



July 31, 2024



# Agenda

- Secretary Report
- Treasurer's Report
- Membership
- FIGMAS Update
- Strategic Planning Report
- M&M Updates
- AReS
- Awards
- Social Media
- Education
- Fellows
- Finance
- International Liaison
- Student Council
- Sustaining Members
- Nominations Committee
- Closing Remarks

# Secretary Report – Owen Neill

- 2023 Business Meeting Minutes
  - Motion

# Treasurer Report – Dave Tomlin



# 2024 Budget

Code		2024 Proposed Budget	2024 Budget	Actual 6/30/2024
<b>INCOME</b>				
<a href="#">I01</a>	General Membership	\$ 12,000.00	\$ 12,000.00	\$ 17,915.00
<a href="#">I02</a>	Sustaining Membership	\$ 18,000.00	\$ 18,000.00	\$ 7,600.00
<a href="#">I03</a>	M&M Co-Sponsor Share (M&M 2023)	\$ 30,000.00	\$ 30,000.00	\$ 53,859.56
<a href="#">I04</a>	MAS Topical Conferences (I&E)	\$ -	\$ -	\$ -
<a href="#">I05</a>	Chodos Fund	\$ 900.00	\$ 900.00	\$ 70.00
<a href="#">I06</a>	Fiori Fund	\$ 400.00	\$ 400.00	\$ 150.00
<a href="#">I07</a>	Goldstein Fund	\$ 2,500.00	\$ 2,500.00	\$ 145.00
<a href="#">I08</a>	Misc Income (interest, dividends, etc)	\$ 50.00	\$ 50.00	\$ 6.00
<a href="#">I09</a>	Corporate Award Sponsorship	\$ 3,500.00	\$ 3,500.00	\$ 1,000.00
<a href="#">I10</a>		\$ -	\$ -	\$ -
<a href="#">I11</a>		\$ -	\$ -	\$ -
<a href="#">I12</a>		\$ -	\$ -	\$ -
<a href="#">I13</a>		\$ -	\$ -	\$ -
<a href="#">I14</a>		\$ -	\$ -	\$ -
<a href="#">I15</a>		\$ -	\$ -	\$ -
<b>Total Income</b>		<b>\$ 67,350.00</b>	<b>\$ 67,350.00</b>	<b>\$ 80,745.56</b>

