

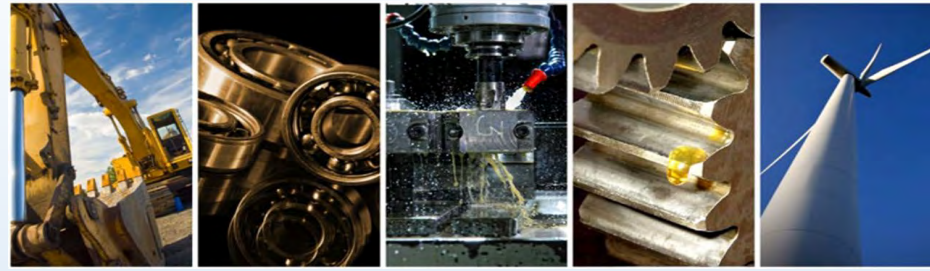
STLE Current Status and Initiatives

December 3, 2018

Edward Salek, CAE – Executive Director

Mission Statement:

"To advance the science of tribology and the practice of lubrication engineering in order to foster innovation, improve the performance of equipment and products, conserve resources and protect the environment."



15,000

Community of technical
professionals

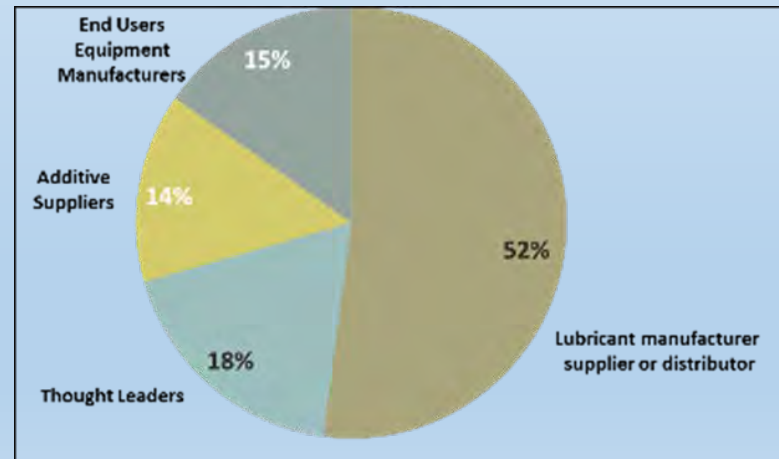
250

STLE corporate members

300+

STLE active
volunteer members

70 - Countries with STLE members



\$ 3,213,649

STLE's top-line revenue. This is a 19% increase from 2013's \$2,701,934 and more than our target of \$3 million.

3,561

STLE individual members

10 Full-time equivalent positions that make up STLE's staff. Many staffers hold professional certificates and advanced degrees.

Our Value Proposition

Connect. Learn. Achieve

STLE improves your ability to compete in the global business environment.



Connect



Learn

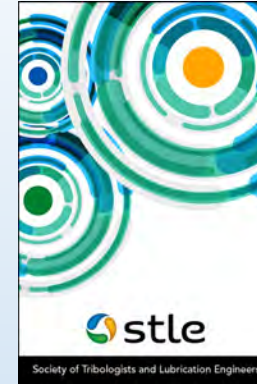


Achieve



CONNECT -

Technical conferences
and commercial exhibits



365 Mobile App

Local Sections



Alberta Section

Canton Section

Central Illinois Section

Chicago Section

Cleveland Section

Detroit Section

Hamilton Section

Houston Section

Louisiana Section

North Texas Section

Northern California Section

Philadelphia Section

Pittsburgh Section

Portland Section

Seattle - Tacoma Section

Toronto Section

LEARN -



INDIVIDUALIZED
APPROACH
TO
PROFESSIONAL
DEVELOPMENT

ABOUT THE LEARNING PATHWAYS

STLE has a well-known tradition of providing continuing education to industry professionals ready to take their career to the next level and create value to their employers, customers & peers. Now we've expanded our course offerings with the launch of STLE's Learning Pathways - a reorganization of all STLE content that is more focused, easier to search & accessible in a variety of formats that is right for you. This content is organized to allow individuals to continue developing skills in two major educational segments: Lubrication Specialist & Oil Analyst.

