



STOMMMAC

STOchastic **M**ulti-scale **M**odeling **M**ethodologies
for the **A**ssessment of failure performance
of **C**omposite materials



M-Era.Net

Call 2014

www.m-era.net

Projektnummer: project2163

Konsortialführer: e-Xstream engineering



FFG nationale Ergänzung

Ausschreibung 2014

www.ffg.at

Projektnummer: 850392

Antragsteller: IPPE-JKU Linz



Internationale Forschungspartner:

e-Xstream engineering, Belgien 

Leartiker, Spanien 

LTAS-CM3, Belgien 

Österreichische Forschungspartner:

IPPE-JKU Linz 

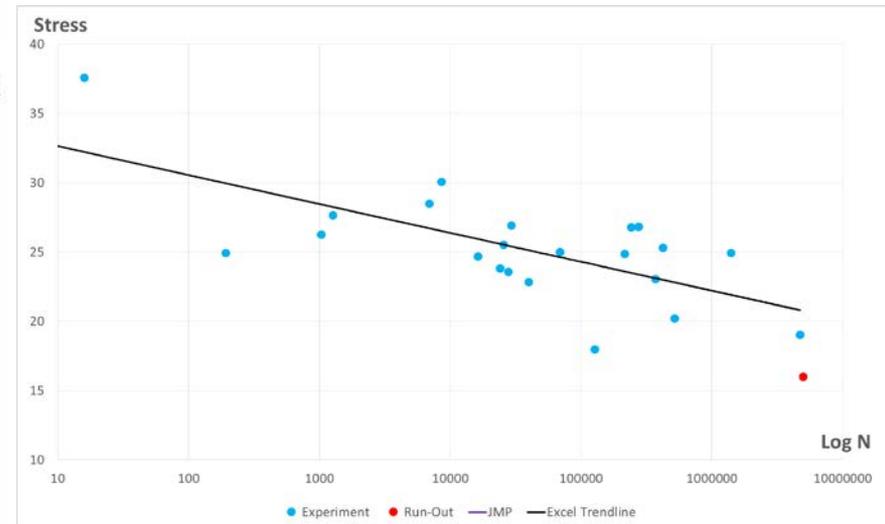
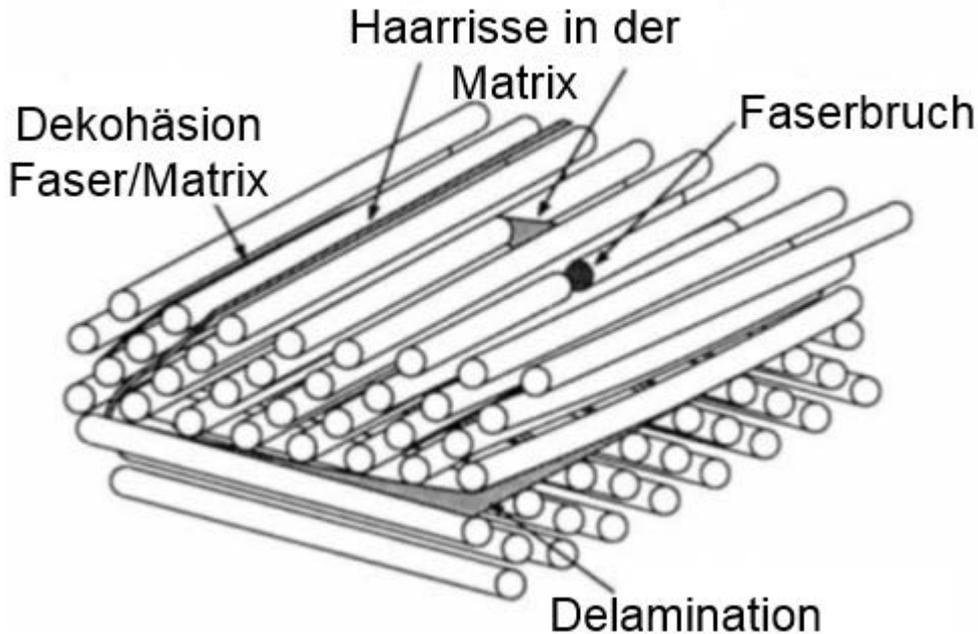
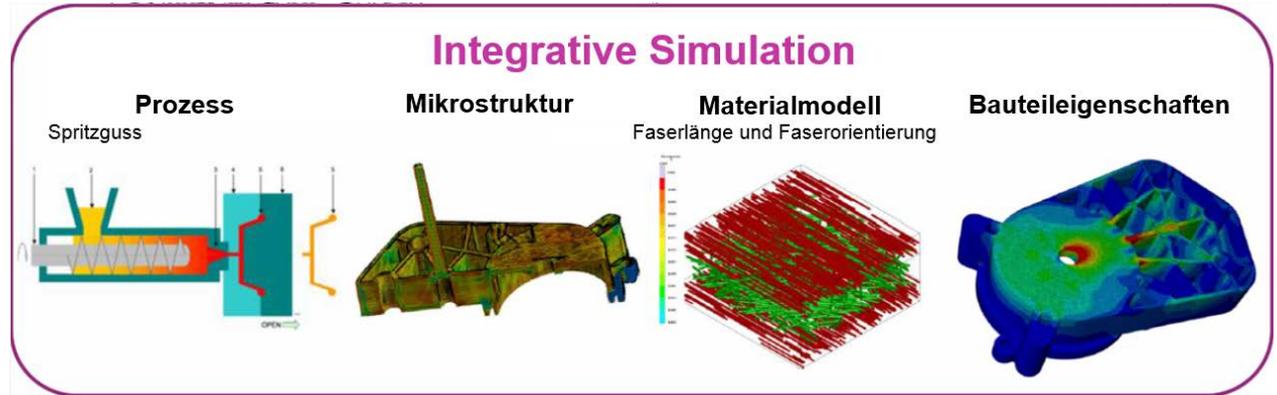
Action Composite 

