

# Research Center of Manufacturing Technology

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Czech Technical University of Prague, Faculty of Mechanical Engineering

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<http://rcmt.cvut.cz>



# RCMT Intro

- **The institute of the Faculty of Mechanical Engineering at the Czech Technical University in Prague**
- **Established in July 2000**

## **RCMT General Research Program**

### **Research of highly productive, accurate, reliable and ecological Machine Tools and their Components**

- Machines of new conceptions
- Components and frames of machine tools
- Drives and control systems
- Virtual prototyping of machines, their subassemblies and components
- Programming and production preparation for CNC machines

### **Research of machine tool properties, their measurement, monitoring and evaluation**

- Accuracy of CNC machine tools
- Postprocess check
- Productivity, reliability and diagnostic CNC machine tools
- Analysis of risk and security of usage machine tools

### **Research of perspective, productive and ecological manufacturing processes**

- Hard machining
- Ecological machining
- High speed machining
- Micromachining
- Laser technologies
- Production Costs

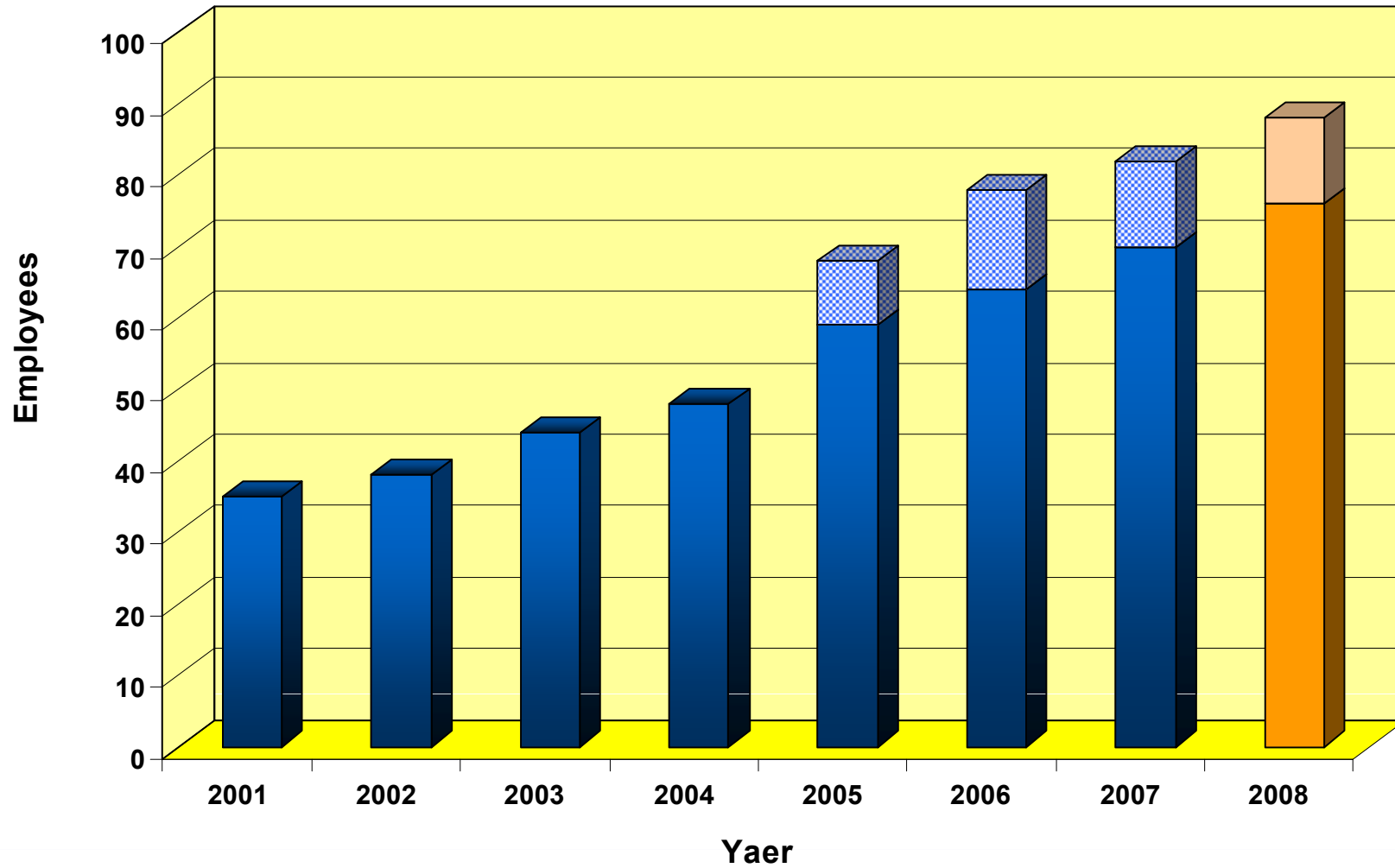
# **Key role of RCMT:**

- a) Research in the field of machine tools and manufacturing technology**
- b) Customer oriented solutions and project focused to MT**

