



TURBOMACHINERY & PUMP SYMPOSIA  
SEPTEMBER 14-17, 2020 | HOUSTON, TX | GEORGE R. BROWN CONVENTION CENTER

DO YOU HAVE  
**MACHINERY KNOWLEDGE TO SHARE?**

ANSWER THE **2020**

**CALL** FOR **PAPERS**

PETROCHEMICAL | OIL REFINING | OIL & GAS | UTILITY | POWER | RELATED INDUSTRIES



**TURBOMACHINERY & PUMP SYMPOSIA  
SEPTEMBER 14-17, 2020**

THE TURBOMACHINERY LABORATORY IS SOLICITING **1-3-PAGE DETAILED ABSTRACTS** FOR **LECTURES, TUTORIALS, CASE STUDIES AND SHORT COURSES** TO BE PRESENTED AT AND PUBLISHED IN THE PROCEEDINGS OF THE 49TH TURBOMACHINERY & 36TH PUMP SYMPOSIA.

**October 25, 2019**

Abstracts Due

**March 26, 2020**

Full manuscripts, short course titles, authors and outlines due

**June 8, 2020**

Final, monitor-approved manuscripts and author forms due

**September 14-17, 2020**

Symposia

FOR FULL GUIDELINES AND TO SUBMIT AN ABSTRACT VISIT:

**[TPS.TAMU.EDU/PROGRAM](https://tps.tamu.edu/program)**

Files will be accepted in Adobe Acrobat PDF only. Faxed or mailed submissions will not be accepted **Questions?** Contact Ashton Drollinger at [ashton@turbo-lab.tamu.edu](mailto:ashton@turbo-lab.tamu.edu) or **979-458-2808**

**TPS 2020 CALL FOR PAPERS**



## ABOUT THE TURBOMACHINERY & PUMP SYMPOSIA

The Turbomachinery Symposium was founded in 1972 to provide an opportunity for interested persons to learn the applications and principles of various types of turbomachinery and related subjects, to enable them to keep abreast of the latest developments in this field, and to provide a forum for the exchange of ideas. The Pump Symposium was founded in 1984, and joined with the Turbomachinery Symposium in 2011 to form a singular event, the Turbomachinery & Pump Symposia (TPS).

The technical program for TPS is selected by the Turbomachinery Advisory Committee (TAC) and the Pump Advisory Committee (PAC). The advisory committees are made up of dedicated industry experts who volunteer their time to oversee the success of the symposia. Advisors solicit and accept or reject abstracts submitted to the symposia.

Accepted submissions are monitored and reviewed by committee members until they are ready for presentation at the symposia, and/or publication in the symposia proceedings.

The TPS advisory committees cordially invite you to submit an abstract to the 2020 symposia!

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# SUBMISSION CATEGORIES

## GENERAL GUIDELINES

Papers must be free of commercialism. References to commercial products, trade names, and manufacturing companies must be avoided. Be mindful of who your audience is: the end user. Previously published works will not be accepted. Submissions should have been factory or field tested and share practical – not only theoretical – information.

**Lecture:** A Lecture is a presentation of a technical paper detailing innovative turbomachinery or reciprocating compressor technology or methodology. The work should clearly state the advantage/impact on operational equipment for the practicing engineer. A lecture presentation is 45 minutes long consisting of 30 to 40 minutes of presentation reserving at least 5 minutes for questions and discussion. The lecture paper will be published as a part of the proceedings. End user participation in the lecture is encouraged.

**Tutorial:** A Tutorial is a mini short course/workshop presenting a specific technical topic. It is a teaching process directed at the practicing engineer. Presenters are encouraged to bring in equipment for hands-on instruction. Tutorials are allocated 90 minutes and consist of 70 to 80 minutes of presentation reserving at least 10 minutes for questions and discussion. Authors are required to create a tutorial paper and presentation. The tutorial paper will be published as a part of the proceedings.

**Case Study:** A Case Study is a short informational presentation describing the successful implementation of established technology or methodology to solve a real-world problem. Case studies concisely relate a Problem, its Solutions, and the Lessons Learned. Each invited case study is allocated 20 minutes and consists of up to 15 minutes for the presentation reserving at least 5 minutes for questions and discussion. End user participation in the case study is strongly encouraged. The case study will be published as a part of the proceedings in pdf format.

**Short Course:** A Short Course is a full-day training session presented concurrently with other short courses on the first day of the Symposia. Short Courses run from 8:30 am to 5:00 pm with a 75-minute luncheon and two 30-minute breaks. The short course presentation will be distributed as a pdf file and hard copy to the registrants of the short course only.

# AREAS OF INTEREST

Abstract categories listed below are of interest to the Turbomachinery and Pump Symposia. Along with the listed categories, authors are also encouraged to propose new ideas that could be of interest.

