



IEEE RAS INSAT Student Branch Chapter Semestrial Newsletter

During the first semester of the 2020–2021 academic year, IEEE RAS INSAT Student Branch Chapter members have been working hard despite the challenging conditions, while simultaneously respecting sanitary protocols. You will find in this newsletter all of the chapter's activities all along the past semester.

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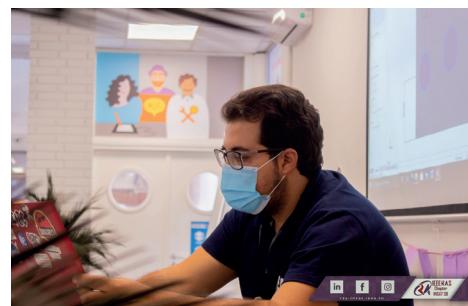
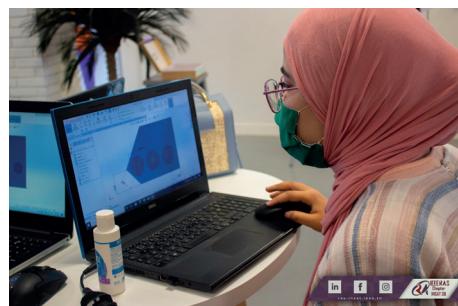


Summer School v3.0

As part of the third edition of the IEEE Summer School, the RAS INSAT SBC had the pleasure to present to its dearest potential new comers two training sessions on both ARDUINO micro controller and SOLIDWORKS. That being under the supervision of our chairman Amine FEKI and our training manager Imed BEN SLIMENE.

These two sessions were considered as an introduction to new members to familiarize themselves even more with the basics. Throughout our training, all members of the executive board without exception did their best to make our event as successful as possible and to help our attenders break the ice and feel free to speak out their minds and take the lead on such experience.

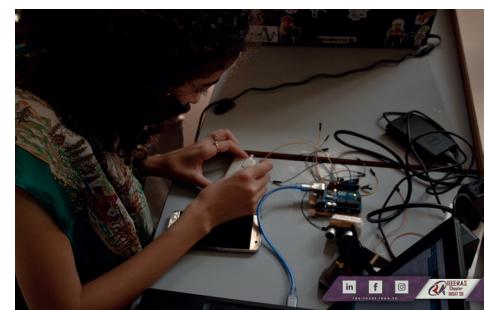
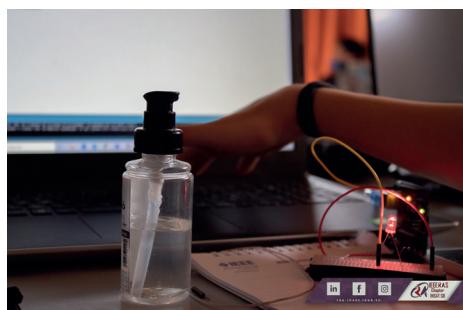
Our training series ended with great success, and we can only be proud of our efforts and that of our new members whom we consider to be a real added value in our RAS family.





Arduino training session

The RAS INSAT SBC organized a binary training session on Arduino micro controller. During this first training, our trainer Amine FEKI ensured that the flow of information was very progressive to ensure a good transmission to the attendees. Therefore, the first session was among other things an introduction to robotics, microcontroller and sensors and actuators. It then focused on the ARDUINO card itself, its IDE, the code structure. This first session was completed with an application and a mini project. The second session started with an application and a mini project. Just after, our attendees proceeded to a very detailed study of the power part of the engine, the H-bridge and the power board. The session ends with an application and a mini project, just like its start.



Proteus Online Workshop

The IEEE RAS INSAT SBC had the pleasure to present to its members an online Proteus training session. The workshop was supervised by our training manager Imed BEN SLIMENE who provided to his attendees the basics to use one of the best circuits designing software "Proteus". The training session was a great opportunity for those who want to learn how to design their own circuit board in order to build their own inventions and bring their ideas to life.





PCB Design Workshop Series

The IEEE RAS INSAT SBC has just launched a series of training sessions on PCB Design. The training supervised by Salem GHARBI will be divided into 4 weekly sub-sessions to ensure regular and continuous monitoring of the progress of the work as well as a smooth transmission of the information rate.

