## ***RIS Internship Master thesis opportunities***

## ***Acad. year 2023/24***

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| Host institution name | ICMS (CSIC-US) |
| Host institution field | Mining / Geo-sciences and geotechnology / Extractive waste management/ Materials science/ Metallurgy / Recycling / Other (specify) |
| Tentative topic of the master thesis  | Use of clay for energy storage |
| Short description (several sentences) | Lithium-ion batteries (LIB) and supercapacitors (SC) have been implemented in applications requiring high energy or high-power densities. In this context, two dimensional (2D) materials have proven to be valuable for the fabrication of high-performance electrodes.In this project, flexible, one layered silicates will be explored as silicon sources for preparing Si-based SC electrode materials.The development of these materials could create new opportunities for natural clays in energy storage applications. |
| Key words | Battery, Supercapacitors, Clay, 2D materials |
| Please select if applicable | Laboratory workField workAvailable datasetsLiterature overviewOther (please specify) |
| Preferred educational background of the intern  | Mining / geology / ecology/biology / chemistry / waste management / civil engineering / mechanical engineering / environmental engineering / metallurgy / economy/management |
| We accept | International students / National students / EIT Labelled students / SinREM/ Amir / Emerald / TimRex |
| Chose tentative months (Internship related to MSC thesis in 2023/24 should be e accomplished between October 2023 and latest May 2024)  | October 2023 (zero grant)November 2023 (zero grant)December 2023 (zero grant)January 2024 (full scholarship)February 2024 (full scholarship)March 2024 (full scholarship)April 2024 full scholarship)May 2024 (full scholarship) |
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