

# VRVis Presentation Overview

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## Research Center (Competence Center)

- founded in 2000 as **K<sub>plus</sub>** center
- since 2010 funded by  **FFG** as a **COMET** K1-center

## Mission: R&D in Visual Computing

- Visualization, Rendering, Visual Analytics
- bridge between science and industry

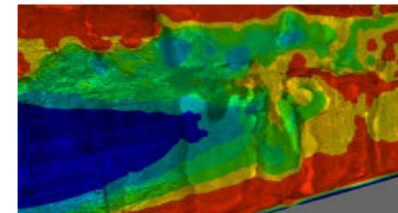
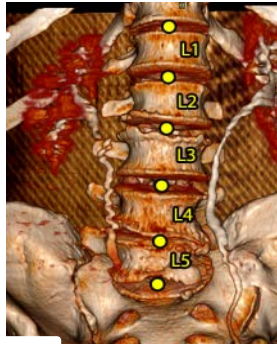
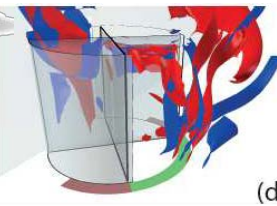
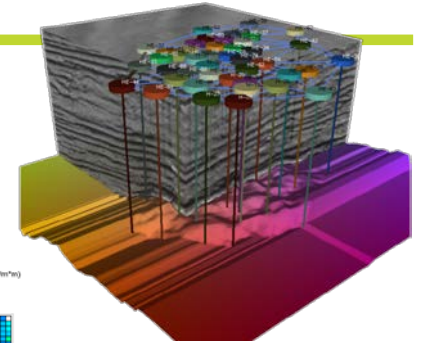
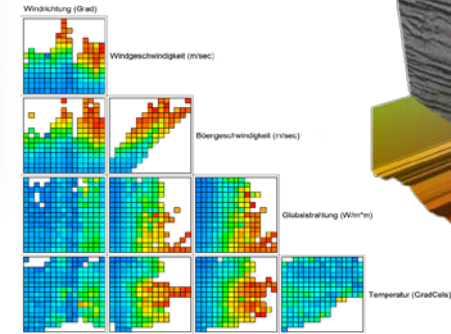
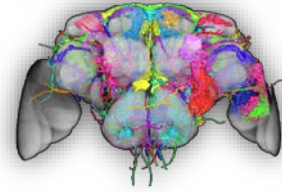
## Organization: GmbH (Ltd. Co)

- in Ares Tower in Vienna
- budget ~6.2 M€ (2017), ~70 FTE employees

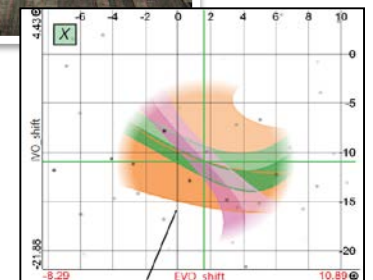
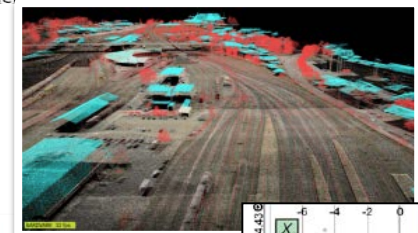


# Visual Computing includes:

- **Computer Graphics**  
graphical user interfaces, animations ...
- **Computer Vision / Pattern Recognition**  
modeling of human vision, machine+deep learning...
- **Visualization**  
rendering of volume data + higher dim. data...
- **Interactive Visual Analytics**  
visual analysis of multi-dim. and abstract data...
- **Optical Sensors**  
recording methods for visual information...
- **Modeling**  
digital models of data and images...
- **Rendering**  
real-time visualization, lighting simulation, hidden parts...
- **Virtual / Augmented Reality**  
combination of real and virtual objects...
- **Aspects of Human-Computer-Interaction**



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# Begriffe: KI, Machine Learning, Deep Learning

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## Künstliche Intelligenz – KI, Artificial Intelligence - AI

- Wenn Maschinen Dinge tun, deren Ausführung dem Menschen Intelligenz abverlangt [Marvin Minsky, 1966]

## Machine Learning

- Training der künstlichen Intelligenz
- Erkennen von Mustern, Analyse von Daten, Voraussagen über die Zukunft

## Deep Learning

- Form von Machine Learning (Teilbereich)
- Verwendung von künstlichen neuronalen Netzen

# VRVis bietet: Machine Learning, Deep Learning

## Einsatzgebiete

- Analyse von Bilddaten, Volumendaten
  - Beispiel Medizin: Unterstützung bei der Diagnose (siehe rechts)
- Produktionsunternehmen
  - Qualitätskontrolle
  - Automatische Klassifizierung von Defekten
  - Predictive Maintenance







# Thank you for your Attention!

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Please visit us at

<http://www.VRVis.at/>

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