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Robotics Association of South Africa



The 24th Annual International Conference joined by **ROBMECH, PRASA** and **AMI**, hosted by **CSIR** and **CUT**

RAPDASA
RAPID PRODUCT DEVELOPMENT ASSOCIATION OF SOUTH AFRICA

30 October - 02 November 2023 at the CSIR, Pretoria, SA



In Collaboration with

IOT solution in your Home

Design Competition Introduction

With the use of an Arduino / ESP32 / Edu:bit or similar microcontroller boards, you are required to demonstrate, by scaled functional control systems, as many applications of the implementation of the IOT into an ordinary home. Additional parts can be included to your microcontroller, using the list of items indicated below. The programming and artificial intelligence, as well as the implementation of electromechanical hardware of the system can be as large as your imagination.

Send a 1 minute video (even a stitched together series of clips, based on reusing of components) demonstrating your Smart solution on Whatsapp +27 66 242 0134. On the decision of the committee, the top Smart solution participants will be able to attend the conference on the day to present their solutions and for the award ceremony (registration costs will be covered).

Prizes:

1st place – [Crealty CR-200B FDM 3D Printer](#)

2nd place – [Crealty Harlot One Resin 3D Printer](#)

3rd place – [Arduino Starter Kit D4 Compatible UNO R3](#)

Important Dates:

4 May 2023 - *The planning phase.*

Competition official opening date.

1 June 2023 - *The Purchasing Phase.*

Items will be available for purchase on Stelltron Store at a discounted rate for the duration of the competition.

22 September 2023- *The Submission Phase.*

All videos must be submitted.

30 September 2023 - *The Final Phase.*

All participants who have made it to round two will be notified to hand in their final documentation as per requirements via email. Top 10 Round!

7 October. 2023 - *The Winners .*

Winner announcement will take place and arrangements will be made accordingly via email

30 October 2023 - *The Conference.*

RAPDASA conference dates are from 30 October 2023 until 2 November 2023. First prize winner to attend conference.

NOTE:

If you have submitted a video and have not heard from us by 30 September 2023 regarding the next round, you have not been selected and we thank you for participating.

How to Enter:

Open an account with Stelltron Electronics and fill in all the required fields. Important info is your full name, email and contact number.

Once you have opened an account, select this listing and proceed to checkout. **This listing is free.** Please use this coupon code for free shipping at checkout: **RAPDASA1order@Submission** to activate free shipping.

Once you have submitted an order, this will be your reference number when you submit your video to 066 242 0134. Eg. Video - #65785. This way we will have all your info upon initial submission.

If you do not submit by opening an account and using the correct references, your submission will be disregarded.

When/if you have been approved for costing submission, the same will apply when your documents is submitted to kara@stelltron.co.za. Eg - Documents #65785 (Subject line) with a **PDF attachment** of each document submitted.

List of additional items that can be used:

- Microcontroller and its cable.
- Breadboard
- Dupont wires (GVS or male male or male female) set of around 10
- small DC motor
- battery box
- microcontroller break out adapter for breadboard
- bundle of LEDs - 3 different colours
- switches - on/off

Additional parts that that can be used depending on your concept:

- Limit switches

- Relay
- LM75 temperature sensor
- Light sensor
- Servo - 180 or free rotate

A cost breakdown of your concept will be considered, and the cheapest solution will be considered to differentiate from the top 3 prizes.

Rules, terms and conditions:

- The videos can only be submitted via Whatsapp only.
- Videos longer than 1 minute are disqualified.
- A selection panel will identify the best Smart solution, for participants to enter the next round.
- The next round will require a breakdown of costs of components. Prices can be obtained from www.stelltron.co.za. Parts not available on the Stelltron website can be indicated with a link. A short additional description and the code will be required to be submitted.
- If you have other sensors you want to use for the competition, you may do so, yet keep in mind the cost of the concept will be taken into consideration for competition draw scenarios.
- The collaborating organisers have the right to use the smart solution and to share the concepts at the conference, online, in media, etc.
- The selection of the top solutions will be final. In the event that there is any uncertainty in the selection of the top solutions, a third party will be involved.
- The closing date is final. Late entries will not be accepted.
- For more information or questions, contact kara@stelltron.co.za or 066 242 0134.

Important Notice:

Stelltron, Robotics Association of South Africa, IEEE Robotics and Automation/Control Systems, conference organisers, and any associates to them, may not be consulted for

assistance and advice on the technical aspects of your design. When placing orders, you are required to have performed research, and be aware of how different parts will work.

Should there be anything that you are not sure of or clear in the rules, then you may make assumptions, and indicate these assumptions when further documentation might be required from you.