Technology in Measuring Blood Alcohol Concentration (BAC)	PI	$120k	04/01/23 - 03/30/24
UCI/CORCL	A Personalized Virtual Tutor for Python Programming to Support At-Risk Students in CS Increasing Latinx+ Students' Employment Opportunities through Industry-sponsored Projects	PI	$5.2k $7k	07/01/23 - 6/30/24 10/01/21 - 06/30/22
UCI/OVPTL	Faculty Provost Fellow Award	PI	$25k	10/01/20 - 06/30/22
NSF/IUCRC	Center for Smart Space Research (CSSR)	Co-PI	$100k	09/01/21 - 0 8/30/22
NSF/EAGER	Multi-Level Attack and Defense Simulation Environment for Artificial Intelligence Education and Research	Co-PI	$300k	08/01/20 - 07/30/22
PCORI	Using the Child Health Ratings Inventories (CHRIS) to improve diabetes care for children	Co-I	$1.9M	01/01/20 - 06/30/24

NIH – NHLBI R01	My Own Way; Addressing negative beliefs about medication to improve adherence	Co-I	$1.8M	12/01/19 - 01/31/24
DOE - SESMII	Establishing Smart Connected Workers Infrastructure for Enabling Advanced Manufacturing	Co-I	$1.4M	04/01/19 – 12/31/21
NIH – NCI R01	Innovative Pain and Symptom Management Program for Children with Cancer	Co-I	$3.2M	07/01/18 - 06/30/25

Teaching

2013 – current: Instructor at UC Irvine, teaching the following courses:

- COMPSCI 180A/B: Project in Computer Science. Avg. course size: 60. Terms: Winter-Spring of 2020-2025.
- COMPSCI 297p: Capstone Design. Avg. course size: 35. Term: Fall 2019, Fall 2020, Spring 2021, 2023, 2024, 2025.
- COMPSCI 295p: Keystone Project. Avg. course size: 35. Term: Fall 2019, Fall 2020, Spring 2021, Winter 2023.
- COMPSCI 125: Next Generation Search Systems. Course size: 240. Term: Winter 2021 and 2023.
- COMPSCI 147: IoT Principles and Systems. Avg. course size: 80. Term: Fall 2019, Fall 2020, Fall 2024, Spring 2021, 2023, and 2024.
- COMPSCI 244p: Internet of Things. Avg. course size: 80. Term: Fall 2024.
- ICS 9: Intro to Computation for Scientists and Engineers.Avg. course size: 35. Term: Fall 2022 and 2023.
- ICS 6N: Computational Linear Algebra. Avg. course size: 117. Term: Fall 2018, Winter/Spring/Fall 2019, Winter/Spring 2020.
- ICS 46: Data Structure Implementation & Analysis. Avg course size: 326. Term: Summer 2017, Summer 2018, Fall 2018, Winter 2019,
- COMPSCI 121: Information Retrieval. Avg course size: 358. Term: Spring 2017, Winter 2018, Spring 2018
- ICS 32: Programming with Software Libraries. Course size: 52. Term: Summer 2016
- ENGRMAE 80: Dynamics. Course size: 64. Term: Summer 2013

10/05 - 09/07: part-time Instructor & Coordinator in Les Corts Academy - Barcelona, Spain.
Undergraduate program, Department of Sciences.

10/00 - 09/02: Private Tutor at Galileo Galilei Institute - Barcelona, Spain.
Provide support and guidance to high school students.

Mentoring

Graduate Students Advising

2024 - Present: Junko Kobayashi, Master, Computer Science, UC Irvine

2024 - Present: Richard A. Ky, PhD, Computer Science, UC Irvine

2024 - Present: Jared Apillanes, PhD, Computer Science, UC Irvine

2023 - 2025: Pere Verges Boncompte, PhD, Computer Science, UC Irvine

2023 - Present: Jason L. Weber, PhD, Computer Science, UC Irvine

2023 - Present: Rithra Ravikumar, Master, Computer Science, UC Irvine

2022 - Present: Manuel Segura, PhD, Computer Science, UC Irvine.

2022 - Present: Amisha Priyadarshini, PhD, Computer Science, UC Irvine.

2022 - 2023: Natalie Perez, Master, Computer Science, UC Irvine.

2021 - 2022: Margarita Geleta, Master, Computer Science, UC Irvine.

2020 - Present: Hamza Errahmouni Barkam, PhD, Computer Science, UC Irvine.

2020 - 2023: Yibo Wang, PhD, Electrical Engineering and Computer Science, UC Irvine.

2019 - 2025: Barbara Martinez-Neda, PhD, Computer Science, UC Irvine.

2019 - 2021: Yue Zeng, Master, Computer Science, UC Irvine.

Undergraduate Students Mentorship

2025 (Winter–Spring): Balsells Fellow Jofre Mosegui Monterde (UPC) – Undergraduate thesis at UC Irvine: Exploring Brain-Inspired Hyperdimensional Computing for Resource-Efficient Wearable Biosignal Classification.

