

NAFEMS World Congress 2021



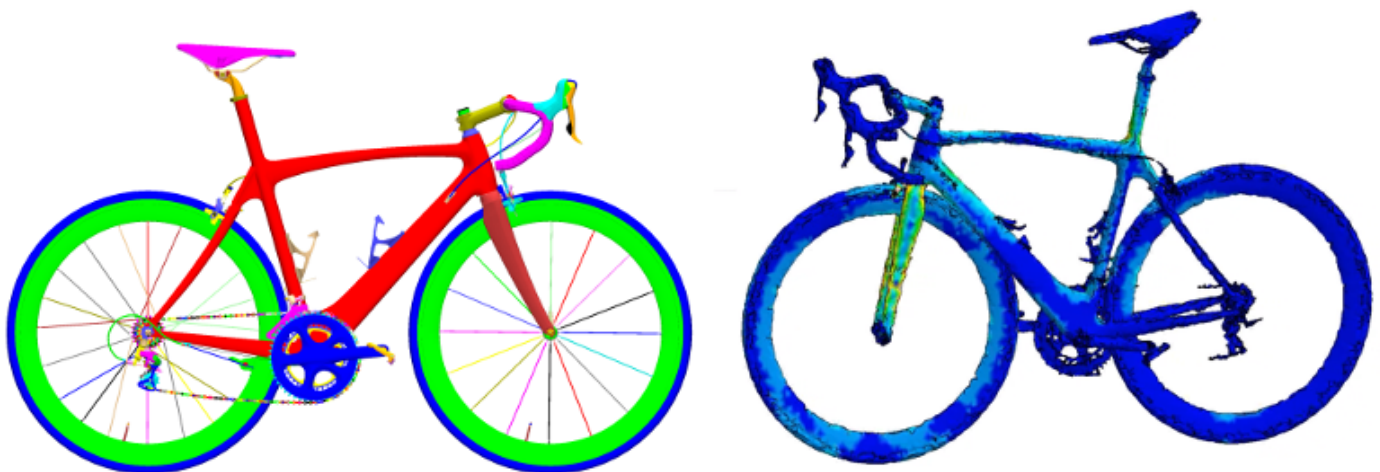
https://www.nafems.org/publications/resource_center/nwc21-153-c/

Heavy Braking Bicycle

634 parts, STL data, grabcad

LFE MMT release 7..