<b>EXPENSES</b>				
<b>Operating Expenses</b>				
<a href="#">OE01</a>	Society Management (see breakout)	\$ 12,500.00	\$ 12,500.00	\$ 7,845.71
<a href="#">OE02</a>	ASTM-Membership	\$ 3,250.00	\$ 3,250.00	\$ 1,562.50
<a href="#">OE03</a>	Membership Office	\$ 700.00	\$ 700.00	\$ -
<a href="#">OE04</a>	Sustaining Member Office	\$ 1,000.00	\$ 1,000.00	\$ 703.06
<a href="#">OE05</a>	Fellows Program	\$ 500.00	\$ 500.00	\$ -
<a href="#">OE06</a>	Archivist	\$ 1,500.00	\$ 1,500.00	\$ -
<a href="#">OE07</a>	ARes TS Program (Fiori)	\$ 3,000.00	\$ 3,000.00	\$ -
<a href="#">OE08</a>	TC Seed Money	\$ 1,000.00	\$ 1,000.00	\$ -
<a href="#">OE09</a>	Foreign Society Reciprocity	\$ 2,500.00	\$ 2,500.00	\$ -
<a href="#">OE10</a>	Corporate/Named Awards	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
<a href="#">OE11</a>	MAS Sponsorships	\$ 7,000.00	\$ 7,000.00	\$ -
<a href="#">OE12</a>	Chodos Fund	\$ 2,000.00	\$ 2,000.00	\$ -
<a href="#">OE13</a>	Fiori Fund	\$ 1,000.00	\$ 1,000.00	\$ -
<a href="#">OE14</a>	Goldstein Scholar Awards	\$ 5,000.00	\$ 5,000.00	\$ -
<a href="#">OE15</a>	ECS Funding International Co-Sponsor	\$ 2,000.00	\$ 2,000.00	\$ 1,000.00
<a href="#">OE16</a>	IUMAS Meeting	\$ -	\$ -	\$ -
<a href="#">OE17</a>	FIGMAS NSF Standards	\$ 10,000.00	\$ 10,000.00	\$ -
<a href="#">OE18</a>			\$ -	
<a href="#">OE19</a>			\$ -	
<a href="#">OE20</a>			\$ -	
<b>Total Operating Expense</b>		<b>\$ 56,950.00</b>	<b>\$ 56,950.00</b>	<b>\$ 15,111.27</b>
<b>Meeting Expenses</b>				
<a href="#">ME01</a>	MAS Booth Expenses	\$ 1,000.00	\$ 1,000.00	\$ -
<a href="#">ME02</a>	Meal with a Mentor (Chodos)	\$ 8,000.00	\$ 8,000.00	\$ 5,030.33
<a href="#">ME03</a>	M&M Meeting Awards	\$ 15,000.00	\$ 15,000.00	\$ 11,416.00
<a href="#">ME04</a>	President's Reception (VIP)	\$ 10,000.00	\$ 10,000.00	\$ 9,209.45
<a href="#">ME05</a>	MAS Social	\$ 10,000.00	\$ 10,000.00	\$ 5,481.08
<a href="#">ME06</a>	Meeting Registration Comps	\$ 11,000.00	\$ 11,000.00	\$ 8,976.00
<a href="#">ME07</a>	Meeting Hotel Comps	\$ 2,500.00	\$ 2,500.00	\$ -
<a href="#">ME08</a>			\$ -	\$ -
<a href="#">ME09</a>			\$ -	\$ -
<a href="#">ME10</a>			\$ -	\$ -
<b>Total Meeting Expense</b>		<b>\$ 57,500.00</b>	<b>\$ 57,500.00</b>	<b>\$ 40,112.86</b>
<b>Total All Expenses</b>		<b>\$ 114,450.00</b>	<b>\$ 114,450.00</b>	<b>\$ 55,224.13</b>
<b>NET INCOME</b>		<b>\$ (47,100.00)</b>	<b>\$ (47,100.00)</b>	<b>\$ 25,521.43</b>

# 2024 Operations Balance Sheet

ASSETS	
<b>Chase Accounts</b>	
Checking	\$ 65,734.49
Savings	\$ 105,302.82
<b>Pay Pal</b>	\$ 9,355.68
<b>Schwab</b>	\$ 804,555.21
<b>TOTAL ASSETS</b>	<b>\$ 984,948.20</b>

As of 06/30/2024

LIABILITIES & EQUITY	
<b>Liability</b>	
	\$ -
	\$ -
	\$ -
	\$ -
	\$ -
<b>TOTAL LIABILITY</b>	<b>\$ -</b>
<b>Equity</b>	
Goldstein Fund (Early Career)	\$ 15,261.78
Fiori Fund (ARes)	\$ 16,329.52
Chodos Fund (Student Activities)	\$ 13,706.46
Member Equity	\$ 914,129.01
Net Income	\$ 25,521.43
<b>Total Equity</b>	<b>\$ 984,948.20</b>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$ 984,948.20</b>
<b>Total Charitable Funds</b>	<b>\$ 45,297.76</b>
<b>TOTAL Schwab Funds</b>	<b>\$ 804,555.21</b>
<b>TOTAL UNENCUMBERED EQUITY</b>	<b>\$ 180,392.99</b>

<b>MAS Liquid Assets (06/30/2024)</b>	
Chase Checking	\$ 65,734.49
Chase Savings	\$ 105,302.82
Pay Pal	\$ 9,355.68
<b>Charitable Fund Totals</b>	<b>\$ 45,297.76</b>
Chodos (Student Activities)	\$ 15,261.78
Fiori (ARes)	\$ 16,329.52
Goldstein (Early Career Scholarships)	\$ 13,706.46
<b>Schwab Investment Account (06/30/2024)</b>	<b>\$ 804,555.21</b>
<b>Total Encumbered Assets</b>	<b>\$1,030,245.96</b>
<b>Total Unencumbered Assets</b>	<b>\$ 984,948.20</b>

