# 'The Forum'

October 2024





Vol. 26 No. 10

Visit our website at https://www.metalsmith.org

# October 9 Membership Meeting Explores Al Advances in Materials Discovery

Ellad Tadmor is a Professor of Aerospace Engineering and Mechanics at U of M, and he will lead our program on Wednesday, October 9, at Christ the King Lutheran church (8600 Freemont Ave S in Bloomington. Map unavailable. Check Google). He will talk about how recent advances in artificial intelligence (AI) are revolutionizing materials discovery.

He spoke to us years ago at the Historic Fort Snelling Auditorium with a combined meeting with the MN Clockmakers Guild.

Prof. Tadmor uses theoretical models and computer simulations to understand material behavior and failure from the fundamental interactions of their atoms. This requires a multiscale approach that can link processes occurring on atomic scales to the scales of human perception.

I looked at his fall class load, and he is teaching a graduate level course on **Continuum Mechanics**, which is the fundamental subject that serves as the foundation for solid and fluid mechanics. It provides the most general description of the deformation and response of materials to external loading. He says that this is his favorite class to teach because it shows students how most everything they learned in their undergraduate engineering curriculum is unified and generalized in this course.

Note: If you're over 62, you can take the course for the price of books and parking. It's course # is AEM5501. Don't know about you, but I don't think I would be his best student

We will enjoy our customary potluck at 6:30 pm, so be sure to bring a dish to pass and some of your favorite show-n-tell items.

– Richard Zielike

# Congrats to participants in TGoM's 2024 Fall Conference theme contest

Smiths were invited to create a unique item for one of two contests.

- 1. Basic contest: bottle opener
- 2. Advance contest: picture frame

Entries were auctioned off, and final auction sale prices determined three winners in each contest. For the basic contest seven entries competed for three cash prizes. Winners were:

1st: Adam Dauer, whose bottle opener was auctioned for \$95. Adam received \$50.

2nd and 3rd tied: so Piet Maas and Jack Lassiter each received \$25. Their openers earned \$50 each. Total proceeds from the bottle opener contest were \$250.

**For the picture frame contest** six entries competed for three cash prizes. Winners were: 1st: Jesse Gavin, whose picture frame was auctioned for \$130. Jesse received \$100. 2nd: Wayne Olson, whose picture frame was auctioned for \$120. Wayne received \$60. 3rd: Bob Brown, whose picture frame was auctioned for \$90. Bob received \$40. Total proceeds from the picture frame contest were \$500. See page 5 for photos.

Thanks go to this list of companies for donations to 2024 Fall Conference-Live Auction, Found Art, and Tailgate!

Mississippi Welders Supply 5211 Moundsview Dr. Red Wing, MN 55066 651-388-1836 Mississippi Welders Supply 1810 Webster St. Hudson, WI 54016 715-381-6964 Oxygen Service Co. 1111 Pierce Butler Route St. Paul, MN 55104 651-644-7273 1-800-774-1336 Toll Gas and Welding Supply 3005 Niagara Lane

3005 Niagara Lane Minneapolis, MN 55447 763-551-5300 Toybox Repair, Inc 215 Ohio St. St. Paul, MN 55107 651-226-1471 Please show your appreciation by patronizing these companies.

### **QUICKNEWS**

**Beginners Blacksmithing 3day Class October 2024 -**Registration still open. Details page 3.

**Class: Oxy/Acetylene Welding** Details page 3

**Class: Betty Lamp.** October 19. Details page 2.

**Class: Candle Chandeliers** November 2. Details page 2

**Class: Intro to Arc Welding** Nov. 16. Details page 3.

**Event: Taste of Blacksmithing** November 23, 2024. Details pg 2.

**Class: Handled Struck Tools** December 7, 2024. Details page 3.

#### **Volunteer** Opportunities

Are you a smith looking for volunteer opportunities and not sure whom to talk to? Contact: Kim Maas, Volunteer Coordinator at: tgom.volunteer@gmail.com or call 651-328-7219.

