Sondervortrag

EINLADUNG ZUM GASTVORTRAG

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INSTITUT FÜR GEOGRAPHIE UND REGIONALFORSCHUNG
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GIS - Labor (C0109)

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TRACKING WATER QUALITY FROM SPACE: LEVERAGING REMOTE SENSING FOR AQUATIC RESOURCES MANAGEMENT

Human activities are increasingly putting water quality at risk, making effective monitoring essential. Traditional in-situ methods, while precise, are often costly and time-consuming, especially for large-scale assessments. Remote sensing offers a cost-effective alternative, providing a high spatiotemporal synoptic view of water bodies. It enables the tracking of critical water quality indicators, such as Chlorophyll-a, phycocyanin (linked to eutrophication and harmful algal blooms), suspended sediments, water transparency, and colored dissolved organic matter. This presentation highlights how remote sensing is advancing water quality monitoring in Brazil through case studies. Discover how these cutting-edge techniques are aiding scientists and policymakers in protecting aquatic resources and ensuring their sustainability for future generations.

Dr. Daniel MACIEL is a postdoc researcher at the National Institute for Space Research (INPE), Brazil. He has been working on water-quality remote sensing-based studies since 2017, with a focus on water transparency, long-term trends, and human-induced changes in water quality, as well as image processing and machine learning methods applied to aquatic resources.

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