# 2025 Proposed Budget Income

MAS Operating Budget 2025				
Code		2025 Proposed Budget	2024 Budget	Actual 6/30/2024
	<b>INCOME</b>			
<a href="#">I01</a>	General Membership	\$ 15,000.00	\$ 12,000.00	\$ 17,915.00
<a href="#">I02</a>	Sustaining Membership	\$ 12,000.00	\$ 18,000.00	\$ 7,600.00
<a href="#">I03</a>	M&M Co-Sponsor Share (M&M 2024)	\$ 50,000.00	\$ 50,000.00	\$ 53,859.56
<a href="#">I04</a>	MAS Topical Conferences (I&E)	\$ -		\$ -
<a href="#">I05</a>	Chodos Fund	\$ 900.00	\$ 900.00	\$ 70.00
<a href="#">I06</a>	Fiori Fund	\$ 400.00	\$ 400.00	\$ 150.00
<a href="#">I07</a>	Goldstein Fund	\$ 2,500.00	\$ 2,500.00	\$ 145.00
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<a href="#">I09</a>	Corporate Award Sponsorship	\$ 3,500.00	\$ 3,500.00	\$ 1,000.00
<a href="#">I10</a>		\$ -	\$ -	\$ -
<a href="#">I11</a>		\$ -	\$ -	\$ -
<a href="#">I12</a>		\$ -	\$ -	\$ -
<a href="#">I13</a>		\$ -	\$ -	\$ -
<a href="#">I14</a>		\$ -	\$ -	\$ -
<a href="#">I15</a>		\$ -	\$ -	\$ -
	<b>Total Income</b>	<b>\$ 84,350.00</b>	<b>\$ 87,350.00</b>	<b>\$ 80,745.56</b>



# 2025 Proposed Budget Expenses

	Operating Expenses			
<a href="#">OE01</a>	Society Management (see breakout)	\$ 12,500.00	\$ 12,500.00	\$ 7,845.71
<a href="#">OE02</a>	ASTM-Membership	\$ 1,562.50	\$ 3,250.00	\$ 1,562.50
<a href="#">OE03</a>	Membership Office	\$ 700.00	\$ 700.00	\$ -
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<a href="#">OE07</a>	ARes TS Program (Fiori)	\$ 3,000.00	\$ 3,000.00	\$ -
<a href="#">OE08</a>	TC Seed Money	\$ 1,000.00	\$ 1,000.00	\$ -
<a href="#">OE09</a>	Foreign Society Reciprocity	\$ 2,500.00	\$ 2,500.00	\$ -
<a href="#">OE10</a>	Corporate/Named Awards	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
<a href="#">OE11</a>	MAS Sponsorships	\$ 7,000.00	\$ 7,000.00	\$ -
<a href="#">OE12</a>	Chodos Fund	\$ 2,000.00	\$ 2,000.00	\$ -
<a href="#">OE13</a>	Fiori Fund	\$ 1,000.00	\$ 1,000.00	\$ -
<a href="#">OE14</a>	Goldstein Scholar Awards	\$ 5,000.00	\$ 5,000.00	\$ -
<a href="#">OE15</a>	ECS Funding International Co-Sponsor	\$ 2,000.00	\$ 2,000.00	\$ 1,000.00
<a href="#">OE16</a>	IUMAS Meeting	\$ -		\$ -
<a href="#">OE17</a>	Strategic Planning Initiatives	\$ 10,000.00	\$ 10,000.00	\$ -
OE18			\$ -	
OE19			\$ -	
OE20			\$ -	
	<b>Total Operating Expense</b>	<b>\$ 55,262.50</b>	<b>\$ 56,950.00</b>	<b>\$ 15,111.27</b>