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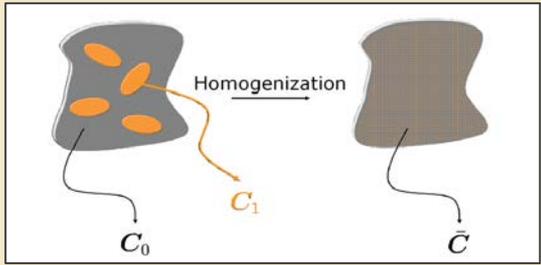
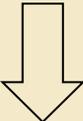
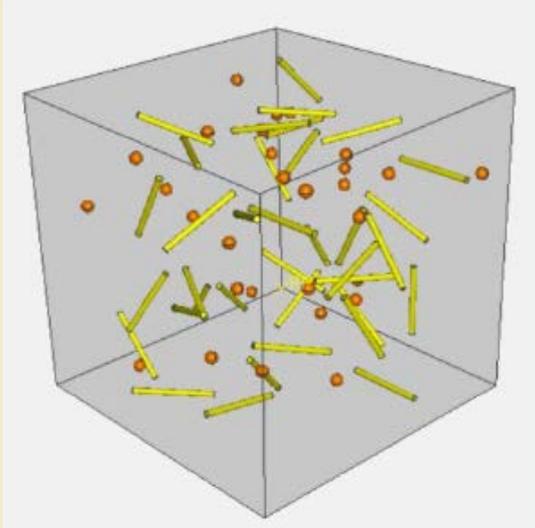
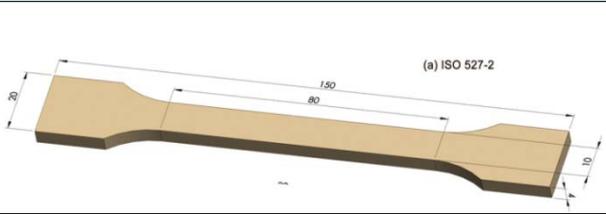
Stochastische Methodik zur Multiskalen-Modellierung für die
Bewertung der Ausfallwahrscheinlichkeit von
Faserverbundwerkstoffen



Makro
Prüfkörper, Bauteil

Meso
Homogenisierung

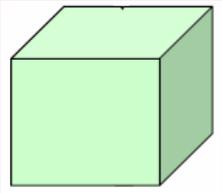
Mikro
Fasern, Matrix



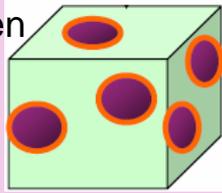
Einschlüsse (Fasern, Poren)



