

NEWSLETTER

2018 MAY

COVER STORY

STUDENT INTERN PROGRAMME

INDUSTRIAL INSIGHTS

2017

WELCOME TO THE
NEWSLETTER OF

OLD ROYALISTS
ENGINEERING
PROFESSIONALS'
ASSOCIATION

OREPA

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2018/19



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STRENGTHENING OUR FUTURE WORKFORCE:

INDUSTRIAL INSIGHTS 2017

In a highly pragmatic field of study such as engineering, it is extremely vital that those preparing to join the industry receive a well-rounded education which involves an ample amount of both theoretical and practical elements. With this idea in mind, the OREPAs Students' Chapter with the support and resources of the main body organized 'Industrial Insights', an initiative to give engineering undergraduates exposure to the industrial environment to supplement their learning at lectures and labs. This project was mainly aimed at students who are preparing to embark on their internship period which is a crucial element in assessing their performance.



The inauguration of Industrial Insights took place last year. Applications were made open to Old Royalist undergraduates currently in their second year of study at all member institutions of OREPAs. In response, a total of 62 students representing 10 different engineering streams from the University of Moratuwa and the General Sir John Kotelawala Defence University enrolled in the programme. These students were divided into groups for which they were assigned to a mentor who is a respected professional in each respective field.

Throughout the programme the undergraduates were given the opportunity of visiting a number of workplaces and industrial sites with respect to

their field, giving them a good taste of what to expect during their internship period. The students were able to closely observe the work process of each of these sites and request the assistance of their mentor for further clarifications.

It is often said that in a professional setting, the building of strong networks is of paramount importance. The students who took part in the Industrial Insights programme were able to meet with numerous Old Royalists representing a variety of engineering disciplines and learn from their experience of many years serving in the industry. It is our hope that the connections made through this programme will be sustained for years to come.



In addition to gaining a huge amount of theoretical knowledge and practical experience, the participants were given insight into other important non-subject related aspects of the industry such as workplace communication, ethics, project management etc adding much more wholesomeness into this project.

It is important to recognize the professionals in OREPA main body who took it upon themselves to become mentors for this programme, taking time off their busy schedules and giving in the much-needed effort. Messrs **Kalana de Silva** and **Himantha Alahakoon** representing the Electronic and Telecommunication Engineering field, **Mr Janith Dushyantha** representing Textile Engineering, **Mr Thilanka Gamage** representing Earth Resources Engineering, **Mr Vihagun Ariyaratne** for Chemical Engineering, Messrs **Dhilina Nissanka** and **Benura Vithana** representing the Civil Engineering stream, Messrs **Danula Eranjith, Madawa Zoysa** and **Anushka Abeyrathne** for the field of Computer Sciences Engineering, **Mr Nuwan Chaturanga** mentoring for the Mechanical Engineering stream and **Mr Akila Udage** for Electrical Engineering. This project would not have been a success if not for their support. Under their wing, a total of 11 groups successfully completed the programme.

Going into 2018 the Student Chapter hopes to make a number of improvements such as providing for the need of mentors for the streams of Material Engineering, Electrical Engineering, Aeronautical Engineering and Mechatronics Engineering. The



possibility of allocating multiple mentors for each group, hence further improving the amount of exposure that the students receive is also under consideration. Second Year undergraduates of OREPA member institutions may enrol in this programme for the year 2018.

For more information in this regard please contact Hiran Kodithuwakku on 077 582 4978.

STUDENT INTERN PROGRAMME

Going by the tradition, newly elected board of officials of OREPA Student Chapter of 2017/18 too made sure that they initiate novel concepts to highlight the respective year while continuing the ongoing projects.

Student Intern Project, which was conducted for the second time, is basically about providing young Royalists who have finished their Advanced Level Examination with an opportunity to undergo an internship training during their vacation. The programme is implemented in a way so that all participants will get a clear idea of tackling the opportunities and challenges in the years to come.

According to the present education system in the island, one will have to spend at least one year at home before they start their careers at state universities. Unless they choose any other future paths as soon as the examination is over, majority of them go on to waste months of precious time doing nothing useful. Hence last year, the Student Chapter of OREPA came up with this novel idea to fill this void, so that fellow Royalists will spend this time in a useful manner.

Organized and implemented with the help of past Royalists who are established in the corporate sector, the two opening editions itself turned out to be highly successful. Although the organizers were unable to recruit a large number of students for these opening phases, they made sure that the participants will undergo an unforgettable experience.

