



**encit 2020**

18th Brazilian Congress of Thermal  
Sciences and Engineering

# CERTIFICATE OF PRESENTATION

We certify that **Felipe Kraus**

presented the paper entitled:

**i-PENTANE AND i-PENTENE AS GASOLINE SURROGATES FOR THE TRANSPORT INDUSTRY: A  
NUMERICAL ANALYSIS ON IGNITION DELAY TIMES USING DETAILED CHEMICAL KINETICS**

authored by:

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Rouge Dos Santos, Leonel R Cancino**

during the 18th Brazilian Congress of Thermal Sciences and Engineering – ENCIT  
2020, from NOVEMBER 16TH TO 20TH 2020.

A handwritten signature in blue ink, appearing to read "Francis França", written over a horizontal line.

Prof. Dr. Francis França  
*Chair of the ENCIT 2020*

