RESEARCH THEME

XLI Cycle – a.y. 2025/2026

Title of the doctoral research	Ancestral Technique and Sustainable Future: Co-developing natural base solutions, machineries and materials with communities
Proponent professor	Maximiliano Romero
Abstract	This research explores the potential of developing natural base solutions, small-scale machinery and local materials from regional resources in Argentina using a DIY and open-source approach. The goal is to create a sustainable ecosystem to produce small, smart machines, biological materials suitable for artisanal or semi-industrial use, positioning this model as a resilient and inclusive alternative to large-scale centralized industries. In collaboration with INTI (Instituto Nacional de Tecnología Industrial) and INTA (Instituto Nacional de Tecnología Agropecuaria), both deeply rooted in the Argentine territory, the project envisages a multi-scalar mapping process: identifying promising regions and provinces, cataloguing local resources and waste streams, and surveying existing initiatives. This preparatory work will lead to the co-design and prototyping smart and respectful machineries and materials to enable decentralised production. The project will also seek to valorise indigenous and local knowledge by integrating traditional practices into new sustainable production models. Finally, the research will aim to create professionalisation pathways for young people, empower local communities and promote industrial symbiosis between small producers and the few existing manufacturing centres in Argentina.
Keywords	Indigenous practices, Local resources, DIY technologies