# RCMT Focused on Future Research Areas

- Advanced simulation models
- Optimization computing methods
- Verification of advance simulation models
- Experts and knowledge systems in Machine Tools
- Application non-convention materials and structures
- Virtual testing
- Advance controlling of Machine Tools
- Advance monitoring and diagnostic Intelligent Machine Tools
- Thermal Deformations
- Intelligent Machine Tools
- Impacts minimization of Machine Tools operation on environment

## RCMT employees 2001 - 2008



# Status and Structure of RCMT

- Prof. Jaromir Housa – head of RCMT
- Main focus is to Research, Development and PhD study
- Basically supported by the Ministry of Education of the Czech Republic
- Headquarters in Prague and 3 next work location at another technical universities (Brno, Plzeň, Liberec)



# How the RCMT looks?



# Head of RCMT

## Prof. Ing. Jaromír Houša, DrSc.





## Secretarial services



## Office



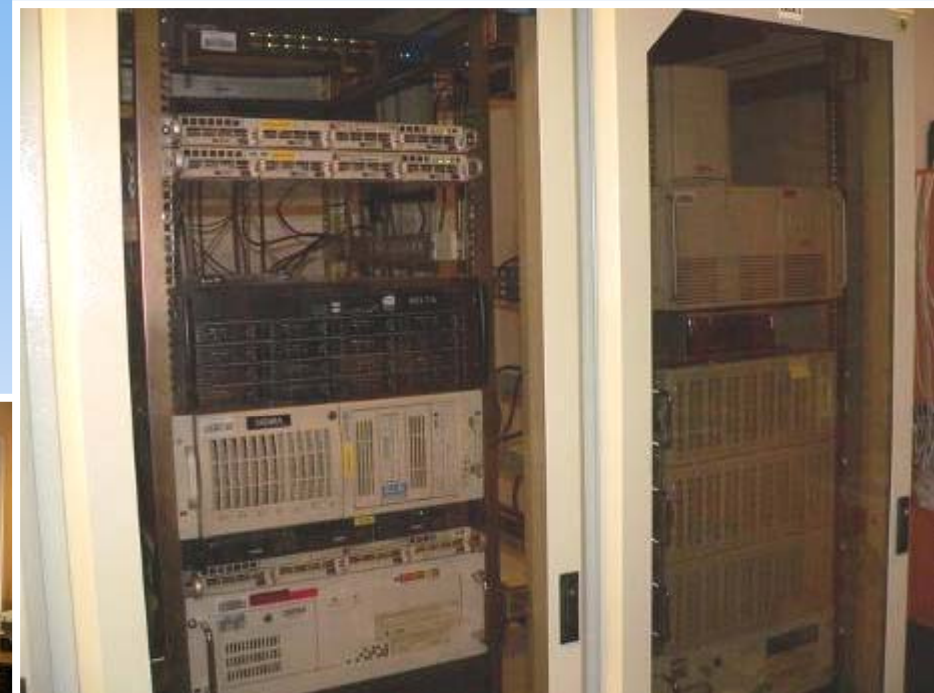
Ing. Jan Smolik, PhD. – Project Design Leader  
E: [j.smolik@rcmt.cvut.cz](mailto:j.smolik@rcmt.cvut.cz), M: 605205918

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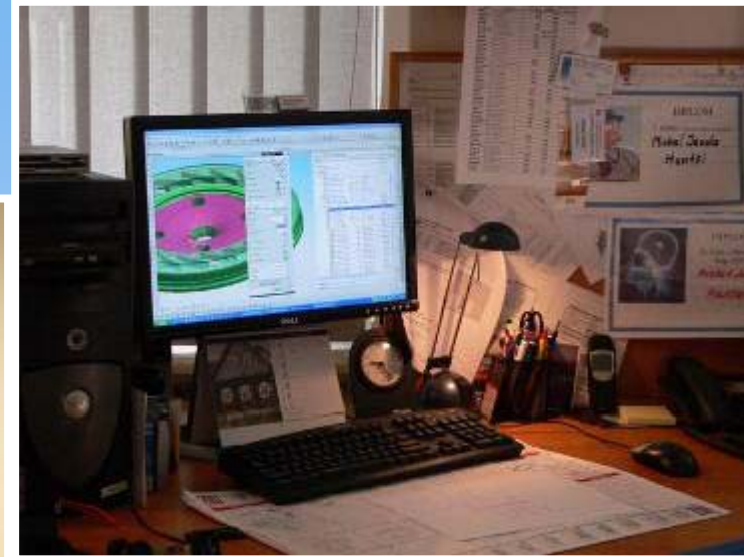