During the course of this project, participants were directed to a range of companies, start-ups and factories throughout the country making them experience real life scenarios that prevail in the sector. Apart from visiting the



factories, production facilities, sites, offices of those companies, the participants were given a opportunity to find solutions to some of the problems they face. Students had a wonderful time tackling those little issues with the help, guidance and expertise of experienced personnel.

With the great encouraging feedback we received from the participants, plans are already in place to conduct the bigger and better third edition of OREPA Student Chapter's Student Intern next year.

“
A good intern is supposed to
be like a good hairpiece:
effective but unobtrusive”

BLOG WRITE-UPS ON STUDENT INTERN

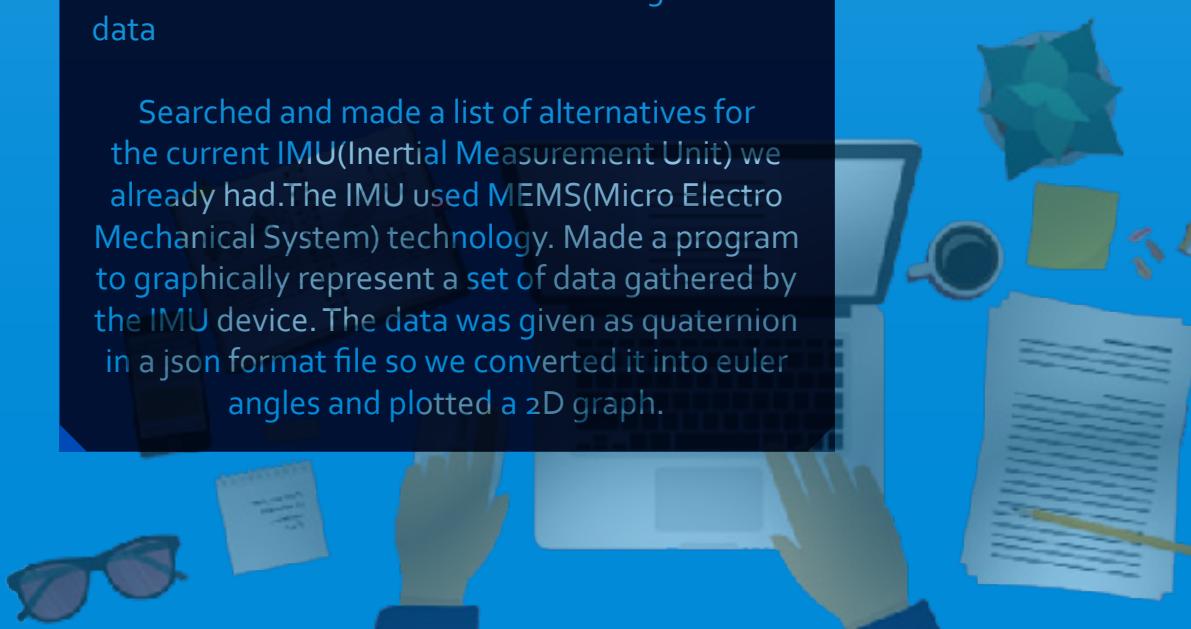
Went to Biyagama Export Processing zone to obtain PCBs for the sewing machine automation project for MAS. The company which produces PCBs, TOS Lanka uses high tech equipment such as robotic hands to solder equipment to the PCBs. However the PCBs are not completely finished and we have to do some of our own soldering according to our needs. I assembled potentiometers, rotary switches LEDs, OLED displays and switches to the front panel.

Made a program to show a 3D object that changes its orientation according to the quaternion data(the blue and red vectors are placed perpendicularly and they represent the 3D object. Black vector is a reference vector)

Project name : Live Bat

Project description : Making an app that monitors the orientation of a bat using sensor data

Searched and made a list of alternatives for the current IMU(Inertial Measurement Unit) we already had. The IMU used MEMS(Micro Electro Mechanical System) technology. Made a program to graphically represent a set of data gathered by the IMU device. The data was given as quaternion in a json format file so we converted it into euler angles and plotted a 2D graph.



THE ANNUAL GENERAL MEETING 2018



The Annual General Meeting of both the Student Chapter and the Main Body of the Old Royalists' Engineering Professionals' Association concluded successfully on Thursday, the 18th January at the Royal College Union Skills Centre. Undergraduates and Academia representing all member institutions of OREPA as well as Engineering Professionals from a variety of disciplines took part. Mr Athula Munasinghe, Secretary of the Royal College Union, graced the occasion with his presence.

The Student Chapter AGM commenced at 6.30 pm. In the Secretary's Report, Sithira Weeratunga read out the minutes of the previous AGM and went on to highlight, in detail, the list of projects completed by the OREPA SC for the year 2017/18. These included Mind Guides, Industrial Insights, Olympiad Training Programme, Fraternite etc.