STLE is a trusted provider of education and a workforce development partner, and the Learning Pathways is just one more valuable information-sharing service STLE offers to benefit industry professionals in their career development.

More products & services to come from STLE Education. Please visit www.stle.org for details.

ADD TO CART

VIEW DETAILS

Society of Tribologists and Lubrication Engineers, 6015 Grand Highway, Park Ridge, IL 60068, info@stle.org, www.stle.org

Lubrication Specialist Learning Pathways

Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
PRIORITY GROUP 1				
Additives	Basic	Intermediate	Advanced	
Base Oils - Mineral & Synthetic	Basic	Intermediate	Advanced	
Bearings	Basic	Intermediate	Advanced	
Friction, Tribology and Rheology	Basic	Intermediate	Advanced	
Gears	Basic	Intermediate	Advanced	
Greases	Basic	Intermediate	Advanced	
Hydraulics (Fluid Power)	Basic	Intermediate	Advanced	
Physical and Performance Properties	Basic	Intermediate	Advanced	

Online Learning Pathways
Support Early Careerists

S

SCIENCE

T

TECHNOLOGY

E

ENGINEERING

M

MATHEMATICS




TRIBOLOGY
2016 CAMP



Workforce Development

STLE Foundations of Lubrication Engineering Course



September 13, 2017
Hilton Plaza
Independence Airport
5200 Broadway Ave.
Independence, MO 64051


STLE's new Foundations of Lubrication Engineering Course that offers an overview of the first seven topics in STLE's Lubrication Specialist Learning Path. This course serves as a foundation for individuals new to the lubrication industry, giving attendees a strong background level of information for them to build upon.

Registration for this course is \$300 for STLE members and \$400 for non-members. The non-member price covers with a year of STLE membership.

Course registration includes the full course book with presentation slides as well as course notes. The course book are provided in either printed or digital format.

For more information please contact STLE's Education Manager, Tom Winkler at twinkler@stle.org or call the STLE Headquarters at (847)835-1530.

*Class size is limited register today at www.stle.org. Registration deadline is September 13, 2017



METALWORKING FLUID MANAGEMENT PROGRAM

Feb. 27 - Mar. 1, 2018, The DoubleTree by Hilton Cleveland, 6200 Quarry Lane, Independence, Ohio 44131

The STLE Metalworking Fluid Management Program offers a solid overview of metalworking fluids management and is tailored to provide individuals with a comprehensive look at the latest techniques and practices that are key to improve their metalworking fluid operations. Optimize your metalworking fluid management capabilities and become a more valuable asset to your company.

This program includes the following topics:

- The various operations that use metalworking fluids
- The fundamentals of fluid and additive chemistry
- Adding factors affecting the quality of metalworking fluids and the work environment
- Learn about the unique aspects of metalworking fluid monitoring and testing
- Review a broad range of condition monitoring tests, learning how to use condition monitoring to manage metalworking fluids in individual source and large central systems

What's in it for you?

- Improve your knowledge and understanding of metalworking fluid management, with content specialized to your field
- Document what you've learned and utilize your expertise with a post-course exam
- Participate in case studies to solidify knowledge after learning important concepts
- Fluid lubrication to common metalworking problems you encounter
- Includes lunch (1 Adult and 1 Infant)
- Coffee discounts available
- FREE White Paper: Metalworking Fluids: 10 Best Practices Issues
- Optional STLE Certified Metalworking Fluids Specialist (CMFSP) exam sitting fee to be paid after the program concludes on Thursday, Mar. 1.

NOTE: Must register for exam by Feb. 25. If the maximum number of participants is not reached, the exam sitting will be cancelled.

