



# The MMS Scope

## Minnesota Microscopy Society

Local affiliate of the **Microscopy Society of America**  
and the **Microanalysis Society**

January 2020

### In this Issue:

#### 2020 kickoff event:

Join us in Bloomington for a tour/talk at Consolidated Precision Products to learn about the complex casting parts manufactured for the aerospace, defense, and industrial gas turbine sectors, pp.1-2.

#### Up ahead:

MinnTS is March 19 with a theme of *Wearable Technology*. Spring Symposium is May 1, 2020. Mark your calendar today, p.3.

#### Project MICRO:

Three elementary school events plus a Family STEM Day at Mill City Museum will showcase microscopy to students/families. Mark your calendar and get involved, p.4.

#### 2020 MMS dues:

Please remember to submit your annual membership dues.

#### Photo album:

See what you missed: MMS Oct event – a tour of the Midwest Art Conservation Center, p.5.

NEW YEAR KICKOFF

February 4, 2020

### Tour of Consolidated Precision Products (CPP)



#### MESSAGE FROM THE BOARD

*MMS Members,*

*We are excited to announce the first MMS event of 2020 will be a presentation and tour at **Consolidated Precision Products (CPP)** Minneapolis Operation, a supplier of high complexity aluminum and magnesium castings. CCP Minneapolis Operation is a nonferrous foundry that specializes in producing complex components for the aerospace industry. We hope to see you there.*



#### LOCATION

Consolidated Precision Products  
8701 Harriet Avenue  
Bloomington, MN 55420

[View map.](#)



#### REGISTRATION

There is no fee for the event, but registration is required. Registration deadline is **Monday, February 3rd.**

Register at [Eventbrite](#). (Generated tickets are not needed to attend.)

The registration link is also available on the [MMS events page](#).



#### SCHEDULE

The tour will go from **4:15 to 6:00 pm**, with an informal dinner\* for those interested to follow at Mandarin Kitchen (8766 Lyndale Av S, Minneapolis, MN 55420).

\* Each guest will pay for their own meal.

- 4:15-4:30 p.m. Check-in
- 4:30 p.m. Presentation by Joe Hirvela (Learn more on page 2.)
- 5:00-6:00 p.m. Tour of CPP Minneapolis Operation
- 6:00 p.m. Optional dinner at Mandarin Kitchen

## MMS New Year Kickoff | continued



### SPEAKER BIOGRAPHY / COMPANY BACKGROUND

**Joe Hirvela** will explain the processes that CPP Minneapolis Operation uses in producing its castings, while describing the company history and its technical capabilities. This company has been a supplier of high complexity aluminum and magnesium castings for over 100 years. It uses a chemically-bonded dry sand process and tight controls of its melt chemistry and quality to produce precision engineered components such as transmission gearbox housings, fuel system housings, and airframe structures for both military and commercial aerospace operations. CPP Minneapolis Operation offers in-house tooling and pattern construction, as well as machining, with the objective of producing castings that are ready to be assembled on the aircraft by its customers. The company is accredited to both NADCAP and ISO/AS9100, and it also serves a wide range of customer specifications as required.



Joe Hirvela is currently Plant Metallurgist at CPP Minneapolis Operation. During his 37 years at



CPP Minneapolis Operation, he has served in a variety of roles, including product engineering, process engineering, and quality assurance. He is a member of the American Foundry Society and the American Society for Materials (ASM), and served as the Chair of the Minnesota Chapter of ASM during the 2014-15 and 2018-19 program years. Joe holds a bachelor's degree in metallurgical engineering from the University of Minnesota and an MBA from University of St. Thomas.

For more information about CPP, visit [cppcorp.org](http://cppcorp.org). Don't forget to register at [eventbrite](https://www.eventbrite.com).



## CALENDAR of EVENTS

**22 JAN 2020**

### AVS Minnesota Chapter: Dinner and Discussion

*Presenter:* Sally McArthur, Swinburne University of Technology and CSIRO, Australia

*Title:* "Creating Toolboxes for 4D Cell Culture Systems"

*Venue:* Buca di Beppo, St. Paul, Minn.

*Schedule:* 5:00 p.m. social, 6:00 p.m. dinner, 6:30 p.m.

