

## **Advanced Materials Science Research**

# Enabling rapid Industrial innovation through novel AI Algorithms

#### **Abstarct**

In classical manufacturing there is appr. 10 000 different materials available. However, in additive manufacturing, there are currently only a few hundred available. The reason for this is that in additive manufacturing the material properties can be altered substantially by changing the printer parameters. This is one of the huge benefits of additive manufacturing, as material properties can be adjusted to fit specific use cases during manufacturing. On the other hand, this makes also the development of new materials and printer parameters extremely time and cost-intensive.

Main Benefits xT smart\_DoE helps:

- Reduce go-to-market time and costs for new materials
- · Develop new materials specifically designed for AM applications
- Develop printer parameters for existing materials xT smart\_DoE works for any printer type, materials, or processing type and the user doesn't require statistical or DoE expertise

Field-Tested We could show so far amazing results in metal powder bed fusion systems and in 3D Printing of car batteries from EOS and SLM Solutions, FFF printers of all different types and materials and in the development of SLA resins together with process parameters with our partner Evonik Industries.

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#### Biography

Matthias Kaiser has completed his M.Sc. from the university of vienna and post-doctoral studies from stanford university school of medicine. He is the CEO of the exponential technologies, a premier techsoft service organization.



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