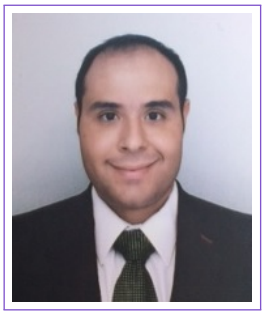

Bruno Senzio-Savino

Curriculum Vitae

"Transcend in History, while outside the box"

Education

2017 **M. Sc.**, *University of the Ryukyus*, Japan, Honorary Award.
Information Technologies

2011 **B.S. Mechatronics Engineering**, *National Autonomus University of Mexico*, Mexico, Summa Cum Laude.

M.Sc. Research

Title *Brainwave processing modular system*

Supervisor Prof. Dr. Eng. Mohammad Reza Asharif

B.S. Thesis

Title *Remote operation of a parabolic movement with free fall experiment*

Supervisor Prof. MSc. Yukihiro Minami

Professional Appointments

Academia

2017 **Research Intern**, *Advanced Telecommunications Research Institute International, Kyoto*, Japan, Supernumerary robotic limbs.

2009 **Visiting Student**, *University of California, Los Angeles*, USA, Robotics, Mechanical Design and Artificial Intelligence.

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Industry

06/2011-04/2014 **Field Applications Engineer, OCS & M2M Leader Mexico**, *Arrow Electronics Inc.*, Mexico.

- Use of ARM Cortex-M0, M3, M4F, 8, 16 and 32 bit manufaturer architecture MCUs for different consumer applications (Vacuum, Vending Machine, Electric fence, Displays)
- Implementation of different communication protocols (UART, SPI, I2C, Bluetooth, Zigbee, TCP/IP, WiFi) for costumer oriented applications
- Use of I2C and SPI GLCD for customer Electric fence project development
- Use of different provider IDEs for MCU Software development (IAR, Keil, mbed, LPCXpresso,AVR Studio, CodeWarrior, Code Composer Studio)
- Use of different Hardware ICs for costumer applications(accelerometers, magnetometers, humidity)
- Development of WiFi/remote controlled lighting applications (dimming, DMX)
- Control of smart wireless sensor network for different instruments
- Strategic management for OCS and M2M initiatives in the company for the whole territory.
- Strategic partner for the automotive manufacturing plants in the country.
- Programming and orienting technical courses on the usage of ST Microelectronics STM8 and STM32 MCU families.
- Developed an Electric Fence GLCD system monitor electronic and PCB design for a customer specification.
- Programmed and developed a Vishay's TFT LCD graphics controller for an Atmel 32-bit MCU with sprite animations for a GPRS vending machine design company.

07/2010-05/2011 **Plant Engineer**, *Proveedora Mexicana de Monofilamentos S.A. de C.V.*, Mexico City, Mexico.

- Designed and developed diverse plastic monofilament extrusion dies for improving efficiency and time/cost.
- QA for ISO9001 and ISO14000 for hazardous materials.
- Operation of diverse in-plant equipment: extruders, furnace, winding machines, lubricators, PLCs, vacuum ovens, mixers, mills.

Industry - Founded

01/2013-01/2014 **Founder, R&D and Sales Manager**, *Azul257*, Mexico City, Mexico.

- Generated and implemented a unique technology for production and assembly of AOLDC (Acrylic One-Layer Different Colors) with a special manufacturing process.
- Competed effectively against Chinese manufacturing companies.
- Generated exponential company growth in a short period of time.

NGO

11/2011-12/2012 **Founder, R&D Manager**, *Recicla para ayudar a quien mas lo necesita A.C.*, Mexico City, Mexico.

- Installed solar panel lighting system on marginalized communities
- Competed effectively against Chinese manufacturing companies.
- Generated different ecological alternatives for cultural and educational robotics with children.