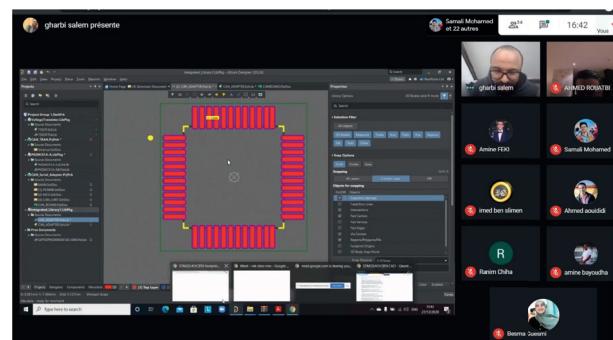
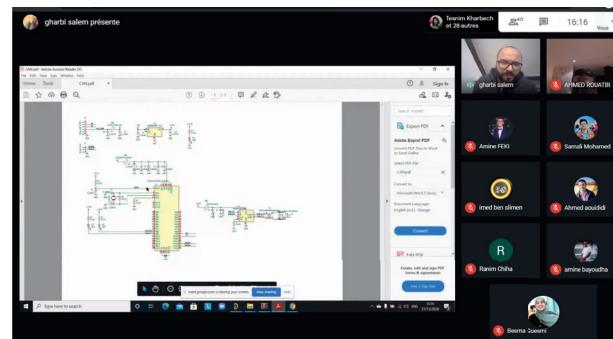
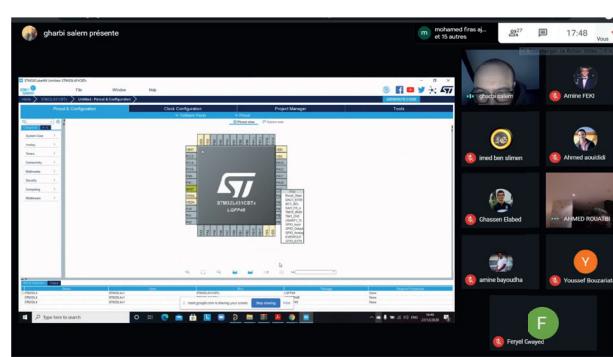
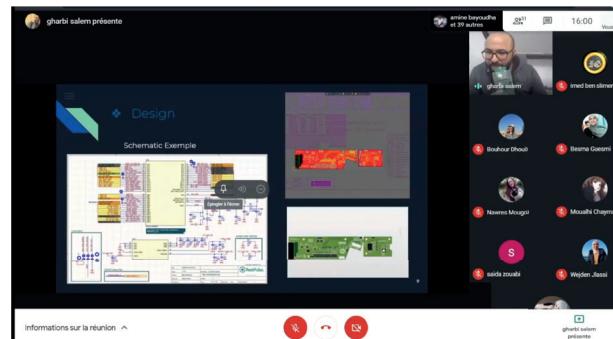
The first session focused on a very clear and detailed study of the hardware process. Its role was to prepare the ground for the receiver, among other things.

The second session has covered everything you need to know about Altium basics and highlight its benefits. then participants discovered “Analog to Digital Converters (CAN)” along with a CAN transceiver’s architecture.

At the end of the session, they designed a CAN Transceiver using Altium and Kicad.

The mottos of our 3rd session are interactivity and practice. The receiver will be able to use all his tools and baggage acquired during the first two sessions for the purpose of designing a board that works from the first time. All this being under the continuous supervision of our trainer Salem GHARBI.

Last but not least, the 4th session will be based on the advanced PCB layout and technical terms. All this being in order to be able to build a card such as the STM32 which could potentially be put on sale in the market.





