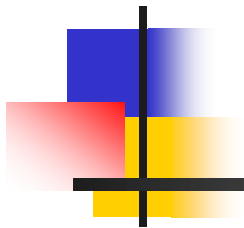


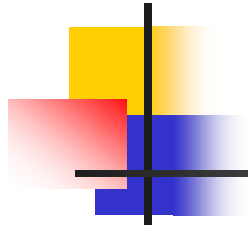
**Research directions**

**MAREK BALAZINSKI**

**Professor**

**Mechanical Engineering Department  
École Polytechnique de Montréal**





## Research directions

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- Machining of hard and difficult to machine materials such as Inconel
- Machining of metal matrix composites MMC
- High speed machining
- Application of the Fuzzy-Logic and genetic algorithms in manufacturing



## Ressources

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Equipment :

New High Tech Lab

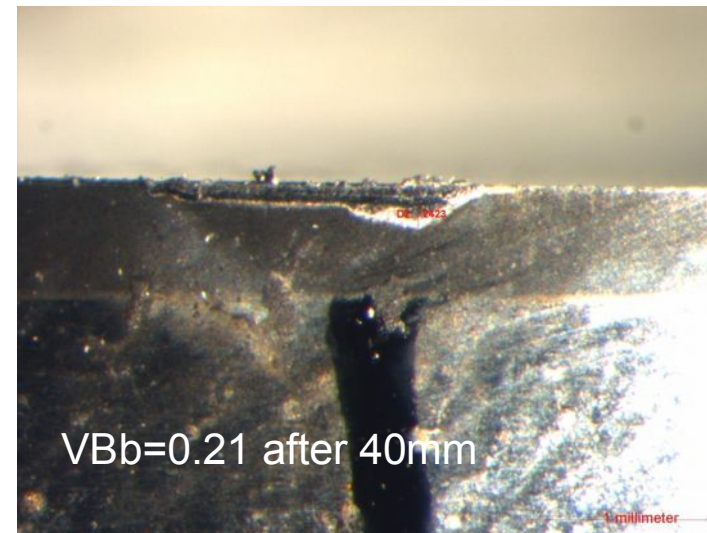
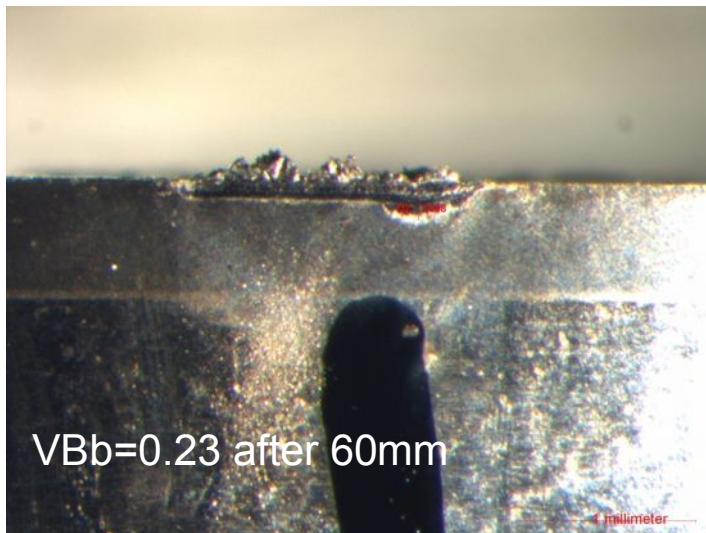
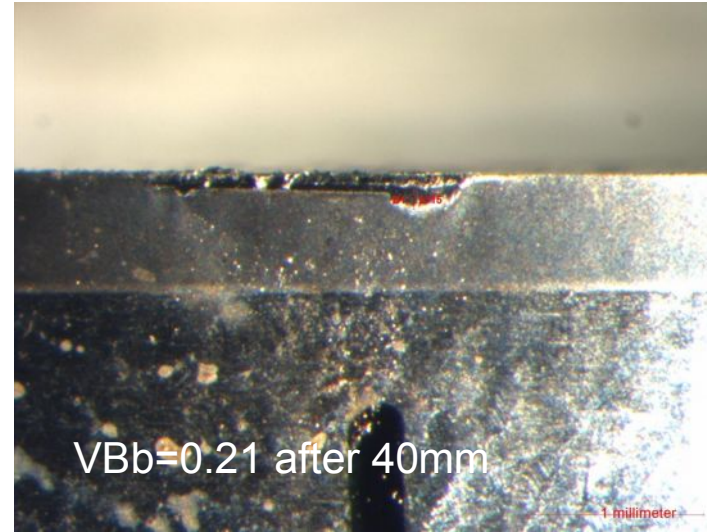
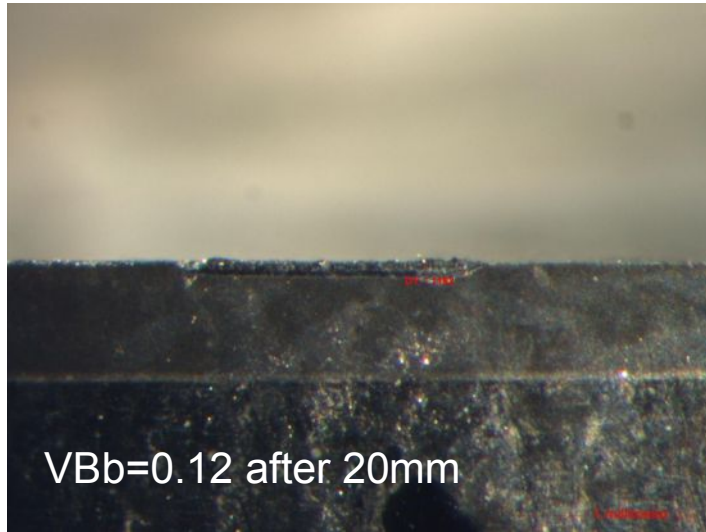
Researcher (present) :

