

2020

GreenTRIBOS Project Kick-Off meeting and 1st Network Wide Event

In coordination with other universities, GreenTRIBOS Kick-off meeting and the 1st NWE (network training event) were successfully organized by University of Leeds, UK on October 19th – 30th, 2020. The 2 week event was held online via Teams application. This is how we all greatly contributed towards Covid19 pandemic issues. The prescriptions and regulations of EU governments were fully accomplished and direct contacts were reduced. By switching to online an important impact towards greener environment was achieved.

Professor Dr. Albano Cavaleiro and Professor Dr. Bruno Trindade from CEMMPRE, University of Coimbra addressed the consortium members and ESRs. They welcomed all the members and also shared valuable research knowledge and tips regarding coating manufacturing, tribology and green engineering solutions with the ESRs. Additional opening remarks were given by Dr. Stojan Sorčan, from MSCA and Prof. Mitjan Kalin, from Ljubljana University, the coordinator of the project. They expressed their support and pride towards the GreenTRIBOS and wished a fruitful collaboration in the future.

Kick-off meeting was organized to show the project plan and its organizational structure. The deliverable plan and work packages were presented, and the sub-projects were refreshed. The ESRs had chance to introduce themselves and got known each other, since they will jointly work on various aspects of green tribology. Overall, the meeting was encouraged and fruitful. In addition, it was a pleasure to see all the supervisors and ESRs together for the first time.

The plan for the 2nd NWE to be organized by the Faculty of Mechanical Engineering, University of Ljubljana and the future work plans of the ESRs were discussed at the end of the meeting. We look forward to the 2nd NWE where the progress and first from ESRs will be presented and discussed.



European Joint Doctorate (EJD) on Green Tribology for Sustainable Engineering integrating CEMMPRE-University of Coimbra

Green tribology is a rapidly expanding field with high scientific impact and is intersectoral in its nature. Green tribology has been enthusiastically adopted in both industry and academia, with high-impact, high-visibility studies being published in research journals like Nature and Science. However, now a shift away from a focused, case-study approach, is needed, towards a broader, European-based, vision of green-technology innovation, which can be envisaged through a doctoral training program. Considering these needs, European union approved a funding of ~ 3 million euros for an ambitious and unique joint doctorate programme – GreenTRIBOS. The project is funded under the umbrella of **Marie Skłodowska-Curie Actions** (MSCA).

The uniqueness of this project comes from the fact that it brings together four academic partners University of Coimbra, University of Ljubljana, University of Leeds, and Luleå University of Technology, and 26 most innovative industrial Partners from 10 countries which will work together to train 12 early stage researchers (ESRs), selected from all over the world, to become professionals in developing sustainable green solutions for tribological applications.

CEMMPRE (Centre for Mechanical Engineering, Materials and Processes) of the University of Coimbra, holding a vital position in the world of Tribology, is one of the core members and stake holders in the GreenTRIBOS consortium. The University of Coimbra is the mother institution for 3 ESRs and will be co-hosting other 3 ESRs, one from each academic partners to further enhance the dissemination of skills and knowledge. The University of Coimbra will be directly collaborating with several industries and organizations of Portugal (Huf, TEandM, IPN, UMinho, UA and Quercus) for the state of the art training of these ESRs and upscaling of the developed sustainable green solutions.

In GreenTRIBOS work plan, the ESRs will work in three science-based work packages to develop integrative green concepts, their functional mechanisms, and lifecycle analyses to verify the sustainability, as well as quantifying the tribological performance to reduce energy consumption, resource depletion and polluting emissions. The details of research projects are presented in the following link <https://www.greentribos.eu/research-projects/>.



FCTUC anniversary

In the celebration of the 248 years of the Faculty of Science and Technology of the UC, the three honourable mentions for Professors and Researchers considering the impact of the international publications were attributed to members of CEMMPRE. The winners were:

- Christopher Michael Ashton Brett
- Jorge Fernando Jordão Coelho
- Pedro Mariano Simões Neto

Event video: <https://youtu.be/0OPuq6N1Mq4>



CEMMPRE Grants for Doctoral Initiation / Completion

Application Deadline: 30-11-2020 (24h00 GMT)

Considering that advanced training is a priority of the research centers' scientific and development policy, the Center for Mechanical Engineering, Materials and Processes (CEMMPRE) announces the opening of a call for Grants for Doctoral Initiation / Completion, to financially support its researchers.