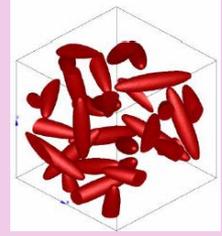
Matrix

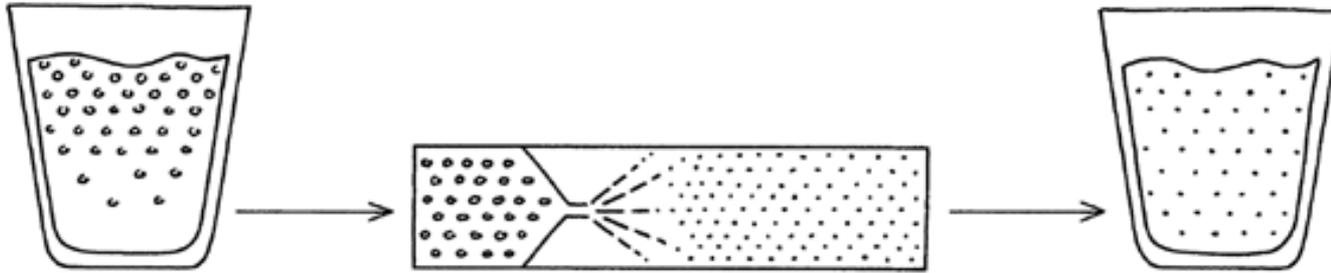


Grenzflächen



RVE



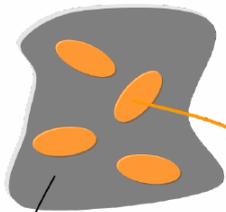


Fett-Milch-Gemisch

Fett-Milch-Gemisch wird unter Überdruck durch Düsen gepresst

frischli Milchwerke GmbH
Homogene Milch

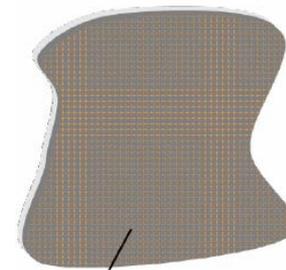
heterogenes Material aus Matrix und Fasern



