







Integrating Digital Services in a Smart City

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Athens, Greece, March 20th, 2014





Agricultural E-health VANETs





Mecatronic & Robotics



Wireless Technologies

UNIVERSITY OF COLIMA MEXICO



Embedded Systems



Efficient Energy



Consejo Nacional de Ciencia y Tecnología

Academic Work (BOOKS)

1. "Broadband Wireless Access Networks for 4G: Theory, Application, and Experimentation" Raúl Aguino Santos, Víctor Rangel Licea and Arthur Edwards.

Ed. IGI Global. 2014.

ISBN:978-1-4666-4888-3

2. "Mobile Ad Hoc Robots and Wireless Robotic Systems: Design and Implementation." Raúl Aguino Santos, Omar Lengerke, Arthur Edwards

Fd. IGI Global, 2012.

ISBN: 978-1-4666-2658-4

3. "Embedded Systems and Wireless Technology: Theory and practical applications." Raúl Aquino Santos, Arthur Edwards Block

CRC Press, 2012.

ISBN: 978-1-5780-8803-4

4. "Wireless Technologies in Vehicular Ad-hoc Networks: Present and Future Challenges" Raúl Aquino Santos, Arthur Edwards Block, Víctor Rangel Licea

Ed. IGI Global, 2012

ISBN: 978-1-4666-0209-0

5. "Inter-Vehicular Communications using Wireless Ad Hoc Networks."

Raúl Aquino Santos.

Ed. LAMBERT Academic Publishing, 2011.

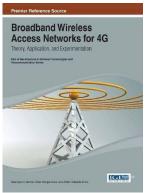
ISBN: 978-3-8454-1021-0

6. "Emerging Technologies in Wireless Ad hoc Networks: Applications and Future Development"

Raúl Aquino Santos, Víctor Rangel Licea, Arthur Edwards Block.

Ed. IGI Global, 2011.

ISBN: 978-1609600273

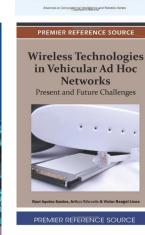


Embedded Systems and

Wireless Technology

Raul Aquino Santos

SP Science





PREMIER REFERENCE SOURCE

PREMIER REFERENCE SOURCE

Mobile Ad Hoc Robots and

Wireless Robotic Systems Design and Implementation Raul Aquino Santos, Omar Lengerke & Arthur Edwards Block

Emerging Technologies in Wireless Ad-hoc Networks Applications and Future Development







Academic work (Journals Citations Report)

20 Papers related to:

- 1. Wireless Networks,
- 2. Wireless Sensor Networks,
- 3. Routing Algorithms,
- 4. Vehicular Ad Hoc Networks,
- 5. E-Health,
- 6. Efficient Energy (Solar Energy).





I+D+I Projects

11 projects (8 National Projects, 3 International Projects)

- 1. VANETS,
- 2. Unnamed Aerial Vehicles (UAVs),
- 3. E-health,
- 4. Wireless Networks,
- 5. Wireless Sensor Networks.





General information of the project

Smart Cities are getting more popularity due to the technological advancements such as wireless sensors networks, Long Term Evolution (LTE) Networks (4G and 5G), Vehicular Ad hoc Networks (VANETs), Smart Homes, Cloud Computing, with the purpose of enhance the Future of the Internet.

Our proposal intends to integrate several services. In a first stage the idea is to create a living lab in a small city in Mexico (COLIMA) with a central coordinator that has the capacity of monitoring several physiological parameters for persons (acceleration, hearth rate, temperature between others, for transportation $CO_{2.,}$

In a second stage the information can be accessed through Cloud Computing from everybody.





Main Objective

This project has the objective of integrate several services in a smart city.

Objectives

- Solar Traffic Lights (Colima has 364.9 days totally Sunny).
- Space in parking Lots.
- Vehicular Communications (Warning Traffic Accidents and monitoring CO₂).
- Physical parameters monitoring (acceleration, temperature, heart rate, etc.) in vehicles or even at home (Odors interface).
- Efficient Energy (green Technologies).





Results







Impacts

- To Reduce the consumption of Electric Energy,
- To Reduce traffic accidents,
- To Reduce Pollution,
- To Reduce deaths.
- To expand business,
- To Make more friends.





Opportunities to collaborate

- VANETs,
- Unnamed Aerial vehicles,
- E-health,
- Wireless Networks,
- Wireless Sensor Networks,
- Efficient Energy,
- SMART CITY.





Conclusions

This particular project has the objective of integrate several services in a smart city.

Health,
Agriculture,
Efficient Energy,
Intelligent Transportation System,
Small and Medium Enterprises (SMEs).





Thank you!

Contact information

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