Awards

2017 Dean's Honorary Award for outstanding achievement

2014 Japanese Government (Monbukagakusho) scholarship winner

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2013 International Rectifier's award for highest demand creation FAE in Mexico

2010 National Association of Universities and Engineering Faculties award for 2010's "best student" for Mechatronics Engineering in the country

2007 3rd place in the Robocup@home as robot mechanical designer for Mexico's team at the international competition

2003 2nd place at the XIV Physics Metropolitan Olympiad

2003 1st place at the XIV Chemistry Metropolitan Olympiad

Patents

2012 Pat.Pending MX/a/2012/010393 for the document Modular control interface for mind operated actuators and devices

Technical skills

Mechanical

Machinery Laser cutter, CNC Router, Lathe, Winding Machine

Environments Solid Works, Solid Edge, AutoCAD, ProEngineer, NX, MasterCAM

Electronics

OS C, ASM

Architectures 8-bit, 16-bit MCU, ARM Cortex-M (ST Micro, Texas Instruments, Atmel), Cortex A (Atmel)

Manufacturers Microchip, Atmel, Texas Instruments, ST Microelectronics, Freescale, NXP, Digi International, Nordic semiconductor

Environments IAR, Keil, Proteus, Altium Designer, Arduino, Code Composer Studio, Atmel Studio, Coocox IDE, STVD

Programming

OS Linux, Windows

Languages C, C++, C#, PYTHON, HTML5, LaTeX

Environments MATLAB, .NET Visual Studio, Git, Blender, Unity3D

Libraries Scikit

Languages

Spanish **Native Level**

English **Native Level** *TOEFL iBT 112/120*

Japanese **High Intermediate Level** *JLPT N3*

Italian **Intermediate Level**

Research Interests

- Machine Learning
- Digital Signal Processing
- Human Robot Interaction
- Brain Machine Interface
- Cognitive Neuroscience
- Android robots

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- Cultural and Educational Robotics - Parallel Computing

Publications

Journal Publications

J1 **Bruno Senzio-Savino**, Mohammad Reza Alsharif, Carlos E. Gutierrez and Kamaledin Setarehdan: "An Online Brain Wave Signal Pattern Classifier by Using Supervised and Unsupervised Learning with Parallel Processing Optimization",International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 8(1), pp.412-419

J2 **Bruno Senzio-Savino**, Mohammad Reza Alsharif, Carlos E. Gutierrez, Katsumi Yamashita, Kamaledin Setarehdan, Mahdi Khosravy and Faramarz Alsharif: "Brain Wave Pattern Classification: Towards the Design of an Effective Online Classifier",European Journal of Information Science and Technology (EJIST), December 2016, pp.18-29

J3 **Bruno Senzio-Savino**, Mohammad Reza Alsharif, Carlos E. Gutierrez, Katsumi Yamashita and Jason Noble: "Path Detection in Virtual Environment for Synchronous EEG by Density Based Support Vector Machine",Journal of Information and Communications Engineering (JICE), December 2015, pp.36-40

Conference Papers with Review

C1 **Bruno Senzio-Savino**, Mohammad Reza Alsharif and Yuuki Yabiku. "Implementation of a Cloud Processing based Voice Communication and Noise Reduction Embedded System Network",3rd International Congress on Technology Engineering & Science, Malaysia,Accepted and to be presented on February 2017

C2 **Bruno Senzio-Savino**, Kyosukuke Hirata, Mohammad Reza Alsharif and Kamaledin Setarehdan. "Non linear EEG Signal Feature Extraction and Healthy or Epileptic User Seizure Discrimination by Weighted Frequency Behaviour Analysis",3rd International Congress on Technology Engineering & Science, Malaysia,Accepted and to be presented on February 2017

C3 **Bruno Senzio-Savino**, Mohammad Reza Alsharif, Carlos E. Gutierrez, Christian Penaloza and Katsumi Yamashita. "Brain Wave Pattern Classification from Virtual Training Environment by Self-Organizing Maps",ITC-CSCC 2016, Okinawa, Japan, July 10-13,2016

C4 Mohammad Reza Alsharif, Linnan Zhang, Mahdi Khosravy **Bruno Senzio-Savino**, Faramarz Alsharif and Katsumi Yamashita. "A New Double Adaptation Algorithm for Acoustic Noise Control",Proceedings of the 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2016), pp. 701-704

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C5 Saurabh Gupta, Mahdi Khosravy, Neeraj Gupta, Bhupendra Nath Tiwari, **Bruno Senzio-Savino**, Faramarz Alsharif and Mohammad Reza Alsharif. "Tractor Oil Pump Fault Diagnosis by Pseudo-spectrum Analysis of Vehicle Sound Records",Proceedings of the 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2016), pp. 787-790