C_0

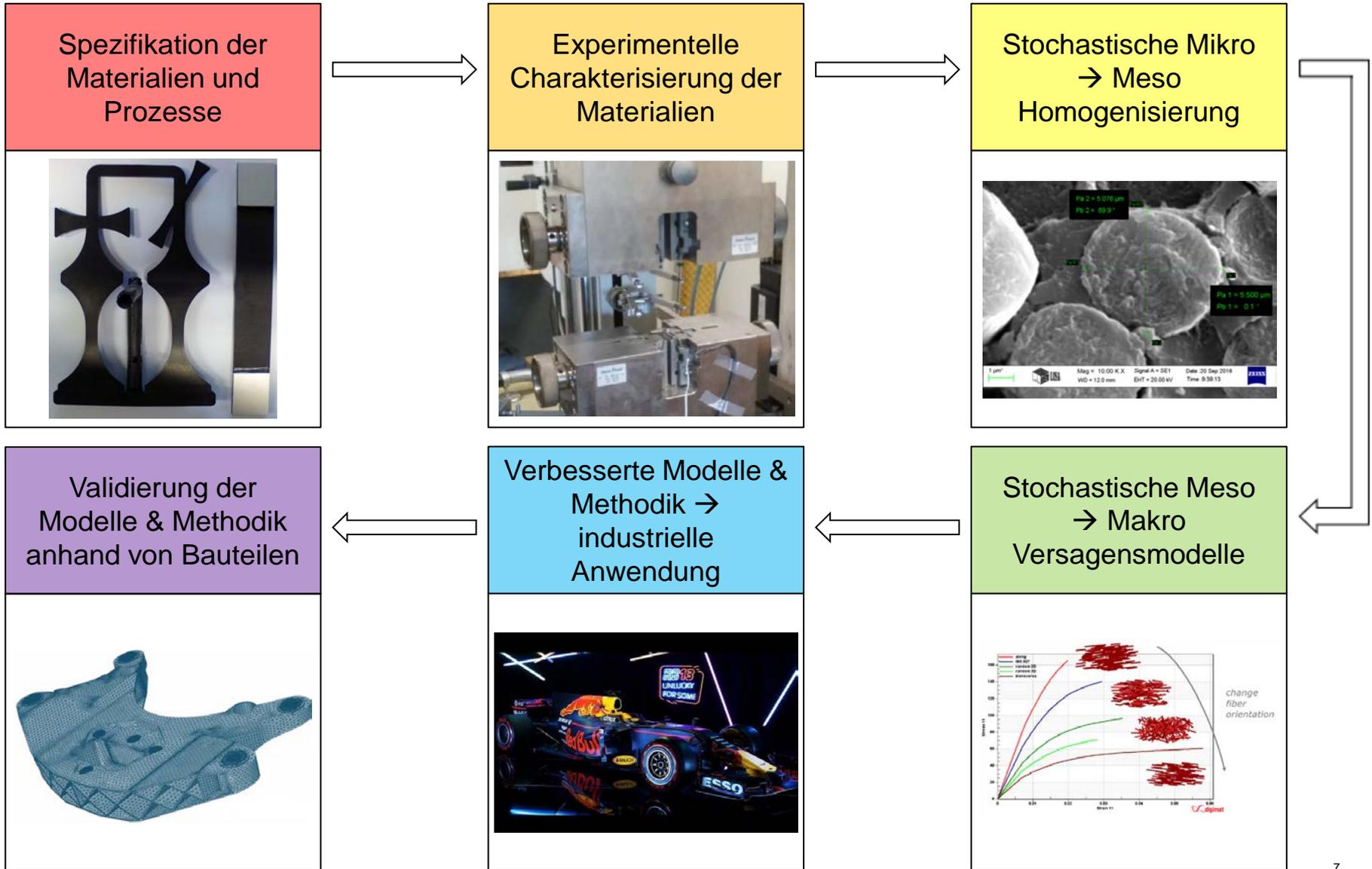
C_1

Homogenisierung mit zB Mori-Tanaka, Double-Inclusion



\bar{C}

homogenes Material mit gleichen Eigenschaften



Spezifikation der
Materialien und
Prozesse



Experimentelle
Charakterisierung
Materialien



Validierung der
Modelle & Methodik
anhand von
Bauteilen

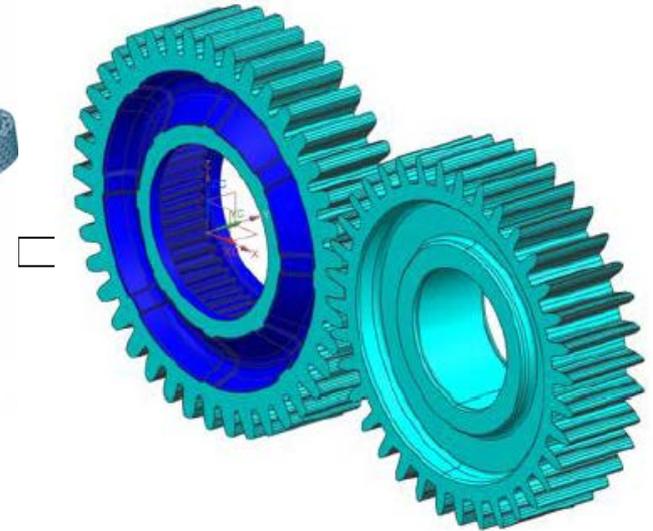


TCKT
Transfercenter für Kunststofftechnik GmbH

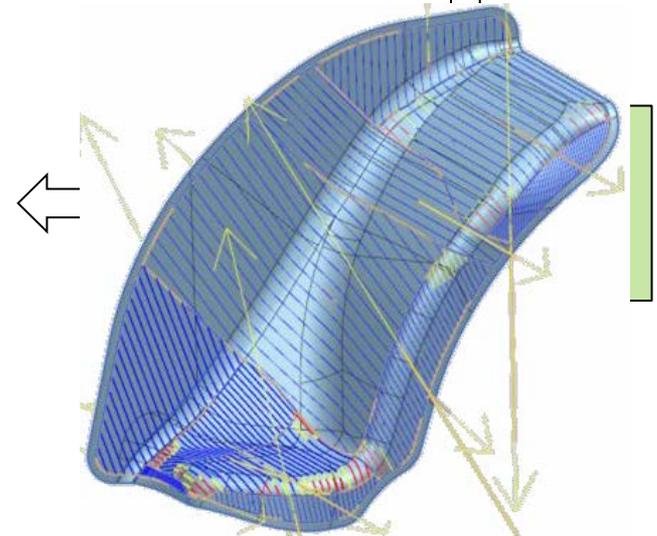
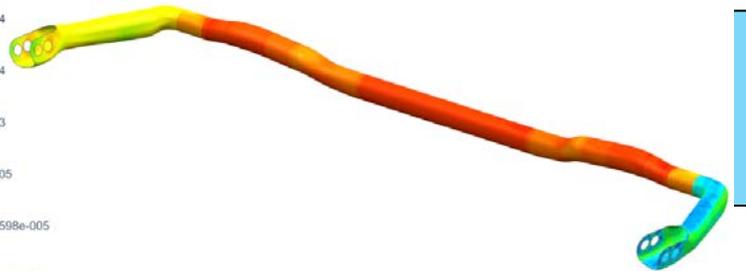
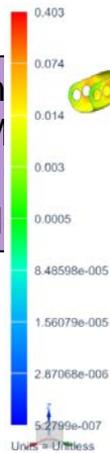
versagensmodelle

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Logistics and
Production Engineering

Spezifikation der
Materialien und
Prozesse



Validierung
Modelle & M
anhand
Bauteil



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