## **ALIGNMENT**

### **ANCILLARY EQUIPMENT**

- Baseplates
- Condition Monitoring
- Controls
- Filtration
- Foundations
- Governors
- Instrumentation
- Lubrication Systems
- Machinery Protection Systems
- Piping
- Sealing Systems

### **APPLICATIONS**

- Acid Gas
- Ammonia
- Chemical
- High Pressure
- LNG
- Pipeline
- Power Generation
- Refining
- Sour Gas (High CO<sub>2</sub> and/or H<sub>2</sub>s)
- Subsea
- Transport
- Wet Gas

### **BALANCING**

#### **BEARINGS**

- Fluid Film
- Gas
- Magnetic
- Rolling Element

### **BLADED DISKS AND IMPELLERS**

#### **COMPRESSORS**

- Axial
- Centrifugal
- Integrally Geared
- Reciprocating
- Screw

### **COUPLINGS**

- Flexible Element
- Fluid
- Variable Speed

## **DESIGN AUDITS**

### **DIAGNOSTICS**

#### **DIGITALIZATION**

- Augmented Reality / Virtual Reality (AR/VR)
- Automation
- Data Analytics (Predictive / Statistical)

### **DRIVERS**

- Electric Motor
- Gas Turbine
- Steam Turbine
- Variable Speed Drives

### **EQUATIONS OF STATE**

#### **EXPANDERS**

- Hot-Gas Expanders
- Turboexpanders

### **FANS**

#### **GEARS**

#### **GENERATORS**

#### **INSPECTION**

#### **INSTALLATION**

#### **MAINTENANCE**

#### **MATERIALS AND MANUFACTURING**

- Additive Manufacturing
- Coatings
- Corrosion
- Metallurgy
- Wear
- Welding

### **OPERATION AND PERFORMANCE**

- Cavitation
- Choke
- Efficiency
- Noise
- Off-Design Behavior
- Range
- Rotating Stall
- Surge

### **PRESERVATION PUMPS REAPPLICATION**

#### **RELIABILITY**

#### **REPAIR**

#### **RE-RATES**

#### **ROOT CAUSE ANALYSIS**

## **ROTORDYNAMICS**

- Critical Speed
- Lateral
- Torsional
- Stability
- Stability Test/Measurement

### **SEALS**

- Brush
- Dry Gas
- Hole-pattern/Honeycomb
- Labyrinth
- Mechanical
- Packing
- Wet

### **SPECIFICATIONS**

#### **TESTING**

- Field Testing
- Performance Testing
- Shop Testing

### **THERMODYNAMICS**

#### **VIBRATION**

- Diagnostics
- Field Vibration
- Lateral Shaft Vibration
- Subsynchronous Shaft Vibration
- Torsional Vibration
- Vibration Monitoring

# THE SUBMISSION PROCESS

## ROUND 1: ABSTRACTS

### SUMMER 2019

Call for papers is opened. Abstracts are solicited.

### OCTOBER 2019

Abstracts, 1-3 pages in length, are due **Friday, Oct. 25, 2019**. Include as much detail regarding what you intend to present in your final paper. Which type you intend to submit (lecture, tutorial, case study, short course) should be written in the abstract, preferably in the title as such, "Tutorial: Title...", but is not required.

### NOVEMBER 2019

The committees meet in November of each year to review the abstracts and choose which topics seem most applicable to TPS for the manuscript round.

### DECEMBER 2019

Authors will be notified in December whether their abstract has been accepted to the manuscript round. A monitor will be assigned to each author at this time to help in the next stages of submittal, and to guide the author to ensure each paper or presentation fits within the parameters required at TPS. Letters will include constructive criticism from the committees and indicate which session type (lecture, tutorial, case study, etc.) they would like to see as a manuscript.

## ROUND 2: MANUSCRIPTS

### MARCH 2020

Of the abstracts selected by the committee, a written manuscript (for Lectures and Tutorials) or a PowerPoint presentation (Case Studies) will be required from authors by **Friday, March 27, 2020**. Manuscripts must fit Turbo Lab guidelines and be approved by the author's monitor before they are submitted to the Turbo Lab. Guidelines can be found here: <https://tps.tamu.edu/program/authors-presenters/>. Templates, when available, will also be found at that link. At this point, the paper or presentation should be as close to a final product as possible, since the next deadline for final publication will be within a narrow window.

### APRIL 2020

The committees will meet in mid-April to decide which manuscripts will be presented and published at the symposia.

### MAY 2020

Decision letters from the April committee meetings will be sent to authors in early May. This letter will provide the final decision of publication at the symposia.

### JUNE 2020

Final, monitor-approved submissions for TPS 2020 are due **Monday, June 8, 2020**. Registration and hotel information for authors are available by June of each year. Copyright questions can be referred to [ashton@turbo-lab.tamu.edu](mailto:ashton@turbo-lab.tamu.edu)

### SEPTEMBER 2020

The 49th Turbomachinery & 36th Pump Symposia (TPS 2020) is set for **September 15-17, 2020**. Short courses, held in conjunction with the symposia, are set for **September 14**.



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