2024 -present Calbridge Co-Mentorship Program for Aaron Rivera (CSU). Mentors: Panangadan, A. (CSU), Gago-Masague, S.

2022 - 2024 NSF-REU IoT-Sity Program: Cultivating the IoT-enabled Smart Community. Advising one student each summer for 8 weeks.

2022 - 2025 CS199: Individual Study, UC Irvine: Academic Performance in CS. UCI DREAM Fellowship Program. Mentors: Martinez-Neda B, Wong-Ma J., Gago-Masague, S.

2022 - 2024 CS199: Individual Study, UC Irvine: PICARD. Mentors: Segura M, Lim, P., Gago-Masague, S.

2021 - 2022 CS199: Individual Study, UC Irvine: VR Mental Health. Mentor: Gago-Masague, S.

2021 – 2022: Sara Vélez Rivera, Bioengineering, visiting student from Universidad Autónoma de Manizales, Colombia. UC Irvine.

2020 - 2021 CS180A/B: Project in Computer Science, UC Irvine: The Smart and Connected Worker. Mentors: Donovan, R., Gago-Masague, S.

2020 - 2021 CS199: Individual Study, UC Irvine: FoodSmart-Greenbite. Mentors: Lim, P., Gago-Masague, S.

2019 – 2020: Multidisciplinary Design Program, UC Irvine: “Experimental Test of Energy Efficiency Annoyance Threshold”. Mentors: Pixley, J.E., Gago Masague, S.

2019 Multidisciplinary Design Program, UC Irvine: “Investigating Interpersonal Comparisons of Utility”. Faculty Mentors: Jameson, k., Narens, L., Gago Masague, S.

2018 Summer Undergraduate Research Fellowship in the Internet of Things (SURF-IoT), UC Irvine: "PET - A Personal Embodied Trainer to promote physical therapy at home ".
Faculty Mentors: Gago-Masague, S., Billimek, J.

2017 – EECS-CSE Senior Design Projects:
Proj. 1: Augmented Reality Rubik's Cube Solver
Proj. 2: Percept. Augmented Reality for Safety in Manufacturing Environments
Proj. 3: Smart Pill Bottle
Proj. 4: PET: A Personal Embodied Trainer to Promote Physical Exercise at Home

2017 Summer Undergraduate Research Fellowship in the Internet of Things (SURF-IoT), UC Irvine: "PET - A Personal Embodied Trainer to promote physical therapy at home ".
Faculty Mentors: Gago-Masague, S., Billimek, J.

2017 & 2018 Multidisciplinary Design Program, UC Irvine: "PET - A Personal Embodied Trainer to promote physical therapy at home ".
Faculty Mentors: Gago-Masague, S., Billimek, J.

2017 Multidisciplinary Design Program, UC Irvine: "PMUI - A Power Manager User Interface to promote Energy Efficiency in Desktop Computers".
Faculty Mentors: Gago-Masague, S., Pixley, J.

2016 Multidisciplinary Design Program, UC Irvine: "MediCom: Comprehensive, Intuitive and Interactive view of health aspects to improve medication compliance".
Faculty Mentors: Billimek, J., Gago Masague, S.

2016 Undergraduate Research Opportunity (UROP), UC Irvine: "Building and Testing a Custom User-Interface for the Crowdsourced Transcription of a Large Handwritten Database of Color Categorization Data". Faculty Mentors: Jameson, K.A., Gago-Masague, S.

2015 Summer Undergraduate Research Fellowship in the Internet of Things (SURF-IoT), UC Irvine: "Cloud-Based Tools to Empower Interdisciplinary Research: A Case Study on the Mesoamerican Color Survey Data Archive". Mentors: Jameson, K.A., Gago-Masague, S.

2015 Summer Undergraduate Research Fellowship in the Internet of Things (SURF-IoT), UC Irvine: "Pain Buddy: Using m-health to track Home-based Therapy for Children suffering from Cancer". Mentors: Fortier, M.A., Gago Masague, S.

2015 Multidisciplinary Design Program, UC Irvine: "Designing Generalizable Crowdsourcing Methods for Large-Scale Database Transcription and Digitalization."
Faculty Mentors: Jameson, K.A., Harris, I.G., Gago Masague, S.

Academic & Professional Service

Leadership

2025 - Present: Associate Director, California Institute for Telecommunications and Information Technology (Calit2)

2024 - Present: Director, Master in Computer Science Program (MCS)

2024 - Present: Vice-Chair for Professional Graduate Programs, Computer Science (CS)

2023 - 2025: Chair, Council on Teaching, Learning, and Student Experience, UCI (CTLSE)

2020 - Present: Co-Director, Teaching and Learning in Computing (TLC)

2019 - 2023: Chair, Council on Enrollment Management and Admissions, UCI (CEMA)

2019 - Present: Director, Capstone Project in CS Program (CSC)

2018 - Present: Associate Director, California-Catalonia Balsells Fellowship Program (Balsells)
2014 - Present: Director, Engaging Technology and Application Design (ETAD)