# 2025 Proposed Budget Meeting

	Meeting Expenses			
<a href="#">ME01</a>	MAS Booth Expenses	\$ 1,500.00	\$ 1,000.00	\$ -
<a href="#">ME02</a>	Meal with a Mentor (Chodos)	\$ 8,000.00	\$ 8,000.00	\$ 5,030.33
<a href="#">ME03</a>	M&M Meeting Awards	\$ 15,000.00	\$ 15,000.00	\$ 11,416.00
<a href="#">ME04</a>	President's Reception (VIP)	\$ 10,000.00	\$ 10,000.00	\$ 9,209.45
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<a href="#">ME06</a>	Meeting Registration Comps	\$ 11,000.00	\$ 11,000.00	\$ 8,976.00
<a href="#">ME07</a>	Meeting Hotel Comps	\$ 2,500.00	\$ 2,500.00	\$ -
ME08			\$ -	\$ -
ME09			\$ -	
ME10			\$ -	\$ -
	<b>Total Meeting Expense</b>	<b>\$ 58,000.00</b>	<b>\$ 57,500.00</b>	<b>\$ 40,112.86</b>
	<b>Total All Expenses</b>	<b>\$ 113,262.50</b>	<b>\$ 114,450.00</b>	<b>\$ 55,224.13</b>
	<b>NET INCOME</b>	<b>\$ (28,912.50)</b>	<b>\$ (27,100.00)</b>	<b>\$ 25,521.43</b>

# 2025 Budget Approval

- Motion

# Membership – Emma Bullock

- As of July 16th, 2024, we have 794 members (including 45 from “Accounts Payable”), compared to year-end 2023: 1087 members
- Last year: high turnout of planetary science members who joined MAS in order to register and attend the Klaus Keil Symposium
- 75 members are MAS-only
- 185 are students (182 joint, 3 MAS-only)
- Final membership numbers will be available after the meeting

# Strategic Planning – Angela Halfpenny

- FIGMAS Standards project is a seed-money project
  - Aim is to identify a pair of synthetic materials for each major element that can be synthesized reproducibly.
  - Characterize an aliquot of each material using multiple techniques for chemical and structural analysis, and make the materials freely available to any interested and qualified lab.



# FIGMAS – Emma Bullock

- K-ratio standard materials
  - Status
  - Strategic Planning funds short-term
  - Budget item funds long-term

# M&M 2024 – Steven Spurgeon

- 2191 Registrants (vs 2027 in 2023)
  - 1295 attendees (vs 1219 in 2023)
  - 896 Exhibitors (vs 808 in 2023)
- 118 Companies (vs 99 in 2023)
  - 363 10x10 booths (vs 307 in 2023)

# M&M 2025 – Stuart Wright

- Symposia
  - Analytical: 10
  - Biological: 8
  - Physical: 9
  - Cross-Discipline: 7

# Analytical & Instrumentation Sciences

- Advances in Focused Ion Beam Instrumentation, Applications, and Techniques for Materials and Life Sciences (4)
- Frontiers of Electron Ptychography (3)
- When 4D-STEM Meets More Dimensions: Deepening Materials Insights with Efficient Experimental Design and Smart Computational Microscopy (4)
- Contributions of Analytical Electron Microscopy to Understanding Microstructural Evolution in Materials: James Bentley Memorial Symposium (4)
- Latest Advances in Atom Probe Tomography (4)
- Surface and Subsurface Microscopy and Microanalysis of Physical and Biological Specimens (4)
- Advances in SEM Instrumentation, Application and Techniques (3)
- Overcoming the Inherent Obstacles of Electron Microscopy: Operator Bias, Sampling, and Beam Interactions (3)
- Quantitative Electron Diffraction for Materials Analysis, From Transmission Electron Diffraction to EBSD and ECCI (3)

# Cross-Disciplinary Sciences

- Microscopy and [Microanalysis](#) of Interfaces and/or Interactions Among Organic and Inorganic Matter (4)
- Lens On Diversity: Empowering Diversity in Microscopy Sciences (3)
- Microscopy and Microanalysis in Industry (2)
- Best Papers from MSA Publications Portfolio (0)
- Interamerican Committee of Societies for Electron Microscopy (CIASEM) (0)
- [Advancements in Generative Artificial Intelligence and Automation for Electron Microscopy](#) (4)
- Towards Functional Imaging of Materials: Advances and Insights from Phase Contrast Techniques (4)