# Thank you to all!



Thanks to these welders for their time and talent in staffing the "found art" event Saturday, September 21 during "The Madness." They are (I to r) Brendan Stevens, Don Hammer, Andrew Lundrigan, Herb Fick, and Joe Anton.



Thanks to these crafters for their time and talent in staffing TGoM's first craft booth at "The Madness!" They are (I to r) Cathy Miest, Paula Wasmund, Lisa Olson, and Pauline Froehling. Look for this again next year!

# Betty Lamp Class 2024

Date and Time:	October 19, 2024, Start time 8:00am			
Location:	MN School of Horseshoeing (map page 7)			
Instructor:	Martin Pansc	h, 612-599-4762	blacksmithingyeti@gmail.com	
Cost:	\$60	Class size:	Maximum 5 students	

**Class Description:** A Betty lamp is an 18<sup>th</sup> century oil lamp of Germanic origin that could use any number of household oils (fish oil, fat trimmings, bacon grease, etc.) In this class we will be making Betty lamps by cutting, filing, and bending pieces from thin sheet metal. Pieces will be held together by small rivets while we braze the bottom in the coal forge to make it water (oil) tight. The top will include a light hinge. The forging in this class is minimal and light, making rivets and the spine. Some students may not finish the lamp during class time.

Class Manager: Marty Masters Contact Marty with questions: <u>mastersmw@yahoo.com</u> or 651-285-8731

#### Tools and Equipment or other items participants are to bring to the class.

A forging hammer, a small (8 oz or so) cross peen, a medium size flat mill file, small/jewelers square files, a hacksaw with fine blade (18 or 24 TPI), small cold chisel, vernier calipers, long flux spoon, borax flux, tongs for 1/8", center punch, scribe, fine Sharpie. For making small rounds and square holes (1/8" or so) you can either bring a drill and bits or small punches. If you have a vise with good jaws that you can bring that would be helpful.

Safety Equipment – safety glasses, ear plugs, natural fiber clothing (nothing that will melt).

Lunch Arrangements: You can either bring lunch or grab something from one of the local dining establishments.

To register online: <u>click here to our website Education page</u>

To register with a check: Contact class manager Martin Masters at <u>mastersmw@yahoo.com</u> or 651-285-8731 for instructions. Acceptance will be in the order submitted, based on the online transaction date or postage date, and each person will be notified individually.

### **Candle Chandelier Class**

Date & Time: Saturday, Nov. 2, 8:30 am to 4:30 pm

Cost: \$65Location: MN School of Horseshoeing (map page 7)Instructor:Don Hogenson

#### Class Manager: Jesse Gavin

**Class Description:** In this class you will be forging, twisting, and riveting together a candle chandelier. You'll be working with round, flat, and short sections of pipe. Students should have completed the basics classes.

Side note: Don learned how to make this in a class given by Dave Mariette – far enough in the past that we couldn't come up with the year! **Tools and Equipment or other items participants are to bring to the class:** Favorite hammer for forging and peening rivets, tongs to hold 1/4" and 3/8" round, thin flat stock and pipe, plus other tools as you see fit – i.e. wire brush, touch mark, etc.

Safety Equipment: the usual for forging with coal: safety glasses, hearing protection, clothing of natural fiber with no cuffs or fraying, and leather boots or shoes.

Lunch Arrangements: local restaurants or bring your own.

To register online: click here to our website Education page

To register with a check: Contact class manager Jesse Gavin at -715-808-5891 or jagavin6273@hotmail.com for instructions Acceptance will be in the order submitted, based on the online transaction date or postage date, and each person will be notified individually.

# 'Taste' of Blacksmithing

Date and time: November 23, 2024, 9 a.m. – 3:30 p.m.

Location: Jackson Street Roundhouse at MN Transportation Museum, 193 Pennsylvania Ave E, St. Paul MN 55130 (map at right)

Price: \$65 for members, \$75 for non-members Instructor: Rebecca Hrobak, 612-226-8608,

rebelhornbrook@gmail.com

#### Class size: Max 4 students, min 2 students

**Class Description:** This is the day to try blacksmithing. All are welcome – we have designed this for the complete novice. Hammer in hand, iron heated in the coal forge, anvil at the ready, you'll be making one or more of these take-home projects: a drive-hook, an S-hook, a wrist cuff, or just keep hammering and see what amazing shape comes forth? Bring your creativity, safety glasses, and curiosity – we supply every-thing else.