ANSYS Linear static analysis



Preliminaries

Download grabcad data

Separate parts one part -one STL file

Running LFE-MMT

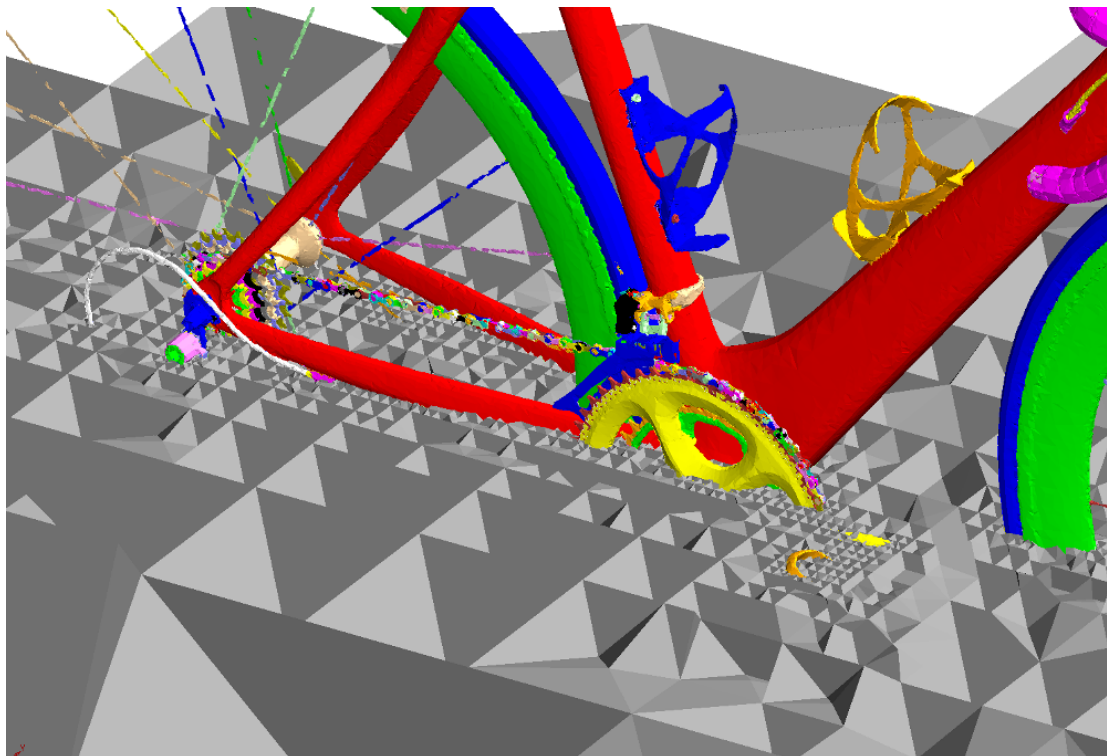
Release DVLP 7 , 2021

12 adaptive refinements fluid+solid tetras

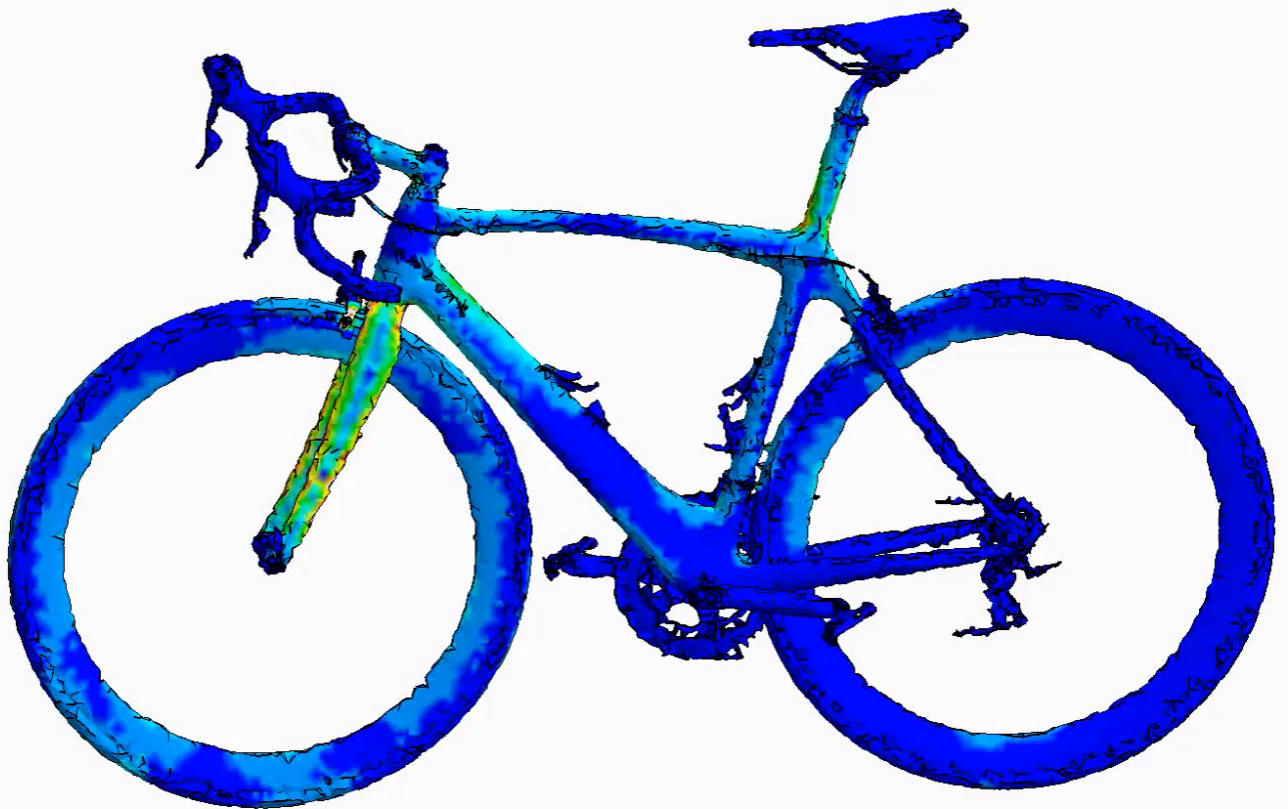
0	1
1	8
2	64
...	
10	
11	
12	

Running Ansys

Linear tetras do not work. Elements are transformed to quadratic elements with linear midnodes.



Stress equivalent
 Units: N/m²
 Scaling: 138.x (auto)
 Result set: 1
 Reference set:
 Time (s): 1.0
 25.
 22.2222
 19.4444
 16.6667
 13.8889
 11.1111
 8.33333
 5.55556
 2.77778
 1.29238e-009



Deformation Sum
 Units: m
 Scaling: 8.58x
 Result set: 2
 Reference set: 1
 Time (s): 1.0
 3.33221
 2.96196
 2.59172
 2.22147
 1.85123
 1.48098
 1.11074
 0.740491
 0.370245
 0