# Physical Sciences

- Advanced Characterization of Nuclear Fuels and Materials (4)
- Electron Microscopy for Ferroic Materials: From Atomic-scale Imaging to in-situ Control (3)
- Plasmons Characterization by Electron Microscopy with High Spatial, Energy and Temporal Resolutions (3)
- Energy Materials: Transport Pathways, Interfaces, & Durability for Performance
- Advances in Imaging and Spectroscopy Beyond Ambient Conditions (CL) (2)
- [Multimodal Data Acquisition and Analysis of Materials Under Real-World Conditions Using Advanced Electron Microscopy](#) (4)
- High-Resolution Microscopy and [Microanalysis](#) of Materials Subjected to Extreme Environments (4)
- [Advanced Imaging, Diffraction, and Spectroscopy of Structurally or Chemically Disordered Materials](#) (4)
- Unconventional Electron Probes (4)
- Innovative in-situ Imaging Techniques for Material Characterization, Synthesis, and Processing (4)

# Advances in SEM Instrumentation, Application and Techniques

The aim of this symposium is to give SEM users a platform to share and discuss novel applications and techniques and still existing bottlenecks. It covers innovative physical and instrumental aspects as well as applications in material and life science that go beyond conventional use. New outcomes in the field of low voltage, low vacuum SEM, detector strategies, transmission mode, contrast mechanism, correlative techniques, EBSD and in-situ/operando are welcome. We are also interested in contributions dealing with analytic challenges like light element detection, or correlative imaging and spectroscopy (mass spectroscopy, Raman, etc.).

- Low Voltage & Low vacuum SEM: With the development of the field emission SEMs the low voltage region down to 500 eV become applicable. Nowadays further development of the instruments enables to go beyond this level with new outcomes. Low vacuum SEM with improved instrument allow new insights.
- Detector strategies, transmission mode and contrast mechanism: A lot of new strategies for the detection of BSE and SE are implemented or can be attached to SEMs, that delivers images, where the contrast has to be understood.
- Correlative techniques: To understand complex question coming up in material science it is necessary to combine results coming from different investigation techniques. Exemplary going from macroscopic investigation methods like computer tomography => light microscopy => SEM down to the nanometre scale and combining the result with EDS, WDS, EBSD, mass spectroscopy and Raman studies from the same sample area.
- In-situ/operando SEM: In-situ/operando SEM opens new avenues of understanding reaction processes induced by heating or cooling the sample and to follow exemplary catalytic reactions.
- Light element detection: A bottleneck in the field of energy related materials is the detection of light elements. Li for Li-ion batteries and Boron for improved magnets. For Li are several new outcomes to improve the situation.

Ute Golla-Schindler      *Aalen University, Germany*  
Marc Willinger        *The Entrepreneurial University, Germany*  
Dirk Berger            *Technical University of Berlin, Germany*

# Future M&M

- 2026 – Milwaukee
- 2027 – Pittsburgh
- 2028 – Seattle
- 2029 – Kansas City



# AReS – Thomas Lam

- Welcome Thomas!
- AReS breakfast yesterday
- 2 speaker requests in the last month

# Awards – Brad de Gregorio

- MAS Officers
  - Assel Aitkaliyeva
  - Thomas Lam
- At-Large Members
  - Aurélien Moy
  - Jennika Greer

# M&M 2023 Best Paper Awards

# Birks Award

## Best Contributed Paper

**Vivek Subramanian**  
**Thermo Fisher Scientific**

*Cryo-FIB and Synchrotron  
SAXS/WAXS Studies of Confined  
Crystallization of PDMS in Tubular  
Network Block Copolymer  
Morphologies*



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Microanalysis Society

# Cosslett Award

## Best Invited Paper

**Claudia Roig González**  
University of Wisconsin Madison

*Epidote Reference Material  
Development Calibrated for  
Oxygen Isotope Determination by  
Secondary Ion Mass Spectrometry  
(SIMS)*



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Microanalysis Society

**MAS**  
Microanalysis Society

# Castaing Award

## Best Paper Presented by a Student

**Sarah Anderson**  
University of Minnesota

*Identifying the Mechanism of  
Glioblastoma Cell Migration in  
Mouse Brain Slices*



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Microanalysis Society

# Macres Award

## Best Instrumentation / Software Paper



**Angelina  
Minocha**



**Brad  
Jolliff**



**Paul Carpenter  
& Team**

**Washington  
University**



**Chris  
Yen**



**Ryan  
Ogliore**

*Quantitative  
Microanalysis Explorer:  
Next Generation  
Analytical Tool for Study  
of Apollo 17 Core  
73002,6015-6018*