Following this was the reading of the Treasurer's Report which was conducted by Abishek Mapa. The report was unanimously approved and seconded by the members.

The Secretary of the RCU, in his speech, commended the efforts of all OREPA members and their services towards College and called for everyone's continued cooperation and support. In a special announcement, he also called upon the members to contribute to 'Trail for Kids' organized by the RCU to raise funds for the Karapitiya Children's Cancer Ward.

Subsequently, letters of appreciation were handed out to all Project Coordinators of the many initiatives carried out by OREPA during the year and the Institutional Coordinators by the RCU Secretary and Immediate Past President Professor U G A Puswewala.

Professor Puswewala, addressing the gathering, thanked the Student Chapter members for the support extended to him and the rest of the main body to carry out the mission for which OREPA was established and requested to continue to give the same level of support to the incoming Committee.



The outgoing President of the Student Chapter Bhanuka Abeygoonawardana after thanking all the SC members went on to induct the new Student Chapter Committee which comprised of the following:

President: Sandaru Jayasekara

Vice President: Chiranthana de Costa

Secretary: Sudaraka Liyanage

Treasurer: Roshan Madusanka

Directors of Information Management and Marketing:

Naveen Avishka

Dulaj Dilshan

Directors of College Affairs:

Kanchana Ranasinghe

Nalith Udugampola

Director of Membership Development: Malisha Ranasinghe

Director of Event Management: Dasun Kariyawasam

Director of Public Relations: Hiran Kodithuwakku

There being no objections, the above appointments were approved and seconded by the members.

Concluding the meeting the Vote of Thanks was delivered by Abishek Mapa.

The Annual General Meeting of the Main Body was held following the Student Chapter AGM headed by the outgoing President Professor Anuruddha Puswewala.

Professor Saman Jayaweera Bandara, Head of the Civil Engineering Department of the University of Moratuwa was appointed as the new President of the Old Royalists' Engineering Professionals Association. He thanked everyone for the faith placed in him and requested all members to be actively involved in the Association's activities in the coming year. He mentioned the importance of project evaluation to make sure that all activities conducted by OREPA have maximum impact and reach and outlined his plans for how such evaluations can be carried out.

The complete list of Main Body Committee Members appointed at the AGM are as follows:

Immediate Past President: Prof U.G.A Puswewala

President: Prof J.M.S.J Bandara

Vice Presidents:

Dr Chandana Gamage

Kavinga Karunasekara

Secretary: Geethanga Wijesinghe

Asst Secretary: Sakitha Kumarage

Treasurer: Prof Jagath Manatunge

Asst Treasurer: Pamodh Alwis

Committee members:

Yoshitha Kaushalya

Dulan Nakandala

Chandula Samaranayake

Amila Saputhanthri

Kalana De Silva

Sithira Weerathunge

Abishek Mapa



OREPA

YEAR PLAN

OREPA Student Chapter presents a new set of enhancements by creating new opportunities for the young Royalists and the member committee bringing out a new look to the community projects for the year of 2018. With a new year in action, new leaders emerge to guide the OEREPA student chapter. New Board of Directors takes up the baton to lead forth.

In the year 2018, community projects with new outlook are being launched for young Royalists

- » Academic Guidance
- » Creativity Enhancement program 2018
- » Mind Guides 2018/19
- » Olympiad

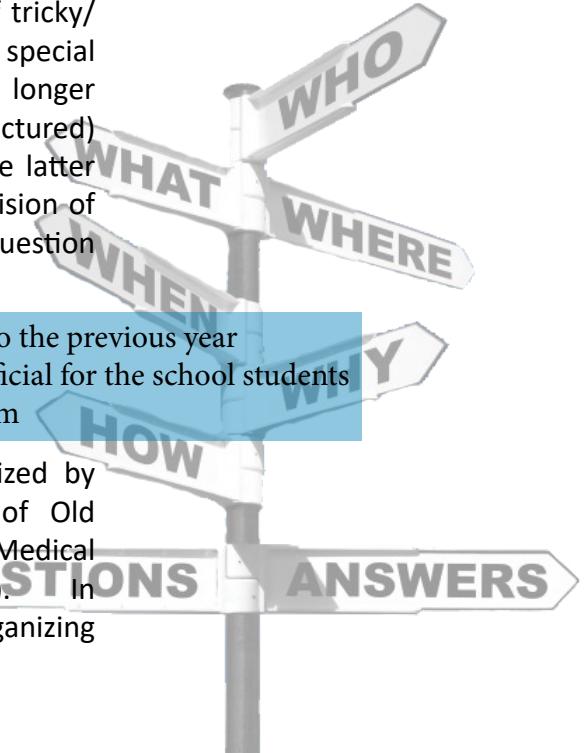
ACADEMIC GUIDANCE

The Advanced Level Examination is one of the most difficult examinations faced by school students. Numerous students fail to reach their highest potential at this examination, mainly due to lack of motivation and adequate guidance. Also, a drop in the number of entrants to University of Moratuwa from College has been noticed. The student guidance programme is aimed at addressing all these issues and providing students the necessary platform to reach their fullest potential at the examination. The objectives of this project are,