## Shared equipment



# Facility



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## Workshop



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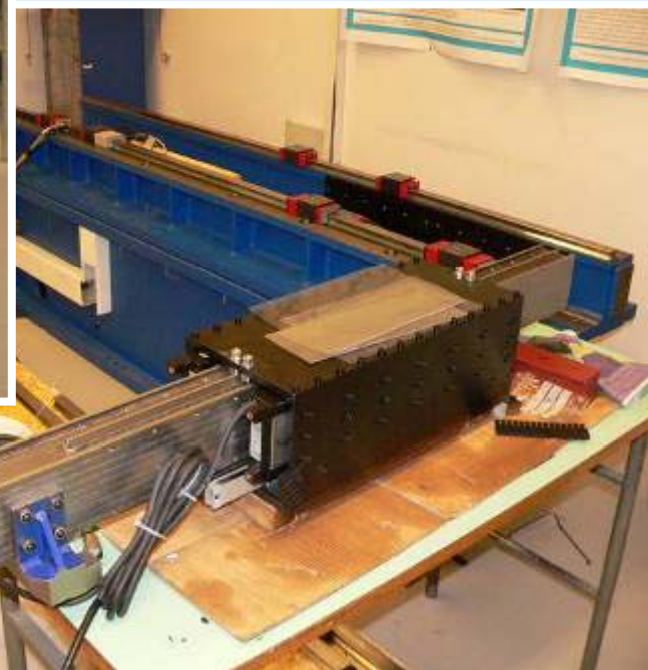
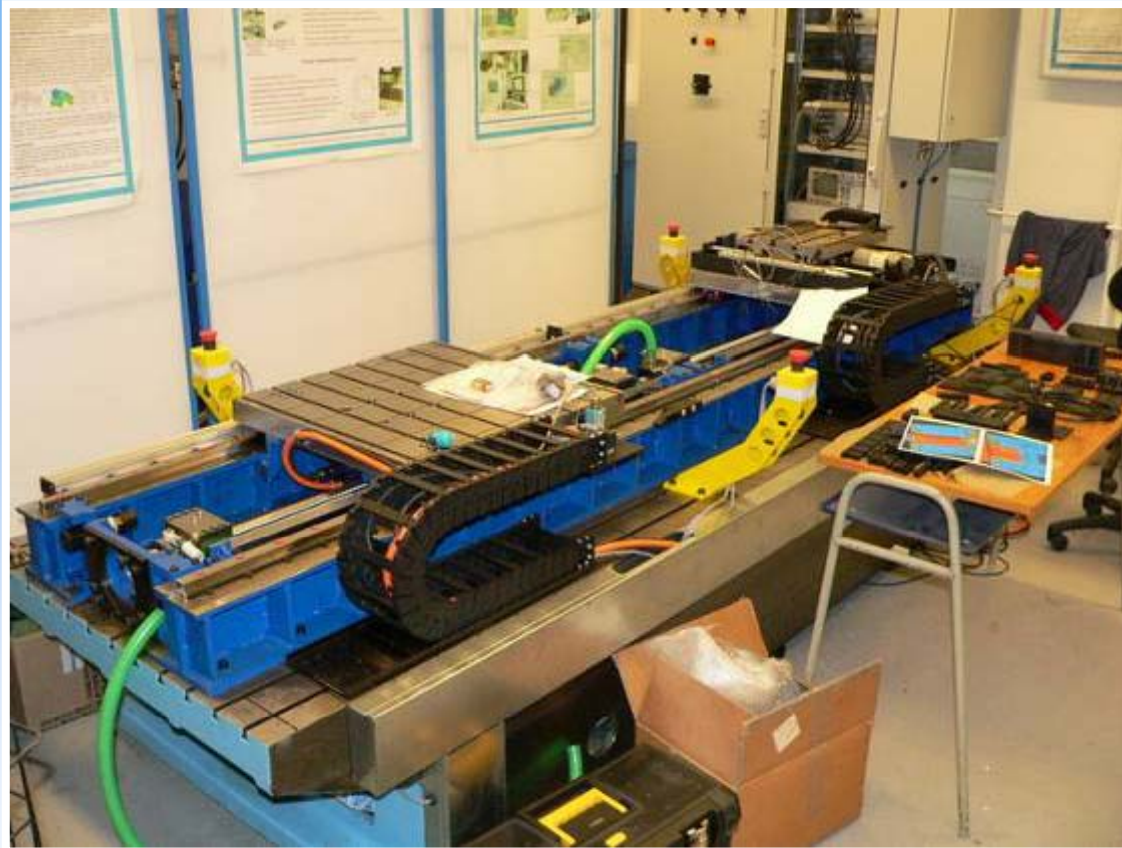




## Laboratory – experimental machines




## Laboratory – testing beds





# RCMT Cooperation and Partners

- Cooperating with Association of Manufacturers and Suppliers of Engineering Technique
- Cooperating with the Czech Society of Machine Tools
- Currently involved in 2 FP6 projects 
- Cooperating with more than 50 industrial factories and reserach institutes in the field R&D



### Industrial cases solved by RCMT 2001 - 2008