2 Ph.D. students and 4 co-directed

3 masters (M.Sc.A.) students

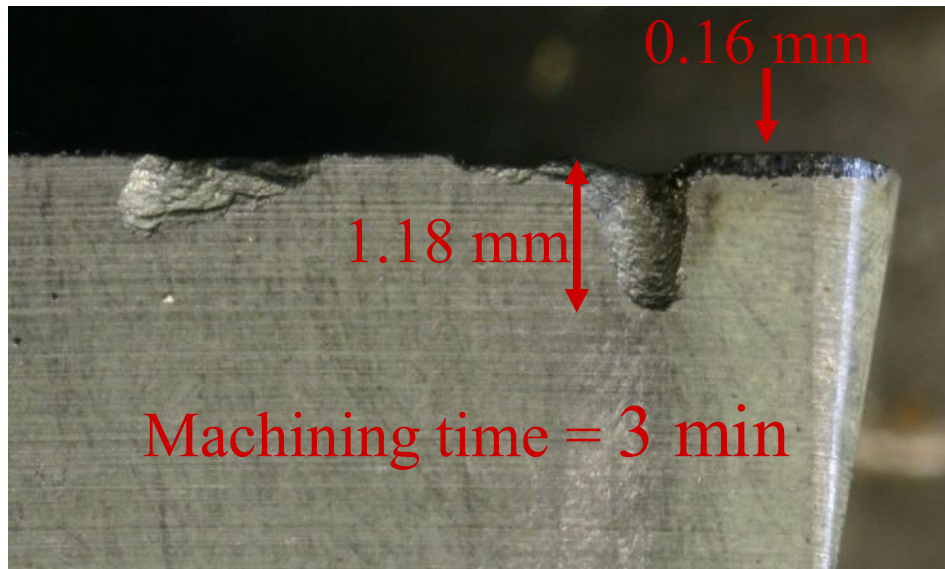
Several under graduate students

# Turning of titanium metal matrix composites

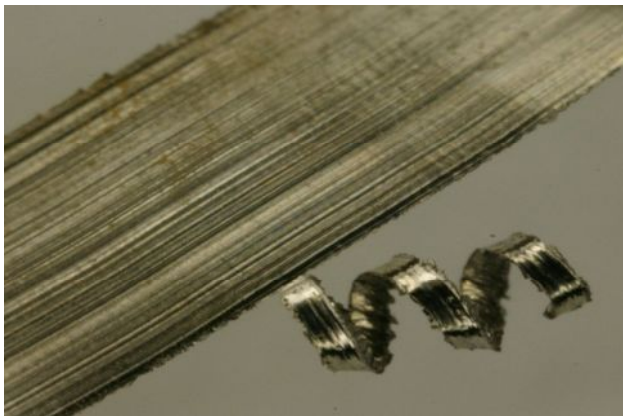


## Inconel 718 shaft machining. Roughing and semi finishing

Notch wear when machining Inconel 718



