



Tuesday, September 15

## Cornell Pump Virtual Pump School 2020

World-Class Pump Training and Networking since 1949



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About

Agenda

Speakers

### Agenda

All Days	Tue Sep 15	Wed Sep 16	Thu Sep 17
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Tuesday  
15 Sep  
5:15 AM

#### Welcome Day 1 (Both Tracks 1 & 2)

Attending

Main Stage 15 Minutes

General overview of the school, history of Cornell Pump, and expectations for learning in the virtual environment .

 **Marcus Davi**  
Vice President of Sales and Marketing  
Cornell Pump Company


Tuesday  
15 Sep  
5:30 AM

### Pump Parts and Terminology (Track 1)

Main Stage 50 Minutes

Attending

Overview of centrifugal pump parts and general terminology. Designed to provide a baseline for learning later in the sessions.

 **David Haas**  
Rental Market Manager  
Cornell Pump Company

Tuesday  
15 Sep  
5:30 AM

### NPSHA/R & Hi Standards (Track 2)

Breakout Session 50 Minutes

Attending

Utilizing The Hydraulic Institutes standards in discussing Net Positive Suction Head Available and Required in pump operation. While some review of NPSH will be undertaken in this session, attendees are expected to have basic understanding of NPSH for this advanced section.

 **Jordan White**  
Product Development Manager  
Cornell Pump Company


Tuesday  
15 Sep  
6:30 AM

### Basic Hydraulics (Track 1)

Main Stage 50 Minutes

Attending

Section will answer these questions about pumps:  
•What is a pump? How does it work?

 **Adam Lawler**  
Design Engineer | New Product Devel...  
Cornell Pump Company

Tuesday  
15 Sep

6:30 AM

### Advanced System Curves (Track 2)



Attending

Breakout Session 50 Minutes

Advanced section on System Head Curves and how that impacts pumps in series and pumps in parallel.



**Andrew Enterline**  
Engineering Manager  
Cornell Pump Company

Tuesday  
15 Sep

7:30 AM

### Vibration Analysis (Track 2)



Attending

Breakout Session 50 Minutes

Seventeen percent of root causes for pump failure is resonance. Understanding how vibration and harmonic frequency can shorten a pumps operating life allows smart practitioners to save time and money.



**Aaron Weiss**  
Electrical Project Engineer  
Cornell Pump Company

Tuesday  
15 Sep

7:30 AM

### Pump Curves, System Design, TDH & Friction (Track 1)



Attending

Main Stage 50 Minutes

Address what pump curves are, what types of curves are commonly seen, and how to read a curve. System design describes how friction loss affects performance, the components to account for in determine a systems friction losses, and how that related to total dynamic head.



**Lloyd Spanke**  
Manure Regional Sales Manager  
Cornell Pump Company

Tuesday  
15 Sep  
8:30 AM

### NPSH A/R (Track 1)



Attending

Main Stage 50 Minutes

Basic section on Net Positive Suction Head and differences between Available and Required NPSH.



**Nicholas Ivers**  
International Sales Manager  
Cornell Pump Company

Tuesday  
15 Sep  
8:30 AM

### Slurry Pumps Basic (Track 2)



Attending

Breakout Session 50 Minutes

An introduction to pumping slurries, and how the volume and composition of materials can influence pump operation.



**Bill Schlittler**  
Mining Market Manager (Retired)  
Cornell Pump Company

Tuesday  
15 Sep  
9:30 AM

### System Curves (Track 1)



Attending

Main Stage 50 Minutes

Discuss graphical representation of the pump head required to move fluid through a piping system at various flow rates. The system curve helps quantify the resistance in a system due to friction and elevation change of the range of the flows, and how to create and understand this graph will be demonstrated.



**Bob Jansen**  
Agricultural Market Manager (Retired)  
Cornell Pump Company

Tuesday  
15 Sep

9:30 AM

## Metallurgies and Coatings (Track 2)

Breakout Session

50 Minutes



Register

Demonstrate how various materials can be employed to pump liquids with different pH levels and chemical compositions, and how this effects wear, abrasion, corrosion, impact, and galling of pump metals.



**Andrew Enterline**  
Engineering Manager  
Cornell Pump Company

Tuesday  
15 Sep

10:20 AM

## Conclusion of Day 1 (Both Tracks 1 & 2)

Main Stage

10 Minutes



Register

Discuss what lies ahead in the next two days, and ensure participants have signed up for the optional virtual networking event immediately following the school.



**Marcus Davi**  
Vice President of Sales and Marketing  
Cornell Pump Company

Wednesday  
16 Sep

5:20 AM

## Welcome Day 2 (Both Tracks 1 & 2)

Main Stage

10 Minutes



Register



**Marcus Davi**  
Vice President of Sales and Marketing  
Cornell Pump Company

Wednesday  
16 Sep

5:30 AM

### Pumps in Parallel and Series (Track 1)



Register

Main Stage

50 Minutes

Difference in piping and operation of multiple pumps, either in series, parallel, or a hybrid system, with valving.



**Bob Jansen**

Agricultural Market Manager (Retired)  
Cornell Pump Company

Wednesday  
16 Sep

5:30 AM

### Advanced IIOT Monitoring (Track 2)



Register

Breakout Session

50 Minutes

Examine how the Industrial Internet of Things allows for better pump monitoring, maintenance, diagnostics, and catastrophic failure warnings.