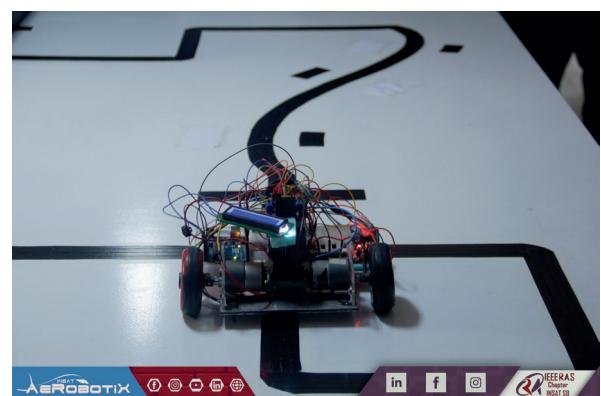
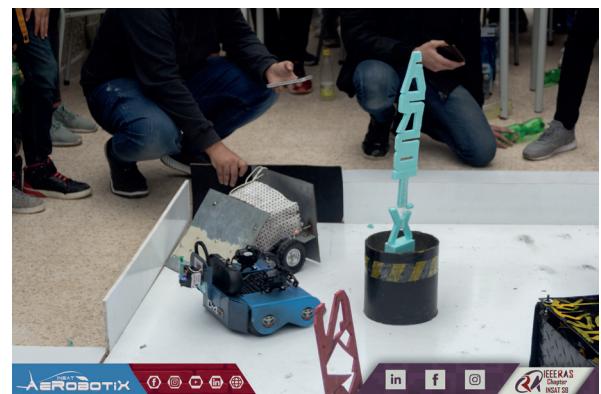
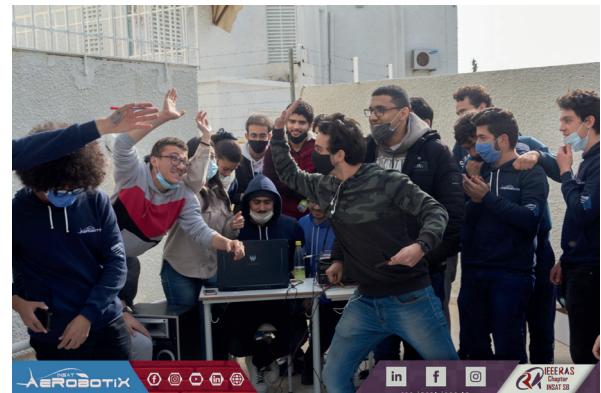
Internal Competition

In partnership with the local robotics club at INSAT "Aerobotix", the RAS INSAT SBC called for an internal competition in a very first and unprecedented edition. This competition comes as part of the encouragement of young participants to further develop their strengths and once again find the thrill of competing despite what is happening in the world regarding the pandemic situation.

The competition itself was divided into two major sub-competitions; A SUMO challenge and a follower robot challenge. Each event has its own specifications which explain in detail its progress.

Regarding the pandemic situation, we took all of this into consideration when implementing the specifications. The number of participating teams was small, and all health measures were fully observed to ensure the smooth running of the competition as well as the safety of our dear participants.

As usual, the IEEE RAS INSAT SBC's teams never failed to exceed our expectations, and that by winning the first prize of the Sumo Challenge, a win that could only make us feel proud to be part of the RAS family.





CoronaBot

The IEEE RAS INSAT SBC had the honor of participating in the coronabot competition, organized by Lasaadbot.

This competition included 4 challenges all related to the theme of the coronavirus.

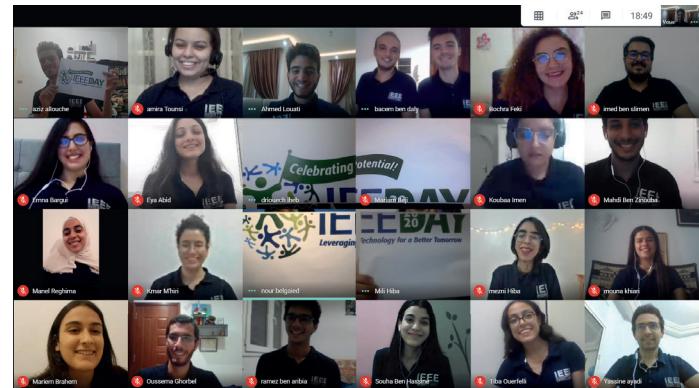
The pandemic did not prevent our hard-working and rigorous team from demonstrating competence and creativity.

It was a unique and enriching experience, which can only be one impetus among others towards the top of self-development.



IEEE Day

The coronavirus could not overcome the diligence and relentlessness of the IEEE INSAT entity. This year the IEEE DAY went through an impressive makeover and took the form of an online meeting. It took place remotely on the google meet platform and was divided into 5 waves to ensure that the maximum number of potential members was reached. The members of the IEEE RAS INSAT SBC office took advantage of this opportunity and showcased their entity, highlighting its activities, achievements and projects.