- Increase number of entrants to Engineering Faculties compared to the previous year
- Conduct continuous academic support sessions that will be beneficial for the school students
- Witness improvement in the A/L results in Physical Science stream

The project is expected to span over a period of six to eight months. During this period, weekly support workshops are expected to be carried out. The workshop series is aimed at discussing past papers where easy solving techniques, efficient time management methods and clarification of tricky/difficult sections will be given special emphasis. Also writing of longer answers (essay type and structured) will be concentrated on. The latter stages will also focus on revision of the entire syllabus through question and answer discussions.

is also supported by the College Prefects' Council. This year a one-to-one mentoring program is also being incorporated as a pilot implementation. The target group for this year is the 2019 batch.



The project is being organized by OREPA with the support of Old Boys from the Colombo Medical Faculty (undergraduates). In addition, the logistics and organizing

CREATIVITY ENHANCEMENTS PROGRAM

Royal College has, since its inception, has served as a breeding ground for many of exceptional skill and character. The strong inspiration and proper guidance provided by the alma mater ensures the continued generation of individuals who are eligible for leading a variety of fields in the future. Innovations in engineering and the creative process that goes into such innovation are of vital importance to the world. With the objective of creating a group of students enriched with such creative talent the inaugural 'Creativity Enhancement Programme' was initiated in the year 2017.

In 2018, being the initiative's second phase, we would like to extend the scope of this programme into new dimensions.



- Increase the interest and knowledge in Robotics through lecture and workshop series.
- Introduce the popular aspects in Engineering and Innovation through lecture and workshop series.
- Increase student participation in national and international robotic competitions.

In order to achieve the above mentioned objectives, this project is being carried out. Creativity enhancement project has 2 phases.

1. Introducing new Engineering and Innovation concepts - A stand- alone workshop/lecture series will be conducted by expertise in the relative principles.

2. Robotic knowledge development - Basic knowledge about robot development concepts will be introduced with a series of workshop and lectures guided by university undergraduates. At the end of this phase a small competition is expected to be held to evaluate the skills of students

The project aims middle school (grade 6 to 10) and advanced level students. OREPA undergraduates and volunteering university lecturers will be involved in different parts of the project.



MIND GUIDES

Inspiring students and nurturing their abilities to produce brilliant, well-rounded individuals is essential. In order to carry out this task, OREPA has

implemented a mentoring programme for Advanced Level Mathematics Stream students at College.

The outline of the project is as follows:

- Undergraduate volunteers who are to be mentors are first trained by professionals
- Mentors are formally introduced to their respective mentees, marking the start of the programme.
- Throughout the mentoring sessions, the progress made by the mentees will be tracked and they are advised and guided accordingly.
- The programme will end with the collection of feedback by the mentors and mentees.

This year the programme will target the 2020 Advanced Level Batch at College.

OLYMPIAD

Royal College has had an impressive track record at both national and international Mathematical Olympiad competitions with many young Royalists securing a number of notable achievements throughout the years. These competitions are extremely challenging and participants go head to head with some of the greatest young minds in mathematics in the world hence, their training should by no means be taken for granted.

The Olympiad Project has three initiatives: motivation and insight sessions, award ceremony, and training programme. The project aims middle school (grade 6 to 10) and advanced level students. OREPA undergraduates and volunteering university lecturers will be involved in different parts of the project.

- ◆ **Motivation and Insight Sessions** are conducted for grade 6 and 7 students where past participants and eminent academia speak about their experiences and value of Olympiad. This will be a one-time event held at school.
- ◆ **Award Ceremony** is held to recognize and reward students representing school in Olympiad at International Level. Will be a one-hour event held at school premises with presence of Principal.
- ◆ **Training Programme** is conducted for selected students (top ones at an exam conducted) before the National Olympiad Competition to prepare them for that. This is done by past participants or university

These projects are carried out throughout the academic year providing young Royalists and OREPA SC members with invaluable opportunities

await...

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