**Safety Equipment: Bring** safety glasses, hearing protection, clothing of natural fiber with no cuffs or fraying, cotton or leather gloves and leather boots or shoes.

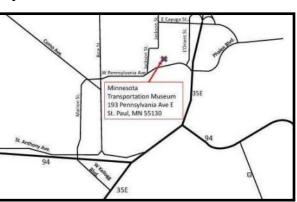
**Contact** Marty Masters with any questions by email: <u>mastersmw@yahoo.com</u> or call/text 651-285-8731.

Lunch Arrangements: Bring a lunch, snacks, and water (your favorite beverage), there is no formal shut down to break for lunch. You can stop anytime during the class for snacks, lunch or to rest.

#### To register online: click here to our website Education page

To register with a check: Contact class manager Martin Masters at <u>mastersmw@yahoo.com</u> or 651-285-8731 for instructions. Acceptance will be in the order submitted, based on the online transaction date or postage date, and each person will be notified individually.

#### **TGoM Forum**



Taste of Blacksmithing

Class size: maximum 8; minimum 4





# **Beginners Blacksmithing 3-day Class -**FALL 2024 - Registration still open!

Dates: The classes are held on the following Saturdays of October 5, 12, 19, 2024

Location: Minnesota School of Horseshoeing, 6250 Riverdale Dr NW, Ramsey MN 55303, just off Hwy 10 near the Anoka Vocational College (see map page 7).

Class Description: This 3 day class covers the basics of: Safety, Tools, Fire Control, Forging Dynamics, Tapers (ribbon, fishtail, point), Twisting, Riveting, Shouldering, Upset, Cutting, Splitting, Punching, Heat Treat, Scrolling, Bending, Forge weld.

The beginners basic classes are designed to give everyone the same understanding of the basics, techniques and terminology.

The basic classes or proficiency is **REQUIRED** before taking any of the many other classes the Guild offers. This enables those classes to concentrate on advanced techniques without having to spend time on basic concepts.

#### Class Size: 8

**Cost: \$190 for NON members, \$180 for Guild members** (covers everything you need: the facility, coal, metal tools and workbook) Minors (under 18) must have a parent present. There will be no sharing of forges.

#### Class Champion: Kim Maas at tgom.volunteer@gmail.com or call 651-328-7219

What you need to bring: Eye, ear and skin protection. This includes safety glasses, ear muff or plugs and suitable clothing which includes hard shoes, cotton or leather. Synthetic and polyester clothing will burn and melt. There will be sparks and brushes against hot metal. Tools: Tools are provided but if you have a favorite hammer, punches, chisels and tools, bring them along. A small 1 to 2 pound ball peen hammer would work. We have various hammers for you to try and get a feel for what is comfortable.

Typical day: Classes start at 9 but people usually show up earlier to swap stories or show off recent projects. Feel free to bring projects you are working on to show. We break for lunch.

**Lunch:** You can either bring a brown bag or go out to a local fast food restaurant. Classes end between 3 and 5.

#### To sign up for the three-day Beginners classes:

Go to the Guild web page Metalsmith.org and sign up under the EDUCATION tab: https://www.metalsmith.org/education/beginnersblacksmithing-class/

If you prefer to send a check - Mail check payable to: The Guild of Metalsmiths.

Mail check and contact information (name of student, address, email address and phone number)

Kim Maas To:

965 Gorman Ave.

West St. Paul, MN 55118 Direct questions to: Kim Maas at tgom.volunteer@gmail.com or call

651-328-7219

(\$180 for members, \$190 non-members)

Acceptance will be in the order submitted, based on the transaction date, and each person will be notified individually.

# Oxy/Acetylene Welding 2-Day Class

Still 2 openings for this class.