Dr. McArthur's talk will discuss the tools and systems the Bioengineering Research Group at Swinburne is using to investigate and validate the materials, sensors and construction principles required for reproducible, scalable and monitored 4D *in vitro* cell culture systems.

Please join us for camaraderie and to learn more about innovative biomaterials, surface analysis, and microscopy techniques.

Learn more [here](#).

**19 MAR 2020**

### 20th Annual MinnTS (Minnesota Technical Symposium)

Ecolab Schuman Campus

Eagan, Minn.

5:00 – 9:00 p.m.



## 20th Annual MinnTS (Minnesota Technical Symposium)

[www.minnts.org](http://www.minnts.org)

**WEARABLE TECHNOLOGY**

### PRELIMINARY MARCH 19 MinnTS SCHEDULE

4:30 p.m.	Tours begin
5:00-6:00 p.m.	Registration, social with refreshments
6:00-7:00 p.m.	Dinner
7:00-7:15 p.m.	Welcome message, introductions
7:15-8:00 p.m.	Lucy Dunne, Univ. of Minn., Co-director of <a href="#">Wearable Technology Lab</a> (WTL)
8:00-8:15 p.m.	Break
8:15-9:00 p.m.	Speaker #2 (to be determined)

**01 MAY 2020**

### MMS Spring Symposium

Minnesota Science Museum

St. Paul, Minn.

7:30 a.m. – 4:00 p.m.





## PROJECT MICRO WINTER/SPRING 2020

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### Project MICRO

*Project MICRO has a busy 2020 planned! Thank you to all the devoted and new volunteers who are making time to help inspire the next generation of microscopists. Mark your calendar today and plan to get involved.*

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### 2020 SCHEDULE

- |                                 |   |
|---------------------------------|---|
| <b>Jan. 30</b>   5:00-7:00pm    | Lincoln Elementary School for the Arts Family STEAM Night (Anoka) |
| <b>Feb. 22</b>   11:00am-3:00pm | Mill City Museum <a href="#">STEM Day</a> (Minneapolis)           |
| <b>Mar. 13</b>   tbd (evening)  | Eagle Creek Elementary Science & Art Fair (Shakopee)              |
| <b>Apr. 02</b>   5:00-7:30pm    | Hamilton Elementary Science Night (Coon Rapids)                   |



### DON'T FORGET

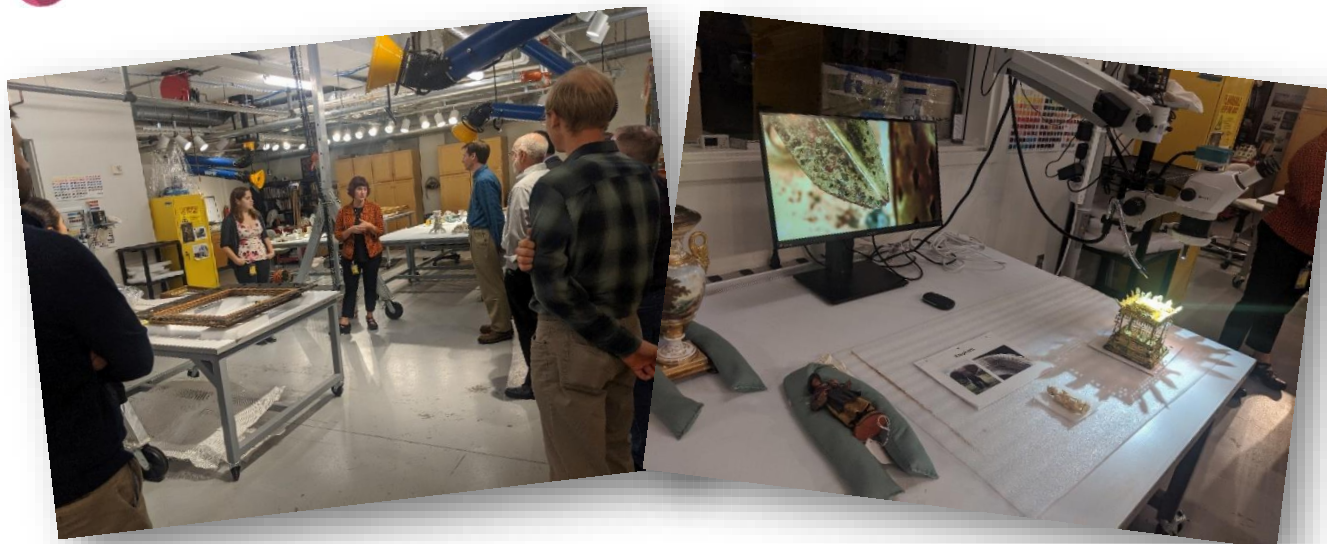
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Please remember to pay your 2020 MMS membership dues.  
Thank you.