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# M&M 2024 Distinguished Scholars

Category	Author	Institution	Title
Student	Jack Grimm	University of Washington	Evaluation of Stoichiometric Accuracy with Deep-Ultraviolet Laser-Assisted Atom Probe Tomography of Hydroxyapatite
Student	Huiming Guo	University of California Irvine	Atomic Structure and Chemistry of High-Entropy Oxide Grain Boundaries Revealed by STEM Imaging, Strain Mapping, and Spectroscopy
Student	Hanyu Hou	University of Illinois Urbana-Champaign	High-Resolution STEM Cathodoluminescence of 2D Exfoliated Quantum Emitters
Student	Ya-Hsiang Hsu	The Ohio State University	The Characterization of Newly Secreted Dental Enamel by Electron Energy Loss Spectroscopy
Student	Minhazul Islam	The Ohio State University	In-depth Analysis of Structural Heterogeneity in High Entropy Bulk Metallic Glasses Using 4D-STEM
Student	Zhongmin Long	Karlsruher Institut für Technologie	Segregation to Creep-Induced Planar Faults in Ni-Base Single Crystal Superalloys
Student	Julian Lüken	Universiteit Antwerpen	AdAPTS: An Adaptive Atom Probe Tomography Simulation Library
Student	Patricia Meza	Northwestern University	Structural and Chemical Analysis of Entropy-Engineered Vanadium Rich 2D Thiophosphates (MPS3)
Student	Ruiying Shu	University of Oxford	Atom Probe Tomography Investigation of the Impact of Stacking Faults on InGaN/GaN Quantum Well LED Systems
Student	Oliver Waszkiewicz	Imperial College London	Advancements in Cryogenic-Atom Probe Tomography to Directly Resolve Electrochemical Interfaces at the Atomic Scale
Student	Hannah Matos-Pimentel	Florida State University	Study of a CuAg Alloy from Microscale to Atomic Scale
Postdoc	Akshay Agarwal	Boston University	Ion Count-Aided Microscopy for Quantitative, Shot Noise-Mitigated Secondary Electron Imaging
Postdoc	Brian Caffrey	Rosalind Franklin Institute	Biology in its Element Using Energy Dispersive X-ray Spectroscopy Scanning Transmission Electron Microscopy (EDX-STEM) to Probe Bacterial Ultrastructure.
Postdoc	Liza-Anastasia DiCecco	Pennsylvania State University	Improving Methods for Imaging Viral Pathogens Using Liquid Transmission Electron Microscopy



# M&M 2024 Poster Awards

- Student Category (2): TBD
- Creative Canvas (1): TBD
- Poster Awards are being judged this week.  
Winners will be announced later.

# 2024 Society Awards

**Presidential Service Award**  
for outstanding volunteer service  
to the society over a sustained period of time.



**Donovan Leonard**

Microsoft Quantum

# K. F. J. Heinrich Award

A scientist less than 15 years from their terminal degree for distinguished technical contributions to the field of microanalysis.



**Shelly Conroy**

Imperial College London

# Presidential Science Award

A senior scientist for outstanding technical contributions to the field of microanalysis over a sustained period of time.



**Paul Kotula**

Sandia National Laboratory




# Peter Duncumb Award for Excellence in Microanalysis

Recognizes outstanding achievement in the field of microanalysis through technical accomplishment, leadership, and educational and professional activities



**Sergei Kalinin**

University of Tennessee, Knoxville

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**MAS**  
Microanalysis Society

# Education – Mary Scott

- Meal with a Mentor

# Fellows – Vin Smentkowski

- Committee Members
  - Mary Grace Burke (rotating off)
  - Lucille Giannuzzi
  - Rhonda Stroud
  - Heather Lowers