STLE'S EXCLUSIVE PROGRAM

STLE Headquarters
6015 Grand Highway
Park Ridge, IL 60068
Tel: (847) 835-1530 ext. 222
Registration: www.stle.org
Registration Deadline: Feb. 25, 2018

Priority: STLE members \$300
Non-member \$400
Includes course book, presentation slides, and exam sitting fee

Sponsored by the Society of Tribologists and Lubrication Engineers and the Metalworking Fluid Education & Training Committee



Industry Trends Report

2017 Report on Emerging Issues and Trends in Tribology and Lubrication Engineering





Society of Tribologists and Lubrication Engineers

Publishing

TLT

The future of bearing lubrication

Read with new materials, 3D printing and bearing performance, keeping your shop and increasing output

Read the full story on the future of bearing lubrication

STLE Annual Meeting: The American Society of Tribology



Tribology Transactions

Significant, original developments in the science and application of tribology

In: Tribology Transactions



TRIBOLOGY LETTERS



Professional Education

STLE Report on Emerging Issues and Trends

2017 Report on Emerging Issues and Trends in Tribology and Lubrication Engineering

Dedicated to advancing the science of tribology and best practices in lubrication engineering.

 **stle**
Society of Tribologists
and Lubrication Engineers

- 900 people worldwide were surveyed
- Data reviewed by 30 industry experts for interpretation
- Covering 6 key disciplines



Transportation

Medical/Health

Energy

Manufacturing

Communications
and Data

Atomistic Process

Two Distinct Report Categories

Discipline Areas – Trends within disciplines

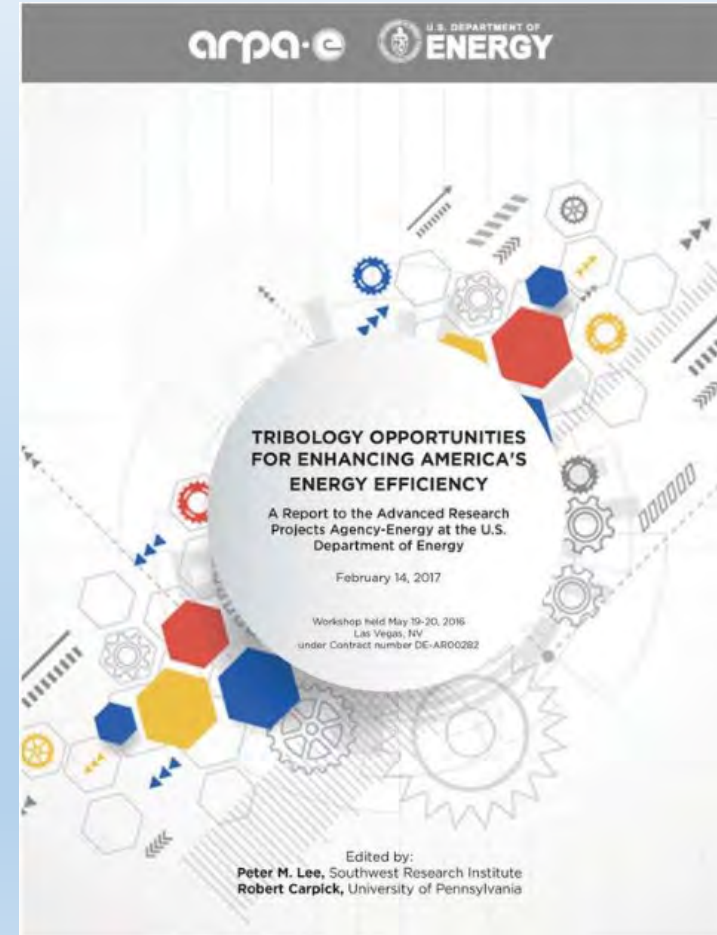
Field Issues – cross discipline issues/trends

