



**Politecnico  
di Torino**

Department of Environment,  
Land and Infrastructure  
Engineering



# PROF CARLOS CARDONA

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Carlos A. Cardona Alzate is full professor in Chemical Engineering Department at the Universidad Nacional de Colombia at Manizales since 1995, where he leads the research group in Chemical, Catalytic and Biotechnological Processes. His research focuses on developing non-conventional separation processes, thermodynamics, integration processes, process engineering, biorefineries, life cycle assessment and agroindustry. He has authored and co-authored over 250 research papers (H-index 51), 15 research books and 58 book chapters.

## Challenges for demonstrating the Biorefineries Sustainability through a Process Engineering approach

Different organizations in the world have discussed the sustainable use of natural resources from different perspectives. The biomass use and refining through biorefinery processes should be related directly to sustainability. The talk will describe, also discussing some case studies and the main related challenges, how applying a Process Engineering approach is the only way to validate the biorefineries' sustainability at conceptual design stage.

### DATE:

2<sup>nd</sup> December 2021 at 11.15 - 12.30

### WHERE:

Meeting Room DIATI3, 1<sup>o</sup> floor



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