Dates are Sat & Sun, October 5 & 6, 2024, 9am - 4:30pm.

Location: Myron Hanson's East Eagan Blacksmith Shop, 4015 Dodd Road, Eagan, MN 55123

Instructors: Myron Hanson, Bob Brown, and Dick Carlson

**Class manager** is Kim Maas at tgom.volunteer@gmail.com.

To register online: <u>click here to our website Education page</u>

To register with a check: Contact class manager Kim Maas at tgom.volunteer@gmail.com or call 651-328-7219 for instructions.

Acceptance will be in the order submitted, based on the transaction date, and each person will be notified individually.

# Intro to Arc Welding

Date and Time: November 16, 2024 from 9:00 AM to 4:00 PM Instructor: Ben Groves

Cost: \$150 Class Size: Max 4, Min 2

Location: MN Transportation Museum, Jackson Street Roundhouse (map page 2)

Class Description:

If you've ever wanted to know more about welding but didn't have a way to do it, here's your chance. There's something mysterious and magical about welding. Welders sit so close to this fountain of sparks that most people would jump back from. They join steel (and other materials) together as if they were one.

This one-day class will be a survey of three common modern arc welding techniques which are appropriate for hobby welding:

- Shielded Metal Arc Welding (SMAW/Stick)
- Gas Metal Arc Welding (GMAW/MIG)
- Flux Cored Arc Welding (FCAW) Each technique will be explained and demonstrated. Then the

student will have hands-on time to practice.

**Class Champion:** Martin Masters

**Safety Equipment** – Wear clothing made of natural fiber with no cuffs or fraying, and leather boots or shoes.

Other Equipment: Proper welding gloves, welding leathers or coat, welding helmet (We will have loaner helmets if you don't want to buy one.)

Lunch Arrangements: Bring a bag lunch or eat at a local restaurant.

To register online: <u>click here to our website Education page</u> To register for this class with a check: Contact Marty Masters for instructions: mastersmw@yahoo.com or 651-285-8731

Acceptance will be in the order submitted, based on the online transaction date or postage date, and each person will be notified individually.



(map page 7) Bob Brown, Wayne Olson, the Gavins, Herb Instructors: Fick, George Auel

Cost:

Date:

Location:

\$85 Class size: Max 8, min 6

**Class Description**: The tools made will be punches with a wire handle and chisels with a wire handle. We will offer the option to use treadle hammers supplied by the teaching staff. (Find out if you really need one of these by trying them.) Tools for the treadle hammers will be supplied. Steel supplied will be 5/8 and 3/4 inch round 4140 AN for the punches and chisels. Handles will be fabricated from 1/4 and or 5/16inch round mild steel.

**Bring:** Power grinders are supplied. Bring your favorite hammers and tongs suitable for the stock if you have them. So far we have never run out of Guild tools to share. Bring your basic safety gear (leather, cotton, gloves, eye and ear protection and safety shoes). The building will be open by 8 am, introductions and coffee will start at 8:30, in the shop by 9 AM. We usually finish just before 5 pm.

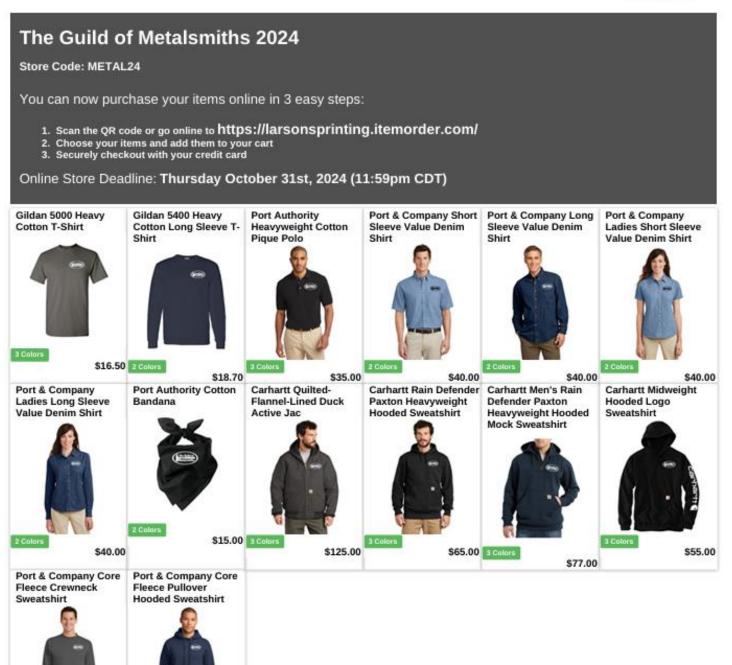
To register online: click here to our website Education page To register with a check: Contact class manager Herb Fick 507-649 -1611 CEL or <u>herb@phyque.com</u> for instructions.