## DECEMBER 2019 MACC TOUR PHOTO ALBUM



On Thursday October 10, 2019, MMS members had a wonderful tour of the Midwest Art Conservation Center (MACC). The MACC is an independent, non-profit regional center for the preservation and conservation of art and artifacts. They use a variety of imaging capabilities like UV, IR, and XRF and apply them to the various specialties of paper, objects, paintings, and textiles. MMS was also proud to make a donation to the MACC in support of their conservation efforts. Many thanks to **Colin Turner** for helping to organize the tour, and to his team Megan and Jenny for helping facilitate the tour.





## MMS Cash Flow Summary 01/01/2019 through 12/31/19

### INCOME

#### Dues

Corporate	2,800.00
Patron	560.00
Regular	265.00
Student	0.00
Sustaining	300.00

<b>Total Dues</b>	<b>3,925.00</b>
<b>Interest Income</b>	<b>1.03</b>
<b>MinnTS Meeting Registration</b>	<b>2,230.00</b>
<b>Miscellaneous Income</b>	<b>0.00</b>
<b>Spring Symposium Income</b>	<b>4,455.00</b>

**TOTAL INCOME** **10,611.03**

### EXPENSES

<b>Interest</b>	<b>2.00</b>
<b>PayPal Credit Card Fees</b>	<b>316.10</b>
<b>Insurance</b>	<b>327.55</b>
<b>Meeting Expenses:</b>	
MMS Regular Meeting Expenses	200.00
MinnTS Meeting Expenses	2,434.74
<b>Total Meeting Expenses</b>	<b>2,634.74</b>
<b>Miscellaneous</b>	<b>0.00</b>
<b>Newsletter</b>	<b>180.00</b>
<b>Website</b>	<b>467.03</b>
<b>Project Micro</b>	<b>90.66</b>
<b>Spring Symposium Expense</b>	<b>5,137.69</b>

**TOTAL EXPENSES** **9,155.77**

**OVERALL TOTAL** **1,455.26**



## MMS CORPORATE SPONSORS

Corporate Sponsors are the backbone of financial support for the Society. These members make it possible for the Society to support Project Micro and to cover many expenses of the regular meetings and the Spring Symposium. MMS gratefully acknowledges the corporate sponsorships provided by the following companies. To become a Corporate Sponsor, complete and return the MMS membership form at the end of the newsletter.

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If any sponsors are missing from this list, please contact Jason Heffelfinger (763-514-1021, [jason.r.heffelfinger@medtronic.com](mailto:jason.r.heffelfinger@medtronic.com)).



## MMS SUSTAINING & PATRON MEMBERS

The Minnesota Microscopy Society would like to express sincere thanks to our Sustaining and Patron Members. These members provide financial support to the organization above the standard membership fee. This additional support makes it possible for MMS to maintain its financial well being. To become a Patron or Sustaining Member, complete and return the MMS membership form at the end of the newsletter.

### MMS Sustaining Members

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## Other Board Members

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## MINNESOTA MICROSCOPY SOCIETY | MEMBER INFORMATION FORM

All microscopists are urged to support their Society at one of the membership levels offered below. Often, supervisors will support MMS memberships out of their project budget because they recognize that it is a very inexpensive way to maintain and increase the skills of their microscopists. If you have been a member over the years and recognize the value of MMS to the community of microscopists it serves, consider upgrading your membership this year to the Patron or Sustaining level. Thank you.

Dr  Mr  Mrs  Ms  First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Affiliation \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

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(Newsletter notifications will be e-mailed to the address above.)

Are you an MSA member?  MAS Member?

Student (\$5-\$9)  Basic (\$10-\$24)  Patron (\$25-\$99)  Corporate/Sustaining ( $\geq$  \$100)

Payment: Check  PayPal

(Please go to [mnmicroscopy.org/membership](http://mnmicroscopy.org/membership) to make your payment via PayPal.)

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