

## Overview: Rotor Dynamics Module ROTLAT™

The image displays a collage of screenshots from the ROTLAT software interface, illustrating its capabilities and workflow.

**Top Left: ROTLAT - Rotor Dynamic Analysis**  
 General navigation menu with links for INTRODUCTION, HOW TO, TUTORIAL, SAMPLE SESSION, MODELING CONCEPTS, and SAMPLE PROBLEMS. A 3D schematic of a rotor assembly is shown below the menu.

**Top Right: Sample Session For ROTLAT**  
 INTRODUCTION text: "When the ROTLAT software is launched for the first time, TUTORIAL is activated to familiarize the user with ROTLAT. When exiting this session the ROTLAT software top level menu (shown below) is displayed."  
 [Click below for more information]

**Middle Left: Tutorial**  
 A flowchart titled "ROTLAT - Rotor Dynamic / Lateral Vibration" showing the six-step process:  
 1. Create NEW .ROI file or OPEN an existing file  
 2. Enter/Modify Rotor-Bearing System Data  
 3. Verify model Graphically or in Text format  
 4. Run (Stability Analysis, Critical Speed Map, Unbalance Response, Time Transient Response)  
 5. View results Graphically or in Text format  
 6. STOP

**Middle Right: Solver Options**  
 A dialog box with the following settings:  
 Always use 4 DOF:   
 Include gyroscopics:   
 Stability Analysis:   
 Unbalance response analysis:   
 Time transient analysis:   
 Critical speed map:   
 Stability Map:

**Bottom Left: Modeling Concepts**  
 Five Stage Boiler Feed Pump Schematic Representation. Labels include: Suction Nozzle, Impeller, Discharge Nozzle, Wear Rings, Balance, Journal Bearing Coupling-End, Shaft, and Casing.

**Bottom Right: Modeling Concepts**  
 Radial forces Acting on Pump Rotor. Labels include: Coupling-End, Impeller, Centrifugal Force Due to Unbalance, Hydraulic Forces arising from Impeller, Hydraulic Forces arising from Balance Drum, Outboard-End, Journal Bearing, Rotor Mass Weight, Hydraulic Forces arising from Wear Rings, and Oil-Film Force of Bearings.