The applications must be formalized between **16 and 30 of November**, by sending the documents referred to in the [REGULAMENTO INTERNO DE PRÉ-SELEÇÃO DE CANDIDATOS A BOLSAS DE INICIAÇÃO/CONCLUSÃO DE DOUTORAMENTO](#) to the following email addresses: mmadeira@dem.uc.pt; cemmpre@uc.pt .

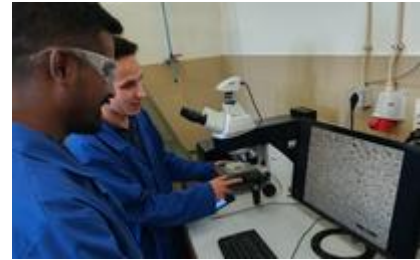


PhD RESEARCH GRANTS

Application Deadline: 12-10-2020 (24h00 GMT)

The Centre for Mechanical Engineering, Materials and Processes (CEMMPRE) is opening a call for awarding 3 PhD research grants, in the area of Mechanical Engineering or similar scientific areas, under the FCT Research Grants Regulation (RBI) and the Statute of the Research Fellow (EBI).

The scholarships will be financed by the Foundation for Science and Technology (FCT) under the Collaboration Protocol for Financing the Multiannual Plan for Research Scholarships for PhD Students, signed between FCT and the R&D Unit 285, CEMMPRE. ([details](#))



The topics proposed for the doctoral plans are the following:

- **3D, 2D & 4D Sustainable Technologies for the production of multifunctional stents** ([details](#))
- **Biobased Lubricants with improved properties by polymeric additives** ([details](#))
- **Design and characterisation of additive manufactured metallic auxetic materials** ([details](#))
- **Development of multiscale approaches to improve the control of self-adaptive coatings in low friction mechanical systems** ([details](#))
- **High-speed processing of hybrid-manufactured parts** ([details](#))
- **Intelligent additive manufacturing of metal powder** ([details](#))
- **Linking Fatigue Crack Growth to Microstructure** ([details](#))
- **Sustainable Lubricating Interfaces towards a more energy-efficient Maritime Transportation** ([details](#))

All correspond to interdisciplinary work in the two major research areas of CEMMPRE: Materials and Processes and Mechanics and Intelligent Manufacturing. The candidate must select four of these themes and indicate the order of preference in the motivation letter. The motivation letter must be written in English and must clarify the reasons for the selection of each of the four themes, as well as how the candidate's professional experience can contribute to achieving his goals. After selection, candidates must prepare a work plan, with the help of the respective guidance team, to be submitted to the respective doctoral programs.

CALL FOR EXPRESSIONS OF INTEREST: Marie Skłodowska-Curie Actions Individual Fellows

CEMMPRE wants to support young researchers in Mechanical or Materials Engineering who take an interest in research in working in Mechanical and Intelligent Manufacturing or Materials and Processes. We are interested in developing an application to the Marie Skłodowska-Curie Fellowship (MSCA-IF). An MSCA-IF can be a great boost to your career if you are looking for a prestigious Fellowship that allows you to pursue your own independent research.

Applicants should hold a doctoral degree or four years' full-time research experience, be based in EU member States or Associated Countries and cannot have lived in Portugal for more than 12 months in the last 3 years.

At the University of Coimbra we are committed to providing you with individualized support for the success of your application. We offer help in writing the non-technical sections of your application, a wide range of re-location services once you become a Fellow and competitive conditions to maximize the transfer of knowledge and impact of your research.

For more information:

MarieCurie@UC

[Marie Skłodowska-Curie Actions - Individual Fellowships](#)

We invite applications in Mechanical and Intelligent Manufacturing or Materials and Processes. Interested applicants in any of our research topics are encouraged to send us (cemmpre@uc.pt) their CV/cover letter until July 15. The deadline for submission is 9th of September 2020. Contact us for more information.