Professional Memberships
2023 - Present: National Center for Women & Information Technology (NCWIT)
2023 - 2025: Advisory Board, Center for Data-Driven Drugs Research and Policy (C3DRP)
2021 - Present: American Educational Research Association (AERA)
2021 - Present: Computer Science Steering Committee. Cal-Bridge Program (CalBridge)
2020 - Present: ACM Special Interest Group on Computer Science Education (SIGCSE)
2019 - Present: The Institute for Future Health at UC Irvine (IFH)
2018-24: The Sharon Disney Lund Medical Intelligence, Information, Investigation, and Innovation Institute (Mi4) at the Children's Hospital of Orange County (CHOCMI4)
2018-22: The Active Learning Institute (ALI) at UC Irvine. (DTEI-AL)
2018 - Present: The Cybersecurity Manufacturing Innovation Institute. (CyManII)
2016-20: The Institute for Virtual Environments and Computer Games at UC Irvine (IVECG).
2016-24: Judge and Mentor at The Louis Stokes California Alliance for Minority Participation in Science, Technology, Engineering, and Math. (LSAMP-CAMP)
2016 - Present: Institute of Electrical and Electronics Engineers (IEEE)
2016 - Present: Association for Computing Machinery (ACM)

Session Chair

2025: Educational Data Mining and Learning Analytics. Conference on Edu Tech. & Comp (ICETC).
2024: CS Tools for Education. ACM Special Interest Group on CSEd (SIGCSE)
2023: K-12: Broadening Participation in Computing. ACM Special Interest Group on CSEd (SIGCSE)

Technical Program Committee

2025: The Fortieth AAAI Conference on Artificial Intelligence (AAAI-26)
2025: International Conference on Education Technology and Computers (ICETC)
2024 – present: Frontiers in Education (FIE)
2023 – present: IEEE Global Engineering Education Conference (EduCon)
2022 – present: IEEE World Forum on Internet of Things (WFIoT)
2022 – present: Consortium for Computing Sciences in Colleges (CCSC)
2021 – present: ACM Special Interest Group on Computer Science Education (SIGCSE)
2021: International Conference on Frontiers of Information Technology (ICFIT)
2020: Computing, Communications, and IoT Applications (ComComAp)
2019: International Conference on Inventive Computation Technologies (ICICT)
2018: International Conference on Electronic Design (ICED)
2017: IEEE WCNC Workshop on M2M Communications and the Internet of Things (M2M IOT)
2017: International Conference on Emerging Electronic Solutions for IoT (ICEESI)

Peer Reviewer in Journals

2025: *SoftwareX* (SoftwareX)
2019 - present: Journal of Advances in Information Technology (JAIT)
2019 - present: International Journal of Teaching and Learning (IJLT)
2018 - present: Journal of Medical Internet Research (JMIR)

University Service

2025 - present: Member, Council on Education Policy (CEP), UC Irvine
2025: Member, Learning Management System Review Committee, UC Irvine
2025: Member, Outdoor Sound Policy Review Committee, UC Irvine
2024 - present: Member, First Year Experience Committee, UC Irvine.
2024: Faculty Director, Master in Computer Science
2023-25: Chair, Council on Teaching, Learning, and Student Experience (CTLSE), UC Irvine
2022-23: Vice-Chair, Council on Teaching, Learning, and Student Experience (CTLSE), UC Irvine
2022-24: Member, Lecturer Review Board. ICS, UC Irvine
2021-24: Steering Committee, Master in Computer Science. ICS, UC Irvine.
2021-22: Member of working group on URM student retention, ICS, UC Irvine.
2020-23: Chair, Council on Enrollment Management and Admissions (CEMA), UC Irvine.
2020-23: Representative on the Board of Admissions and Relations with Schools, UCOP.
2020 – Present: Member of the Senate Cabinet, UC Irvine.
2020 – Present: Member Divisional Senate Assembly, UC Irvine.
2019-20: Member, Council on Undergraduate Admissions & Relations with Schools
2018 – Present: Chair, Augmented Review Committee for Undergraduate Admissions. ICS, UCI

Skills and Certificates

Languages & Communication
Fluent in Spanish, Catalan, and English; working knowledge of French and Italian.

Programming & Development
HTML, CSS, Java, JavaScript, Python, Swift, MySQL, C++.

AI / Machine Learning & Data Science
TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Jupyter, R.

IoT & Wearable Systems
Embedded systems (Arduino, Raspberry Pi), Apple Watch SDK, mobile health, and edge computing frameworks.

Modeling & CAD / Game Engines
AutoCAD, SolidWorks, Unity 3D.

Graphic & Visual Design
Adobe Photoshop, Illustrator, Creative Cloud, and Figma.

Simulation & Analysis
MATLAB, ANSYS.

Systems & IT Administration
Linux/Unix system administration, server deployment and management, VMware virtualization, IT support, and helpdesk experience.

Teaching & Pedagogy

Active Learning Institute (ALI) Workshop, Division of Teaching Excellence and Innovation, UCI.