Top Short-term Trends (Significant through next 5-10 years)	Top Long-term Trends (Significant 10+ years into future)
Transportation	
<ul style="list-style-type: none"> Lower viscosity motor oils Improved combustion and valve timing Increased turbo charger pressures 	<ul style="list-style-type: none"> Pure-electric vehicles Self-driving, autonomous vehicles High-efficiency vehicles
Medical / Health	
<ul style="list-style-type: none"> Soft matter 	<ul style="list-style-type: none"> Greater use of prosthetics Greater expectations for personal mobility
Energy	
<ul style="list-style-type: none"> Natural gas Hydraulic fracturing 	<ul style="list-style-type: none"> Decreasing use of fossil fuels Solar energy Batteries as a substitute for liquid fuel in automobiles
Manufacturing	
<ul style="list-style-type: none"> Reduction in costs of production "In-sourcing" of manufacturing services from foreign countries Increased competition for fat supplies due to biodiesel movement 	<ul style="list-style-type: none"> Greater automation of tasks / fewer human workers Increased reuse of materials in manufacturing (recycling) Continuous monitoring of production process through real-time data collection
Communications and Data Management	
<ul style="list-style-type: none"> Continuous monitoring of lubricants and moving mechanical parts through ongoing data collection and algorithms to detect problems and increase efficiencies Solid-state memory and devices (no moving parts) 	<ul style="list-style-type: none"> Free-flow of information that does not require physical information systems (i.e., demise of print media)
Atomistic Processes	
<ul style="list-style-type: none"> Investigating formation of films on surfaces to study antifriction and antiwear layers Aluminum rolling 	<ul style="list-style-type: none"> Linking of atomic-scale behavior with larger systems-level behavior Increasing attention paid to surface factors

Outlook on the Field	Government Regulation
<p>Top areas of concern:</p> <ul style="list-style-type: none"> The ability of the field to attract talented and educated employees The challenge of reducing pollution related to the production / usage of products created by tribologists and lubrication engineers The availability of research funding from both government and for-profit sources compared to other scientific disciplines The cost of materials, chemicals and other resources 	<p>Regulatory areas with greatest impact on the field:</p> <ul style="list-style-type: none"> Industrial waste regulations Restrictions on water pollution Particulate matter emissions regulations Carbon monoxide regulations
Safety and the Environment	Basic Human Needs
<p>Most significant trends impacting safety and the environment:</p> <ul style="list-style-type: none"> Automation replacing workers (minimizing risk to humans) Biodegradability Technology that allows greater ability to determine where environmental hazards originate Particulate matter emissions from lubricants 	<p>Areas where tribology and lubrication engineering will have the greatest impact:</p> <ul style="list-style-type: none"> Production of sustainable energy Reducing air pollution and emissions Reducing costs of manufactured goods through added efficiencies Reducing industrial waste

Issues and Trends Report - Get Your Copy

Go to www.stle.org to download



ACHIEVE - STLE Certification Programs

~ 1871 active certifications

1261

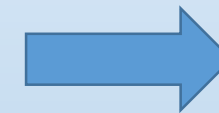


- Minimum three years experience
- 70% or greater exam score
- Re-certify every three years

505



- OMA I and OMA II
- Minimum one year experience
- 70% or greater exam score
- Re-certify every three years



50 certified in
Detroit area

51



- Science, engineering or business degree
- 20 hours technical training
- 70% or greater exam score
- Re-certify every three years

External Communications Program Objectives

- Increase awareness of tribology and lubricants in key vertical markets.
- Communicate the importance of tribology and lubricants and how they contribute to the advancement and improvement of industry processes.
- Provide information on how industry can gain the economic, industrial and commercial advantages of lubricants and tribology.

STLE Technical Advisory Committee

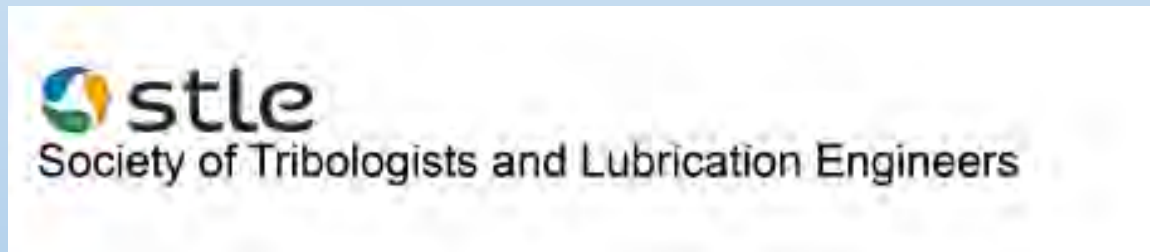
- Committee was formed in September 2017 to advise LimeLight Resources and project advisor (Patti Bianchi) on the development of a communications plan targeting lubricant users in key market segments: **Manufacturing, Metalworking, Power Generation, Transportation.**
- Panel of industry experts has provided STLE's communications team with current insights regarding key industry trends, innovations and challenges and determined STLE's future strategies for **messaging, content development, media outreach and social media sharing.**