Superimposed chip



# Fuzzy Logic

**FDSS - [Coupeang.fuz]**

Marek Balazinski, Hugo Boyer  
Ernest Czogala, Gregorz Drwal

Ecole Polytechnique de Montreal  
Technical University of Silesia

C.P. 6079 Montreal, Qc, H3C-3A7  
Akademicka 16 44-101 Gliwice

Canada Poland

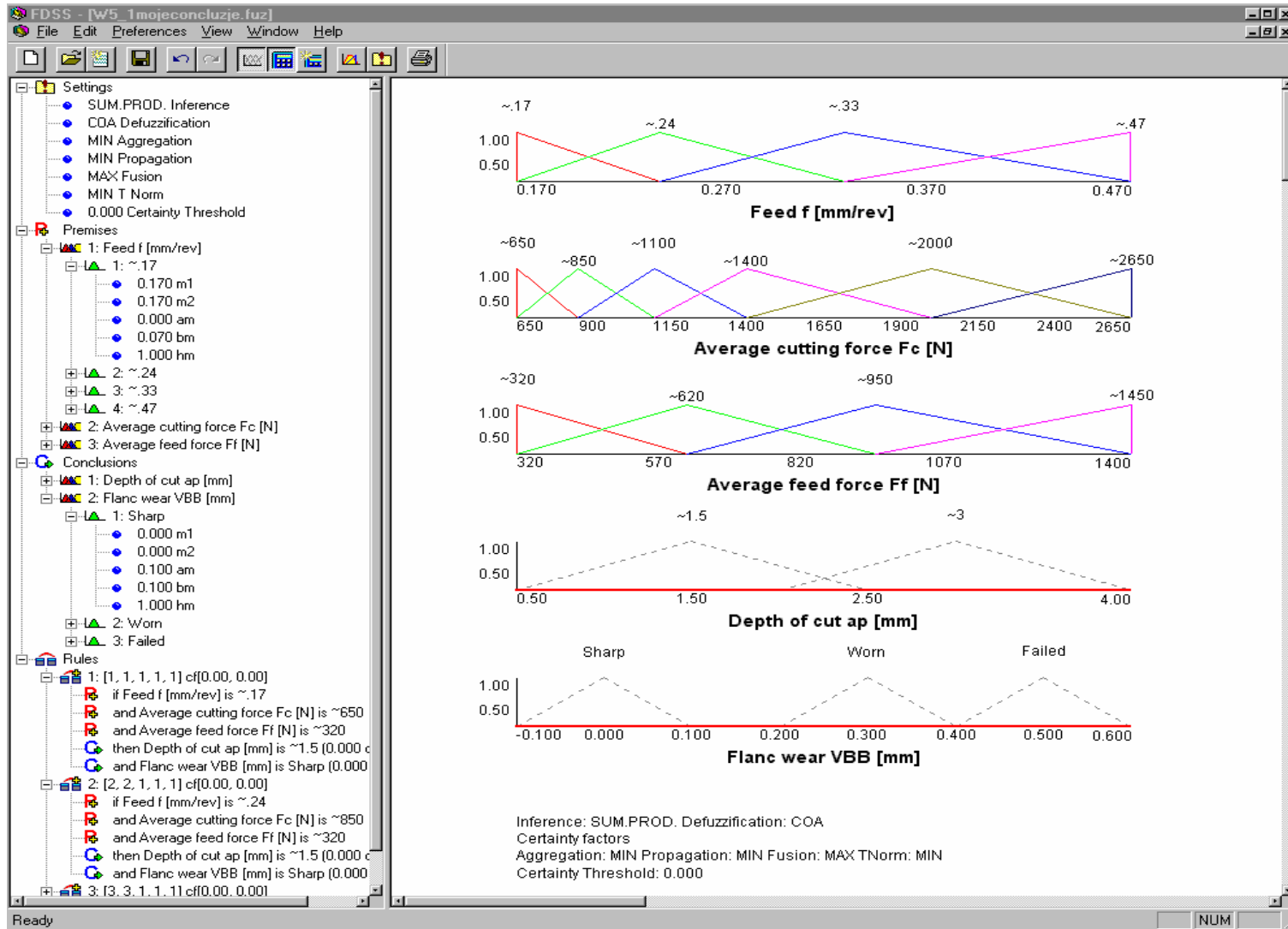
