

# MARIANA AIME CASTRO ISDAHL TROYE

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Under the ONISILOS MSCA COFUND programme, Dr. Mariana Aimé Castro Isdahl-Troye works on a project entitled “Technology Enhanced Interventions Targeting Emotions and Cognitions: A Novel Approach for Treating Behavioural Problems”, which includes the development and testing of an intervention that combines non-invasive brain stimulation with a cognitive training designed to modify social information bias processing associated with anger and aggression, in young adults.

Dr. Mariana Aimé Castro Isdahl-Troye is a psychologist, and currently a postdoctoral researcher in the Department of Psychology at the University of Cyprus (UCY), under the ONISILOS MSCA COFUND programme. She works on a project entitled “Technology Enhanced Interventions Targeting Emotions and Cognitions: A Novel Approach for Treating Behavioural Problems”, which includes the development and testing of an intervention that combines non-invasive brain stimulation with a cognitive training designed to modify social information bias processing associated with anger and aggression, in young adults. Dr. Castro Isdahl-Troye obtained her PhD in Neuroscience and Clinical Psychology from the University of Santiago de Compostela in Spain. During her doctorate, she focused on exploring common emotional and relational mechanisms underlying the development of at-risk behavioral profiles from early childhood, with the ultimate goal of informing prevention strategies in developmental psychopathology. Alongside her research career, she also gained experience in mental health settings, supporting emotional well-being and interpersonal functioning among adults with serious mental illness. This experience has strengthened Dr. Castro's research interest in how individuals interpret social situations and how these interpretations may shape emotional and behavioral responses, such as anger and aggression, which may emerge in various forms of psychopathology. On the basis of this research interest, Dr. Castro Isdahl-Troye is currently conducting her project under the supervision of Professor Kostas Fanti and Professor Andreas Chatzittofis, and in collaboration with members of the Developmental Psychopathology Lab at UCY.

Through this interdisciplinary collaboration, the project integrates perspectives from developmental psychology and clinical psychiatry to investigate whether non-invasive brain stimulation techniques, such as transcranial magnetic stimulation, can modulate neural networks associated with mentalization and cognitive reappraisal processes. The aim is to explore whether, by targeting these neural processes, it is possible to enhance the impact of a cognitive training designed to modify interpretation biases in everyday social situations that could trigger anger. Ultimately, the project seeks to identify key intervention components that could enhance current approaches targeting the cognitive components of aggressive behaviour, paving the way for the development of more effective intervention strategies.