Key “Year One” Achievements

- Message Maps (for all key segments)
- Speaker’s Bureau (for all key segments)
- Media and trade show targets (for all key segments)
- Content/trade event partnerships
- Media placements in trade publications
- TLT articles in trade publications
- Press Releases

Next Steps

- Build on foundational work of year one by shifting to an **implementation phase** of action steps organized around our four market segments – manufacturing, metalworking, power generation and transportation.



Featured Articles - STLE in the News

November 2018

[Challenges in Formulating Metalworking Fluids](#)

(November 1, 2018)

MetalForming Magazine

www.metalformingmagazine.com

[Lubricant Emulsifiers: Can Water and Oil Mix?](#)

(November 2, 2018)

UL Prospector

<https://knowledge.ulprospector.com>

October 2018

[Technique developed to join aluminum to steel](#)

(October 30, 2018)

Plant Engineering

www.plantengineering.com

September 2018

[Auto industry's efforts to lighten up create lubrication challenges](#)

(September 1, 2018)

MetalForming Magazine

www.metalformingmagazine.com

MARK YOUR
CALENDAR!

SAVE THIS CARD!

Scan this QR code in March 2019 for
the Annual Meeting section of STLE's 365 App.



74th **STLE** Annual Meeting & Exhibition



May 19-23, 2019 • Omni Nashville Hotel • Nashville, Tennessee (USA)

Join your industry peers for five days of technical education & networking!



Trade Show • Technical Presentations • Industry Education • Networking



STLE to celebrate Diamond Anniversary



STLE was founded on March 3, 1944. The time period beginning March 3, 2019 and ending May 5, 2020 will be designated as the organization's Diamond Anniversary year based on 75 years of service to the tribology and lubricants industry. A year-long celebration will highlight the importance of tribology and lubrication engineering and promote STLE's value as the organization which represents the field.



Artist Rendering – Renovated Chicago HQ building



MAJOR EVENTS PLAN 2019 TO 2020



March 3 2019 - STLE incorporated 75 years ago in Chicago.

News release and member announcement of year-long celebration. Greg Croce president and Dave Scheetz anniversary chair.

Nashville AM - May 2019

Kick off of 75th anniversary year. Unveil commemorative logo design. Poster gift to attendees. Collect video clips for use during the year about impact of the field and about STLE. Greg transitions to Mike Duncan. Ryan Evans is conference chair.

Anniversary logo design - Bruce has it in the works

Attendee gifts - pins, posters, etc. - would use the special logo

Videography onsite for future production - Association Studios Karl

Timken role in celebration?

Congratulations letter from Nashville mayor

Chicago TFC - October 2019

Mike Duncan president. Aaron Greco of ANL is conference chair

Release timeline of industry events and accomplishments

Announce a legacy project that serves the industry and grows out of the anniversary. What is it? Perhaps a student competition to create a timeline of the next 25 years? In conjunction with a partner organization.

March 3 2020 - Mid point of celebration year

Bury time capsule with items collected during year. Location? Good photo opportunity. Mike Duncan president.

Host an event at STLE HQ to mark occasion?

Chicago AM - May 2020

Culmination of 75th anniversary year. Mike D. transitions to Paul H.

Invite all living Ku and International Award winners to attend 2020 meeting.

Skip making awards that year and honor collective achievements.

Connect with Chicago Section as hosts for an event at the 2020 Annual Meeting. Perhaps a lake or river cruise etc?

Congratulatory messages from Chicago mayor, Illinois governor and US President.

Create a special PPT template for use in presentations and at 2020 education program.

Oversize poster at 2020 meeting. Everyone invited to sign.

Paid or sponsored keynote speaker for 2020 Annual Meeting. Suggestions: Bill Nye science guy or Bob Crippin (NASA) - Ken Hope to check on Crippin

Questions, Comments and Discussion!

