

Newsletter

on the new developments in the project

Renewable Energy-based E-Mobility in Higher Education



Source: THI

Welcome to our first joint REMO newsletter!



As lead of the REMO project, I am very pleased to introduce you to this project newsletter.

The aim of this new format is to enable the partners involved in REMO to report on their activities within the framework of the project and thus to exchange knowledge.

Source: THI

Therefore, I would like to encourage you to actively use the project and the existing partnerships to advance research on RET and e-mobility, to build long-term collaborations between academia and industry, and at the same time to promote knowledge transfer between academia and industry across continents.

We as THI take the role of the facilitator in this networking process, the project activities are mainly implemented by the local partners. So it is also up to you to steer this process. Thanks to those who have contributed to this newsletter edition and I am looking forwards to the next editions to come.

Sincerely,



Prof. Wilfried Zörner

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Upcoming dates

November 2021

- 15.11.** Joint Research Group on *Data-driven analysis of supply and demand in transport (public and individual)* - Kick-off-Meeting (online)
- 22.11.** Professor Samir Jomaa from ENSTAB starts his guest lecturer stay at THI (guest lecture stay ends on December 3rd)
- 22.11. - 24.11.** Virtual Launch Conference organised by DAAD
- Further information has been sent to the REMO partners by DAAD
- 29.11.** InES and ENSTAB REMO researchers visit IBC SOLAR AG in Bad Staffelstein

December 2021

- 02.12. - 03.12.** Off-Grid Fair and Expo: InES researcher and guests from ENSTAB present the REMO project (tbc.)
- For further information on the fair, please visit the following website:
<https://www.off-grid-expo.de/>
- 09.12.** ENSTAB Industry Workshop (online & face to face)
- Final agenda will be provided by ENSTAB and you can then directly register with ENSTAB

 OFF-GRID
Expo + Conference

Short Report on Research Stay of ENSTAB Students at THI

The two Tunisian students Karem Chatti and Lazher Mejdj are currently at THI for a 5-month research stay. During their stay, the two are working on their respective research projects in the frame of the REMO project and benefit from the regular exchange with THI scientists. In addition, the two have already had the opportunity to take part in some excursions in the past weeks:

Visit at Eichenseher Ingenieure GmbH in Pfaffenhofen

Philine Ginsberg (InES Project Coordinator)

Direct exchange with industrial partners is essential for gaining scientific knowledge. On 10 September 2021, InES researchers and the two Tunisian guest scientists Karem Chatti and Lazher Mejdj therefore visited the company Eichenseher Ingenieure GmbH based in Pfaffenhofen to discuss, among other things, the existing energy supply of the innovative office building:

Together with Mr. Eichenseher and his colleague Mr. Schreiner, the researcher exchanged ideas on how to further improve the overall balance of energy production and demand of the office building based on evaluated energy data. The head of InES, Prof. Zörner, emphasised that the office building is a very positive example of the design of a building taking into account aspects of climate protection, which has also received several awards in recent years.

During the meeting, the current InES guest researchers from Tunisia also presented their evaluation of last year's measurement data from the charging stations for electric vehicles at the building of the company Eichenseher Ingenieure GmbH. Together, they discussed any anomalies and developed further questions.

The Tunisian students work on the development of intelligent charging infrastructure using artificial intelligence. The acquired insights in Germany will then be transferred to the Tunisian context.

Visit at IAA and Intersolar Fair in Munich

Lazher Mejdj (PhD - ENSTAB) & Karem Chatti (Master student - ENSTAB)

Our presence at Ingolstadt, near Munich, has been a great opportunity for us to get in touch with an in-place e-mobility ecosystem. We have not only been in the right place, but our research stay coincides with a very good time for us as we have been able to attend a couple of the biggest events related to the topic RE and e-mobility, namely the fairs IAA MOBILITY 2021 and Intersolar Europe Conference 2021.

The IAA was a great opportunity to see the latest developments in the automotive technologies and to exchange with industry experts and policy-makers.

During our visit at IAA, we also discussed opportunities of collaboration with some actors to search for further options to get access to data need to reach our research objectives. At the same time, we elaborated how our research could also benefit the companies in their aspiration to improve their products.

Through this direct exchange, we were able to arrange also a follow-up virtual meeting with the company ElintaCharge, for example. The company offers chargers for electric vehicles without control strategies and we suggested that we could develop some charging strategies for them if they provide us with their charging data. In the planned virtual meeting, we will discuss this idea further with each other.



