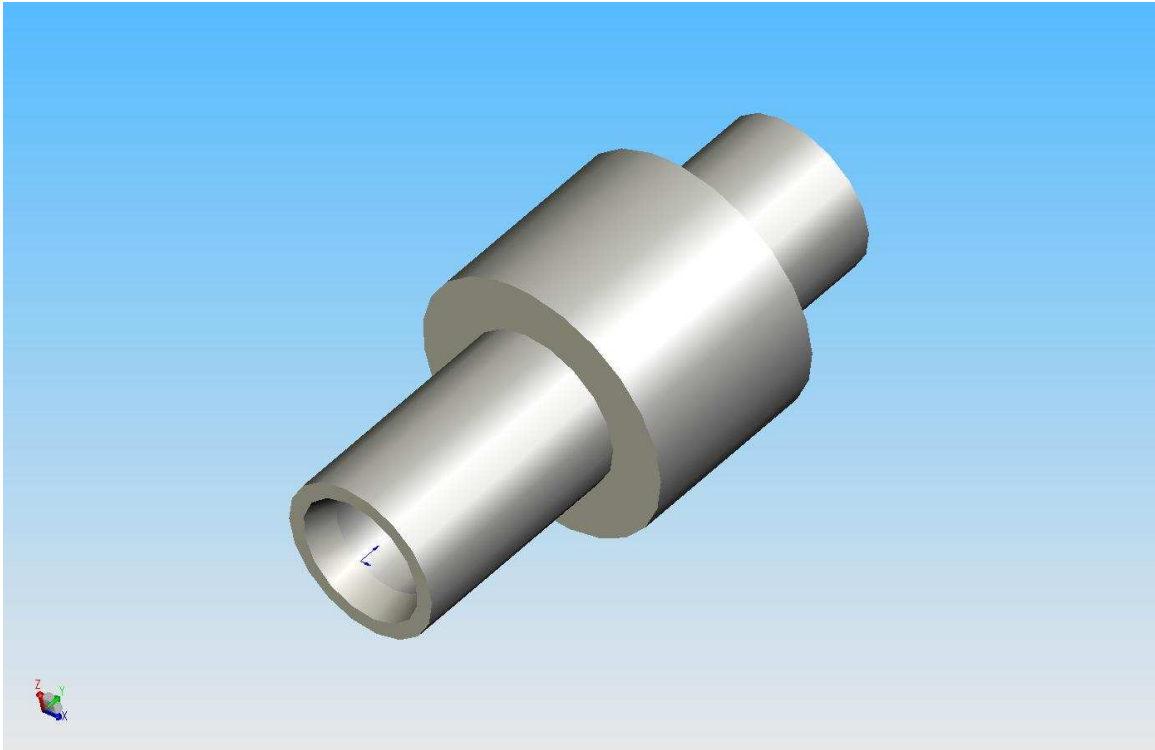


Ani Mazumdar
Dan Schultz
Marcus Lopez
Martin McBrien
Will Bosworth
Team1

April 6, 2007 Lab Session

- Developed a model to predict the peak cutting force and shaft torque
- Wrote a matlab tool to determine peak forces and bending moments in spindle shaft and bearings
- Wrote a matlab tool to specify bearing from cutting force, torque, and desired life and reliability (via the Weibull Equation)
- Specified a collet from sheets provided in lab
- Used results from above tools and supplied lathe solid model to specify shaft dimensions:
 - o 30 mm shaft outer diameter
 - o 10 mm inner diameter



materials attached: Matlab tools and shaft solid model & drawing