

ROSmatic: a scalable smart home for blind people controlled with an app. CSCI'17 The 4th Conf. on Computational Science & Computational Intelligence, del 14 al 16 de Diciembre del 2017. Las Vegas, Nevada, United States. Proceedings of the 2017 International Conference on Computational Science and Computational Intelligence (CSCI'17: 14-16 December 2017, Las Vegas, Nevada, USA); Publisher: IEEE Computer Society Editors: H. R. Arabnia, L. Deligiannidis, F. G. Tinetti, Q-N. Tran, M. Qu Yang ISBN-13: 978-1-5386-2652-8; BMS Part # CFP1771X-USB; DOI 10.1109/CSCI.2017.313; 2017.



The screenshot shows the website for the American Council on Science and Education (ACSE). At the top left is the ACSE logo, a circular emblem with a shield and the text "AMERICAN COUNCIL ON SCIENCE AND EDUCATION". To its right is the text "AMERICAN COUNCIL ON SCIENCE AND EDUCATION". In the top right corner, there are links for "Site Map", "Accessibility", "Contact", and "Log in". Below these is a search bar with the text "Search Site" and a magnifying glass icon. Underneath the search bar are checkboxes for "only in current section" and "Advanced Search...". A blue navigation bar contains "Home", "About Us", and "Events". Below the navigation bar, a breadcrumb trail reads "You are here: [Home](#) / [Events](#) / CSCI 2017". A left sidebar menu for "CSCI'17" lists: "CSCI 2017", "SYMPOSIUMS", "PUBLICATION", "PROGRAM COMMITTEE", "SCOPE & TOPICS", "PAPER SUBMISSION", "PAPER REVIEW PROCESS", "PAPER CATEGORIES", "AUTHORS", "KEYNOTE LECTURES", and "SCHEDULE". The main content area features a large banner for the "4th Annual Conference on Computational Science & Computational Intelligence" with a graphic of a human head made of circuitry and the text "CSCI 2017 Dec 14-16 Las Vegas, Nevada, USA". Below the banner is a sub-header: "4th Annual Conf. on Computational Science & Computational Intelligence (CSCI'17) | Dec 14-16, 2017 | Las Vegas, Nevada, USA". A small line of text reads "by admin — last modified Sep 09, 2017 04:24 PM". The main text states: "The CSCI'17 International Conference invites paper submissions from diverse communities, including researchers from: universities, corporations, government agencies, and standardization bodies. Accepted papers will be published in the conference proceedings by [Conference Publishing Services \(CPS\)](#). Papers are

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ROSsmotic: A Scalable Smart Home for Blind People Controlled with an App

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Abstract

Document Sections

- I. Introduction
- II. Related Work

Abstract:

In this paper we present ROSsmotic, a system for building smart homes operated by a smartphone app. The app is accessible for people with visual disabilities, and controlled by touch or voice commands. We provide a scalable and open source hardware and software solution by incorporating microcontrollers, cameras, laptops, and lights. We show an easy way to connect an iOS app with Robotics Operating System (ROS). We incorporate other open source libraries, cloud services, and image processing frameworks. The whole system is made in Swift and Python. Finally, we deliver the diagrams (logical and

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