C6 Morteza Farhid, Mousa Shamsi, Mohammad Hossein Sedaaghi, Faramarz Alsharif, **Bruno Senzio-Savino** and Mohammad Reza Alsharif. "On the effect of informed nodes on learning over complex adaptive networks",Proceedings of the 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2016), pp. 653-656

C7 Faramarz Alsharif, Shiro Tamaki, Katsumi Yamashita, Mohammad Reza Alsharif, **Bruno Senzio-Savino**, Mahdi Khosravy and H.G. Ryu. "Disturbance Response and Stability of Wireless Tele-Control System for MIMO Plant",Proceedings of the 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2016), pp. 999 -1002

C8 Ahmadreza Heidarpour, Mousa Shamsi, Faramarz Alsharif, **Bruno Senzio-Savino** and Mohammad Reza Alsharif. "Classification of attention deficit/hyperactivity disorder (ADHD) by extracting non-linear features of childrenâĂŹs EEG",Proceedings of the 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2016), pp. 1073-1075

C9 **Bruno Senzio-Savino**, Mohammad Reza Alsharif, Carlos E. Gutierrez, Katsumi Yamashita and Jason Noble: "Density Based Support Vector Machine Classification for a Synchronous EEG Path Tracing Virtual Environment",International Conference on Intelligent Informatics and BioMedical Sciences (ICIIBMS 2015), Okinawa, Japan, November 28-30,2015

C10 **Bruno Senzio-Savino**, M.R. Alsharif, C.E. Gutierrez and K. Yamashita: "Synchronous Emotion Pattern Recognition with a Virtual Training Environment", International Conference on Artificial Intelligence (ICAI 2015), Las Vegas, USA. July 27 - 30, 2015.

C11 Faramarz Alsharif, Shiro Tamaki, Katsumi Yamashita, Tustomu Nagado, Tomokazu Nagata, Mohammad Reza Alsharif, **Bruno Senzio-Savino** and Heung Gyoon Ryu: "Stability and Performance Evaluation of Wireless Tele-Control System for MIMO Plant", International Conference on Wireless Networks(ICWN 2015), Las Vegas, USA. July 27 - 30, 2015.

C12 **B. Senzio-Savino Barzellato**, Y. Minami Koyama and U. Peñuelas Rivas: "Remote Operation of a Parabolic Motion and Free Fall Experiment", 2nd International Congress on Instrumentation and Applied Sciences (ICIAS 2011), Puebla, Mexico. October 5 - 8, 2011.

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C13 **B. Senzio-Savino Barzellato**, Y. Minami Koyama and U. Peñuelas Rivas: "Mobile Robot Navigation with a Wiimote", 1st International Congress on Instrumentation and Applied Sciences (ICIAS 2010), Cancun, Mexico. October 26 - 29, 2010.

C14 Y. Minami Koyama, H.G. Serrano Miranda, A. Monrroy Cano and **B. Senzio-Savino Barzellato**: "Experimental Determination of an Irregular Object's Moment of Inertia", 1st International Congress on Instrumentation and Applied Sciences (ICIAS 2010), Cancun, Mexico. October 26 - 29, 2010.

Conference papers without Review

C15 Hiroki Takahashi, Mohammad Reza Alsharif, **Bruno Senzio-Savino** and Kamaledin Setarehdan. "Brain Wave Attention/Meditation Signal Feature Extraction and Classification with MA and AR based on PCA and SVM",Proceedings of the 2016 Joint Conference of the IEEJ and IEICE (IEEJ 2016)

C16 **Bruno Senzio-Savino** and Koji Yamada. "Test and Development of a Mind Wave Signal Pattern Password Application", Proceedings of the 14th Systems Integration Conference (SI-2014), Tokyo, pp.1182-1184

Invited Talks

- Introduction to Embedded Systems with Arduino - National Polytechnic Institute, Mexico City, Mexico. October 2013.

Service

Memberships

- Network Coordinator of Japan Chapter of the Global Network of Mexican Talent in Foreign Countries (RedGlobalMX)
- Mensa International and Mensa Mexico

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