Winning the IEEE Region8 Large Chapter Of The Year Award

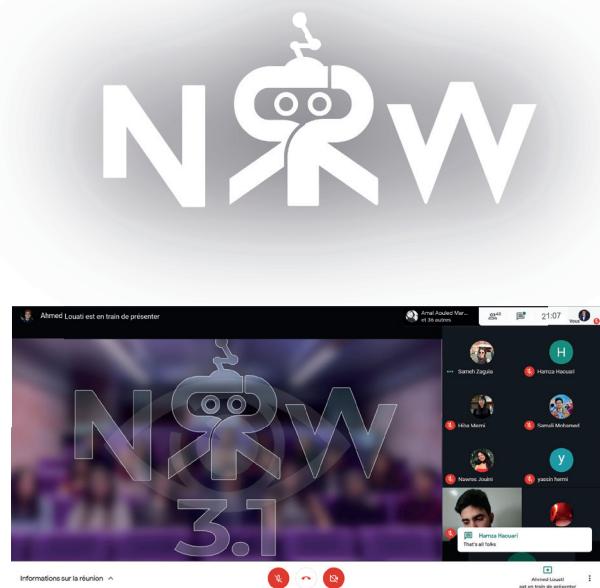
After a long year of hard work, relentlessness and sharing, after a long year full of emotions, willingness and challenges, the IEEE RAS INSAT SBC has won, for the second time in a row the Student Branch Chapter of The Year Award given by IEEE Region 8. An achievement which can only encourage the RAS Family to provide even more effort and to honor its name.



At this special occasion, we wanted to present A special thanks to every IEEE member who contributed to this achievement, including the former Executive Committee, the former Chairman and the present Executive Committee, as well as IEEE INSAT Student Branch, IEEE Tunisia section and IEEE RAS Tunisia Chapter for their continuous support.

NRW Info Session

The IEEE RAS INSAT SBC held an online info session for its most prominent event “National Robotics Weekend NRW”. During the session, the event’s project manager Ahmed LOUATI accompanied by members of the RAS Executive Committee presented this year’s edition of NRW’s novelties along with past experiences of former organizing members of NRW 1.0 and NRW 2.0. the session was followed by a Q/A session where we answered all of the questions that passed into the curious minds of our dearest members.





Teambuilding Activities

Good understanding and harmony are two necessary ingredients in the creation of the identity of the RAS family. This is why we always make sure that these two factors are always present to catalyze the good progress of teamwork.

It is within this framework that the RAS INSAT SBC organized a teambuilding which aims to strengthen the team spirit among our members, and to get closer to each other.

Team building mainly consists of paintball games, a collective game of tactics. These games were simultaneously alternated by activities of reflection and synchronization to invite our members to work in harmony.

This event was a great opportunity for us and our members to get out of the ritual, have a change of air and let off steam.



PS: the team building took place while respecting the health protocol to ensure the safety and well-being of our dear members.



Project axis launching

The IEEE RAS INSAT SBC has chosen to inaugurate its new axis of projects by implementing an online form and by organizing a brainstorming session within the club premises. During this session, the members of the executive board did their best to explain to the members the concept of the new axis, and ended up presenting them a list of ideas and proposals to encourage them to be more creative and to go out of their cocoons. the brainstorming session was a real success and was the birth of several new, innovative and above all creative ideas, something very expected of the members of RAS INSAT SBC.

What kind of projects will we work on?

Mainly, projects have to fall under **Health**, **Industry** and **Ecology** themes and sub-themes. A brainstorming will be held to discuss **your ideas** and study their financial and logistical feasibility. Once we choose the projects based on these criteria, teams can start working on them.

IEEE RAS Chapter
INSAT SB

What is the role of RAS during the process?

IEEE RAS INSAT SBC will help the teams by guiding them whether technically by providing equipment and advice and interfering when needed, or by helping them to raise funds and to find potential partners.

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Towards More Challenges!

The first semester presented a real challenge for IEEE RAS INSAT SBC due to the Covid-19 pandemic and its repercussions on students' lives. Our routines were affected, as well as our productivity and mental well-being. But we managed to get through it and achieve success. That was only possible thanks to the support we have for each other and the sense of belonging to this great family. We are certain our passion will not fade, the second semester already looks more promising!