Acceptance will be in the order submitted, based on the online transaction date or postage date, and each person will be notified individually.











\$20.00

\$30.00

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# 'Madness' 2024 theme contest winners: picture frame



CONTEST ITEM

1st: Adam Dauer



2nd: Wayne Olson

'Madness' 2024 theme contest winners: bottle opener



3rd: Bob Brown

#### Volunteers forge at Bally's Blacksmith Shop in Grand Marais, MN

Photos below show Don Hammer and Steve Frykman demonstrating their smithing talents at 2024 Fishermen's Picnic held in August in Grand Marais. Don and Steve were doing live demos at Bally Blacksmith & Metal Shop, a historic building part of the Cook County Historical Society.

Photos taken by Tyrg Solberg for Boreal Community Media (boreal.org).









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2nd (tied): Piet Maas



CONTEST ITEM

2nd (tied): Jack Lassiter

# 2024 Fall Conference demonstrators

Photos at left and below illustrate how demonstrators for The Guild of Metalsmiths' Fall Conference shared their talents.

At left, Mark Aspery describes a point to TGoM members Tom Latane', Andy Lininger and John Moriarty.

Below, Pete Braspenninx works on one of the projects he brought for TGoM's smiths to learn about.



Machine Shop

# Auction:

**Estate of Russell Garens** Click on photo below to go to auction website: Premier Machinery Auctions



**TGoM Forum** 

# **TGoM Membership Perks**

#### Discounts

The following companies are extending discounts to The Guild of Metalsmiths members. You will need to ask for their Guild of Metalsmiths discount, show your membership card (found on the back of your "Metalsmith"), and a Picture ID. These discounts are a gift to us and can be taken away if they are abused. If you have a hobby shop, no problem. If you are a professional with a few employees, no problem. What is not fair, is turning yourself into a dealership by reselling/trading products that you have purchased with our discount or being a big company and using our discount for your bottom line. Please don't ruin this for everyone. These businesses deserve our recognition and patronage:

Please see The Guild of Metalsmiths website for additional information regarding discounts and products available: https://www.metalsmith.org/about/friends-of-the-guild/

#### **Carhartt at Work Program**

Mall of America

144 North Garden Bloomington, MN 612-318-6422 or Riverdale Village Mall 12680 Riverdale Blvd. Coon Rapids, MN 952-885-8000 www.carhartt.com

15% on almost everything in the store, except Flame Retardant (FR) gear, which is 10% off whether you shop online or at Mall of America

#### Minnesota Glove & Safety & Bob's Workwear

West St. Paul, MN 651-552-8840

www.minnesotaglove.com 10% discount off merchandise not already on sale or discounted

#### Smith-Sharpe Fire Brick Supply

2129 Broadway St NE, Minneapolis, MN 612-331-1345 <u>www.ssfbs.com</u> 866-545-6743

The quantity of product purchased dictates the normal "Level" of discount. Smith-Sharpe Fire Brick Supply is offering to discount "Level" better to Guild members. It will vary with types of products, but may average about 10%.

#### **Garelick Steel Company**

Minneapolis, MN 612-521-8857 888-521-8857 www.garelicksteel.com 10% discount for members

#### Mississippi Welders Supply

Seven locations between MN & WI. www.mwsco.com 800-657-4422

See website or phone book for locations. 15% discount on gases and most in-store items that are not already marked as a sale item or already at a discount from MSRP for members.