**Fuzzy Decision Support System**

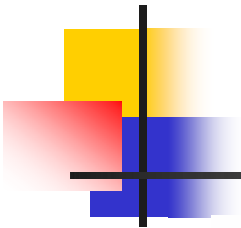
# Fuzzy - Flou

**Version 2.0**

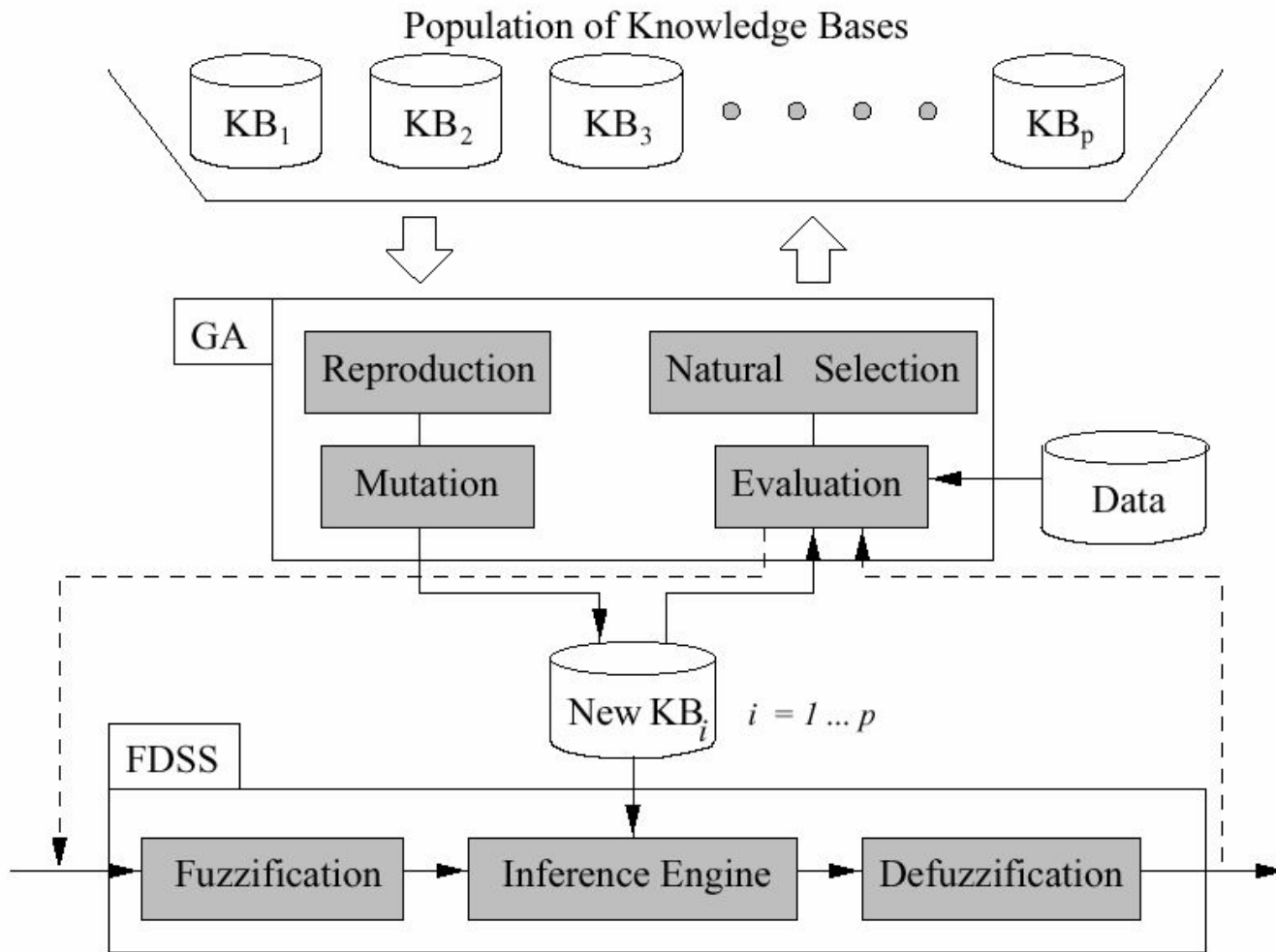
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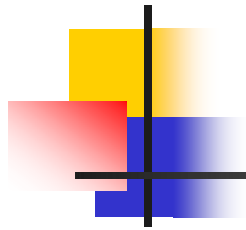
# Fuzzy Logic, Knowledge base





# Genetic Algorithm





# Genetic Algorithm

