

## KEY TAKEAWAYS

- Computational modeling and simulation is used to support marketing applications for a broad range of medical devices.
- There are different modeling disciplines that are accepted (see Figure 3). For example,
  - Solid mechanics (e.g., fatigue assessment)
  - Fluid dynamics (e.g., shear stress calculations)
  - Electromagnetics (e.g., specific absorption rate due to radiofrequency energy)
  - Heat transfer (e.g., tissue damage due to temperature)
- Since 2002, at least 21% of 565 original premarket approval (PMA) applications had computational modeling efforts provided in the Summary of Safety and Effectiveness Data (SSED).

\*Libraries used: Woosh, PyPDF2, Matplotlib, Ipywidgets