**Adam Lindeman**

Project Engineer  
Cornell Pump



**BJ Warren**

IIoT Sales Manager  
Cornell Pump Company



Wednesday  
16 Sep

6:30 AM

### Pump-Flo Basic (Track 1)



Register

Main Stage

50 Minutes

A walk through of powerful software for picking the correct pump--from vendor Engineered Software

Wednesday  
16 Sep  
6:30 AM

### Advanced VFDs & Motors (Track 2)



Register

Breakout Session 50 Minutes

An understanding of variable frequency drives and electric motors is expected of attendees. This advanced section will delve deeper into VFDs and their operation to most effective in an application. Presented by an engineer from US Motors with advance training on VFDs .

Wednesday  
16 Sep  
7:30 AM

### VFD's & Motors Basic (Track 1)



Register

Main Stage 50 Minutes

Examine the basics of variable frequency drives and electric motor operation

Wednesday  
16 Sep  
7:30 AM

### Pump-Flo Advanced (Track 2)



Register

Breakout Session 50 Minutes

Assumes a familiarity with Pump-Flo; advanced class looks at more involved methods for selecting pumps, how to fully utilize the software, and more.

Wednesday  
16 Sep  
8:30 AM

### Priming Systems (Track 1)



Register

Main Stage 50 Minutes

Consider the pros and cons of various priming methods, including self primers, dry priming, submerged pumps and more.

Wednesday  
16 Sep  
8:30 AM

### Mechanical Seals and Water Savings (Track 2)



Register

Breakout Session 50 Minutes

Covers different methods for sealing pumps, including packing, mechanical, and cartridge seals, and examine how much flush water may be used on an annual basis.

Wednesday  
16 Sep  
9:30 AM

### IIOT Monitoring (Track 1)



Register

Main Stage 50 Minutes

Cover basics of Industrial Internet of Things

<  **BJ Warren**  
IIoT Sales Manager  
Cornell Pump Company

 **Adam Lindeman**  
Project Engineer  
Cornell Pump >

Wednesday  
16 Sep  
9:30 AM

### Ragging and Solids Handling (Track 2)



Register

Breakout Session 50 Minutes

Tackle the number one problem in municipal pumps today - how ragging and plugging instances knock pumps out of service, and what can be done about it. Includes practical case studies of cities addressing the issue.

<  **Jordan White**  
Product Development Manager  
Cornell Pump Company

 **Jason Davidson**  
Western Regional Sales Manager  
Cornell Pump Company >



Wednesday  
16 Sep  
10:20 AM

### Conclusion of Day 2 (Both Tracks 1 & 2)



Register

Main Stage 10 Minutes

Conclude Day 2



**Marcus Davi**  
Vice President of Sales and Marketing  
Cornell Pump Company

Thursday  
17 Sep  
5:20 AM

### Welcome Day 3 (Both Tracks 1 & 2)



Register

Main Stage 10 Minutes

Kick off for the last day of the school, Day 3



**Marcus Davi**  
Vice President of Sales and Marketing  
Cornell Pump Company

Thursday  
17 Sep  
5:30 AM

### Virtual Shop Tour and Q&A (Both Tracks 1 & 2)



Register

Main Stage 50 Minutes

Tour the Cornell Pump factory remotely, look at the test lab, and interact with shop employees live.



**Seth James**  
Test Engineer  
Cornell Pump Company



**Andrew Enterline**  
Engineering Manager  
Cornell Pump Company



Thursday  
17 Sep

6:30 AM

## Pump Builds (Both Tracks 1 & 2)



Register

Main Stage

50 Minutes

Watch as pump models are constructed, and ask assemblers questions as they are performing the build.



**Brandon Yoder**

Lead Engineering Technician  
Cornell Pump Company

Thursday  
17 Sep

7:30 AM

## Pump Selection (Track 1)



Register

Main Stage

50 Minutes

Tying knowledge of the last three days on how to properly select a pump



**Bob Jansen**

Agricultural Market Manager (Retired)  
Cornell Pump Company

Thursday  
17 Sep

7:30 AM

## Slurry Advanced 1 (Track 2)



Register

Breakout Session

50 Minutes

Advanced/ in-depth conversations about pumping slurries and mining.



**Bill Schlittler**

Mining Market Manager (Retired)  
Cornell Pump Company

Thursday  
17 Sep

8:30 AM

### Energy Efficiency (Track 1)



Register

Main Stage

50 Minutes

See how wire-to-water efficiency affect energy costs, and how to make you pump more efficient.



**Jordan White**

Product Development Manager  
Cornell Pump Company

Thursday  
17 Sep

8:30 AM

### Slurry Advanced II (Track 2)



Register

Breakout Session

50 Minutes

Continue advanced/ in-depth conversations about pumping slurries and mining.



**Bill Schlittler**

Mining Market Manager (Retired)  
Cornell Pump Company

Thursday  
17 Sep

9:30 AM

### Installation and Care (Both Tracks 1 & 2)



Register

Main Stage

50 Minutes

A show and tell of things that you should and should not do in operating, sizing, and installing pumps in the field.



**Jason Davidson**

Western Regional Sales Manager  
Cornell Pump Company

Thursday  
17 Sep

10:20 AM

### Conclusion of Day 3: Pump Quiz and Logistics Wrap up (Both Tracks 1 & 2)



Register

Main Stage

20 Minutes

A short quiz to test for knowledge and a wrap up to the first virtual Cornell Pump School!



**Marcus Davi**

Vice President of Sales and Marketing  
Cornell Pump Company