

**Variance: definition, usefulness and application**

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The (thermodynamic) variance - also named "*degrees of freedom*" of a system - is a thermodynamic tool taught in the 1<sup>st</sup> year of university which, despite its apparent simplicity, is poorly understood by most students.

What precisely does this quantity represent? How can analysis of variance help us with thermodynamic modeling and the understanding of phase diagrams?

In this session, with the help of numerous illustrations, we will attempt to demystify the notion of variance and answer the pragmatic questions posed above.

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☒ **Oral**

*NB : The final decision belongs to the Scientific Committee*