#### **Toll Gas and Welding Supply**

Eight Twin City metro locations.763-551-5300www.tollgas.com763-551-5300

See website or phone book for location near you. 15% off of gases and most in-store items, for Guild members.

#### Oxygen Service Co.

St. Paul, MN 651-774-7273

800-774-1336

www.oxygenservicecompany.com

15% discount on gases and most items that are not already marked on sale for members.

#### **Division V Sheet Metal**

218 Ohio Street, St. Paul MN 55107 651-291-8662 <u>http://divisionv.com/</u> Architectural sheet metal company: zinc, steel, copper, Cor-Ten, aluminum, composite

# Our neighborhood of smiths

#### The Guild of Metalsmiths (TGoM)

Most membership meetings are the second Wednesday of February, April, June, August, and October, except December. For most meetings a potluck meal begins at 6:30 pm and the business meeting begins at 7, with a demonstration or activity starting around 8 (times approximate). To check your membership expiration date, see the mailing label on your latest copy of "Metalsmith." President: Larry Wasmund <u>poundedtreasures@gmail.com</u>

612-599-4762 Vice-President: Paul Widenhoefer <u>pwidenhoefer@gmail.com</u> 952-930-0070

#### Our website is: https://www.metalsmith.org

#### Badger Blacksmiths

President: Dave Weiss Newsletter editor: John Grump 715-379-5007 715-829-4559 <u>diamondmetalworks13@gmail.com</u> <u>johngrump@att.netBadger</u> website: <u>https://sites.google.com/site/badgerblacksmiths/</u>

#### Lake Superior Metalsmiths

Lake Superior Metalsmiths (LSM) meet the fourth Saturday of the month. Potluck at noon with meeting to follow. Contacts are: Charley Brown, President, <u>CharleyRB@charter.net</u> 218-428-7906 Dave Hanson, VP, <u>duluthblacksmith@yahoo.com</u> 218-391-4466

#### Northern Minnesota Metalsmiths

The NMM meets the first Monday of the month at Lake Itasca Region Pioneer Farmers (LIRPF) show grounds, 1/4 mile east of the north entrance to Itasca State Park. Contact Jeff Olson for monthly specifics at <u>olsonironworks@gmail.com</u>. The NMM's website is <u>https://www.northernminnesotametalsmiths.com/</u>

#### Chicago Avenue Fire Arts Center (CAFAC)

Quarterly blacksmithing classes, exhibits, and open house events. www.cafac.org email: info@cafac.org

#### **Tunnel Mill Crafts**

Blacksmith shop, traditional iron work, classes Located 20 miles south of Rochester MN, near Spring Valley MN. 507 289-4189 or 507 289-5246 Email: Carol Adams <u>jc-adams@msn.com</u>, <u>http://www.tunnelmillcrafts.com/</u>

#### Sandy Lake Forge on Raspberry Island

Blacksmith shop offering classes, workshops and more. See <u>raspber-ryislandfolkschool.blogspot.com</u> for details or call: 218-851-6085 Gary and Janet Hill Raspberry Island 50569 218th Place McGregor, MN 55760

# **Tunnel Mill Crafts**

We are located in southern Minnesota near Spring Valley. All classes are taught at 28036 County Rd 1, Spring Valley, MN 55975 For more information on any of the classes or to register, contact us at <u>jc-adams@msn.com</u>, or call 507-289-4189 Carol Adams.

### 2024 Upcoming Classes and Events

Swivel Jaw Tongs Class with Tom Latane' October 25, 26 and 27, 2024 Students will forge a pair of tongs having one jaw that pivots allowing the tongs to grasp a range of sizes of stock and grip tapered items such as axes. Check the Tunnel Mill website for full details on these classes: http://www.tunnelmillcrafts.com

# Goings on...a listing of TGoM events at a glance

- Most membership meetings are the second Wednesday of February, April, June, August, and October. Date for December will be announced. Watch each Forum for date and location changes. For these meetings a potluck meal begins at 6:30 pm and the business meeting begins at 7, with a demonstration or activity starting around 8 (times approximate).
- Education Comm. meets first Thursday of each month. Contact Martin Masters, mastersmw@yahoo.com
- Program Comm. meetings are 7 pm the third Thursday monthly. Derrick Phillips, co-chair DerrickPhillipsA3o3@gmail.com
- Most board meetings are the second Wednesday of January, March, May, July, September, and November via ZOOM.

