



## ROTOR DYNAMICS

With more than 75 years of experience in the field of rotor dynamics, BRG's training team has the tools to teach difficult material to any audience. Our courses are applied without overdependence on equations and math. They are filled with hands on tutorials and real life case studies. Students will be challenged to digest large amounts of material in a short time period. They will be pushed to their limits, but come away with a wealth of practical knowledge that can be readily applied to their professions. Specific courses are tailored to the interest and depth requested by the participants.

### TRAINING TOPICS

- Overview of Basic Vibrations
- Rotor Modeling
- Undamped Critical Speed Analysis
- Unbalance and Forced Response Analysis
- Stability Analysis
- Torsional, Axial, and Coupled Analysis
- Single Plane Balancing
- Design Optimization
- Case Studies

### BASIC LEVEL COURSE OBJECTIVES

- Be conversant with terms such as critical speed, unbalance response, separation margin, amplification factor, stability margin.
- Be able to field balance a basic machine such as a Fan.
- Understand the important factors involving the manufacture and assembly of turbomachines.

### ADVANCED LEVEL COURSE OBJECTIVES

- Build rotor models, perform critical speed, unbalance response, and stability analysis.
- Ask good questions of the provider of rotordynamic information.
- Critique an API rotor dynamics report.
- Understand the difference between a good design and a poor one.
- Redesign bearings, couplings, seals, rotor to improve rotor dynamic performance.

### WHO SHOULD ATTEND

BRG offers a variety of rotor dynamic training courses to serve a wide spectrum of students. We offer hands on training for mechanics and technicians with little background in engineering. We offer introductory level courses for new engineers with little experience in rotor dynamics. Finally, we offer advanced courses for experienced rotor dynamic engineers anxious to learn the latest techniques and methods.