Participating in the professional exchange at Eichenseher Ingenieure GmbH were (from left): Michael Bachseitz, entrepreneur Wolfgang Eichenseher, Prof. Wilfried Zörner, Dr. Mathias Ehrenwirth, Melanie Werner and the two guest researchers Lazher Mejdj, Karem Chatti.

Source: THI



ENSTAB students Karem Chatti and Lazher Mejdj visiting Bavarian company Eichenseher Ingenieure GmbH

Source: THI

The Intersolar Fair, however, was a more topic specific event, in which we met with companies and professionals to discuss technical aspects of smart charging and its challenges.

The Start-up L-charge was the most interesting company for our research and the Tunisian context as they provide an innovative solution that provides fast electric charging based on clean fuel (pressed H2 or liquid methane) without a grid connection. The charging is thus possible through a small power plant that can be located at a fixed location or mobile (van-based).

Both visits were really exciting for us as researchers as they showed us that our research can have great impact, especially given the need shown by industry practitioners for effective smart charging solutions.

Joint Research Groups have started

International exchange is still limited by the Corona pandemic, so it is all the more gratifying that cross-university research groups have now been initiated that are dedicated to different thematic focuses that are of interest in the field of RET and e-mobility. As project leader Prof. Zörner recently pointed out, REMO is intended to become a catalyst for new research questions and projects through this newly introduced format.

THI-led group with the focus on energy structure - analysis, inclusion of e-mobility

Karoline Knepper (InES researcher)

The THI research group, led by Dr. Mathias Ehrenwirth, kicked off the newly established format. On September 8th, eight researchers from Germany and North Africa met virtually to discuss mutual expectations of the research group after a brief summary of the project goals.



Source: ENSTAB

In addition, the researchers exchanged methodological competences and interests.

The substantive exchange focused on current developments in e-mobility in Maghreb and Germany and the partners discussed helpful databases and proven simulation tools.

The next meeting is to be used to develop joint research questions that will later be worked on together within the REMO project. The aim is to explicitly include the broad expertise of the industrial partners in North Africa and Germany.

Another research group led by ENSTAB will start in November. The main topic will be *Data-driven analysis of supply and demand in transport (public and individual)*. For further information see also page 2 - Upcoming dates in this newsletter or contact the project team.

New partnerships in Tunisia

LaRINa, ENSTAB team members are multiplying their efforts to expand the REMO project network to the main e-mobility stakeholders in Tunisia. In this context, several meetings have taken place in August and September with representatives of ANME (the Tunisian National Agency for Energy Management) and STEG (the Tunisian Company of Electricity and Gas).

LaRINa, ENSTAB strengthening its collaboration with STEG

Dr. Ikbal Msadaa (ENSTAB WP3 Coordinator)



Two online meetings have recently taken place between STEG and LaRINa members to discuss possible scenarios of partnership between the two parties.

The meeting on September 28th, 2021 has been coordinated by EY team whose role is to support STEG in implementing the "Talents 2030" Programme. Discussions have mainly focused on the capacity building of STEG human resources



via the training and R&D services and programmes that ENSTAB and LaRINa might offer as an academic and research institution for STEG staff. STEG representatives have particularly shown their interest in the Master programme to be implemented within the WP2 of the REMO project.

The second online meeting between both parties was held on September 8th, 2021. More than ten participants (Directors and Managers) from STEG and from LaRINa (Khaled Grayaa, Faten Kardous, Ikbal Msadaa and Merjem Trojette) gathered to discuss possible areas of collaboration in e-mobility based on both: (i) **the domain of expertise and research interests of LaRINa team members** and (ii) **the main goals set by STEG within its programme on e-mobility**.

A draft version of the partnership agreement between STEG and LaRINa, ENSTAB has been submitted for revision.

A partnership agreement signed between LaRINa, ENSTAB and ANME

Dr. Ikbal Msadaa (ENSTAB WP3 Coordinator)



A partnership agreement has been signed between LaRINa, ENSTAB, and ANME (the Tunisian National Agency of Energy Management). The main goal of the partnership is to develop and promote e-mobility based on renewable energies.

The axes of collaboration are summarised in the Figure on the right. Meanwhile, both parties are tightly collaborating for the preparation of the industry workshop to be held in Tunis on December 9th, 2021.



Source: ENSTAB

REMO Consortium

University partners



Industry partners

In Germany:



In Tunisia:



If you have any inquiries regarding the content of the newsletter or the overall REMO project, please get in touch with the following persons:



Overall project management:
Philine Ginsberg (THI - InES)

Philine.Ginsberg@thi.de
+49 841 9348 6845



Country Coordinator Tunisia:
Prof. Khaled Grayaa (ENSTAB)

khaled.grayaa@ensta.u-carthage.tn
+216 530 90377

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