#### October 2024

Oct. 9 membership meeting, Christ the King Lutheran Church, Bloomington, MN Oct. 4 & 5, O/A Welding Class

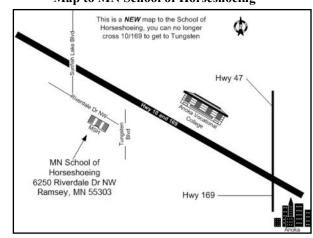
- Oct. 5, Beginners Class A-1, MN School of Horseshoeing
- Oct. 12, Beginners Class A-2, MN School of Horseshoeing
- Oct. 19, Beginners Class A-3, MN School of Horseshoeing
- Oct. 19, Betty Lamp class, MN School of Horseshoeing

#### November 2024

- Nov. 2, Chandelier Class, MN School of Horseshoeing
- Nov. 16, Intro to Arc Welding, Jackson Street Roundhouse
- Nov. 23, 'Taste' of Blacksmithing, Jackson Street Roundhouse

#### December 2024

Dec. 7, Handled Struck Tools Class, MN School of Horseshoeing Dec. 8, TGoM Holiday Party, CSPS Hall, St. Paul



### Join The Guild of Metalsmiths

Send \$30 dues to the address below. Please circle if you want to be listed in our membership directory and/or check items you don't want listed.

The Guild of Metalsmiths	List Me	Don't List Me	
PO Box 72 Hudson, WI 54016	in the directory in the Directory but don't list address - phones: home - work - fax - cell - email - web page (circle items above you DO NOT want published)		
Name:			
Email address:			
Address:			
City, State, Zip Code:			
Primary phone:		condary phone:	
All memberships are fa	mily memberships. Persons	of all ages, professionals, and hobbyists, are invited to join	

We do not sell our mailing list.

#### ELECTRONIC FORUM

If you have not been receiving an email notification that *The Forum* is available, please verify that we have your correct email address. Contact Gordon Barr at <u>agbarr@aol.com</u>.





# **Address Service**

If you have items to be included in *The Forum*, please send them to Georgia Myers, editor, by email to: <u>gldmyers@embarqmail.com</u> by the third Monday of the month, if possible.

# The Guild of Metalsmiths on the web

Visit our website at <u>https://www.metalsmith.org</u>

Looking for something? **Try the search engine.** On our home page, at the top of the right sidebar, enter your query and click on **"Search."** 

To reach our website quickly, just scan the QR code below.

# October 2024



Your membership expiration date will show on the address label of your quarterly "Metalsmith" magazine.

#### TGoM now accepts PayPal and most major credit cards

The Guild accepts PayPal and most major credit cards, in addition to paper checks, for the payment of annual dues. This should make it more convenient for members to pay dues.

#### The Forum

The Guild of Metalsmiths publishes *The GoM Forum* monthly. It is intended as a tool to further our educational mission, to keep members up to date on current happenings, to publicize projects and workshops, a place for all members to express their opinions, concerns, learn more about each other—in short, to help us run our organization

# **Guild educational grants**

There is grant money available for Guild members to study intermediate and advanced metalworking techniques.

The Guild educational grant program is designed to bring new skills into the metalworking community. Participants are given money to pay for a portion of their expenses and are expected to learn some new or poorly understood skill, and then to share what they have learned with other members and the public through an article in our quarterly magazine, "Metalsmith." They're also expected to lead a workshop on the topic (or other educational service approved by the board).

Application forms are available from the president or treasurer at a regular meeting, or by sending a self-addressed, stamped envelope to:

The Guild of Metalsmiths PO Box 72 Hudson, WI 54016