# MAS Fellow, Class of 2024



**Louis T. Germinario**

*LG Analytical*

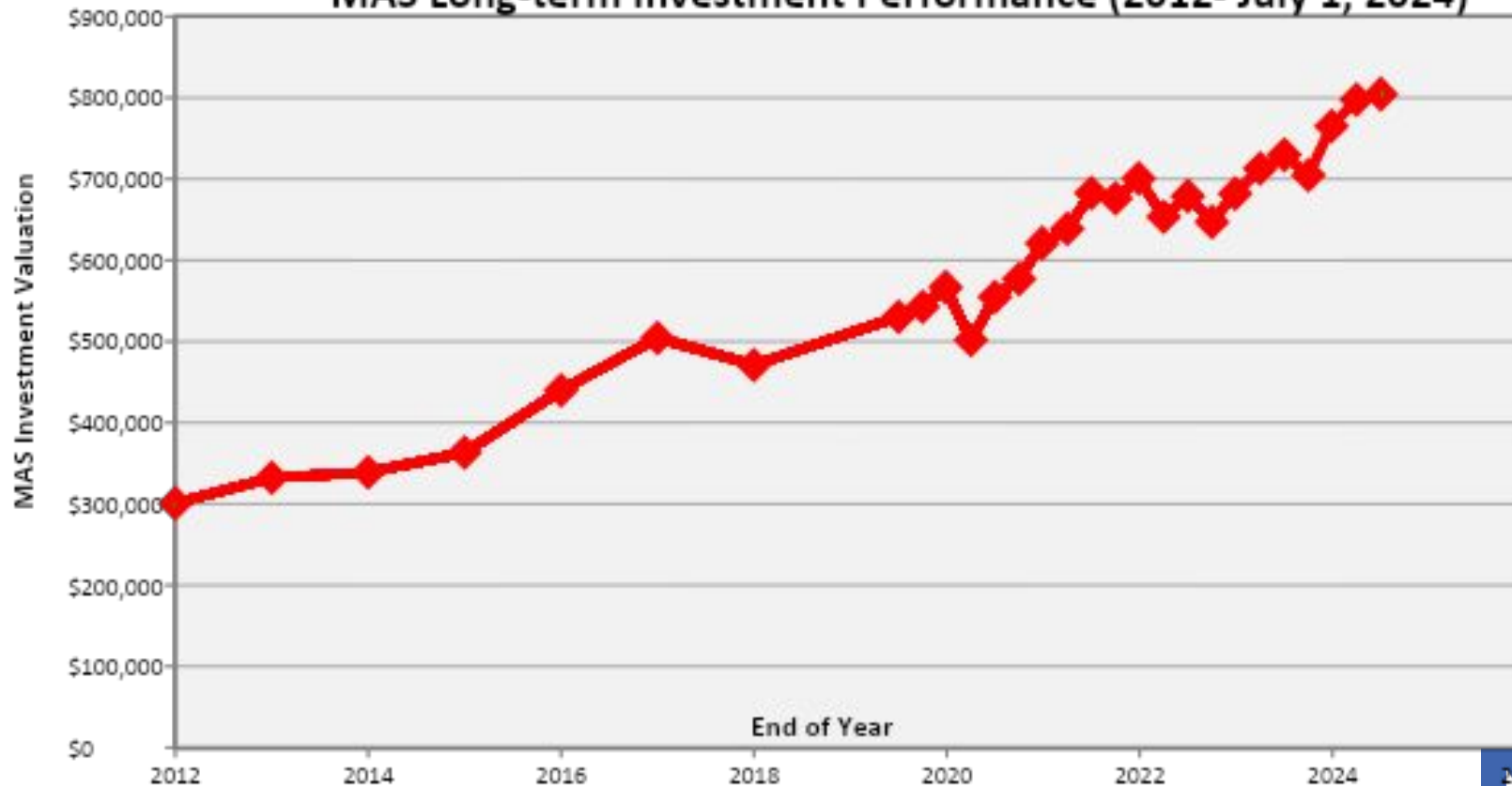
The development of  
cryo-stages for in-situ SEM  
studies, single atom  
imaging, and service to the  
microanalysis community

# Finance – Pete McSwiggen

- Committee members
  - Donovan Leonard
  - Vincent Smentkowski
  - Rhonda Shroud
  - James McGee
  - Davis Tomlin (ex-officio)
  - Patrick Camus (ex-officio)

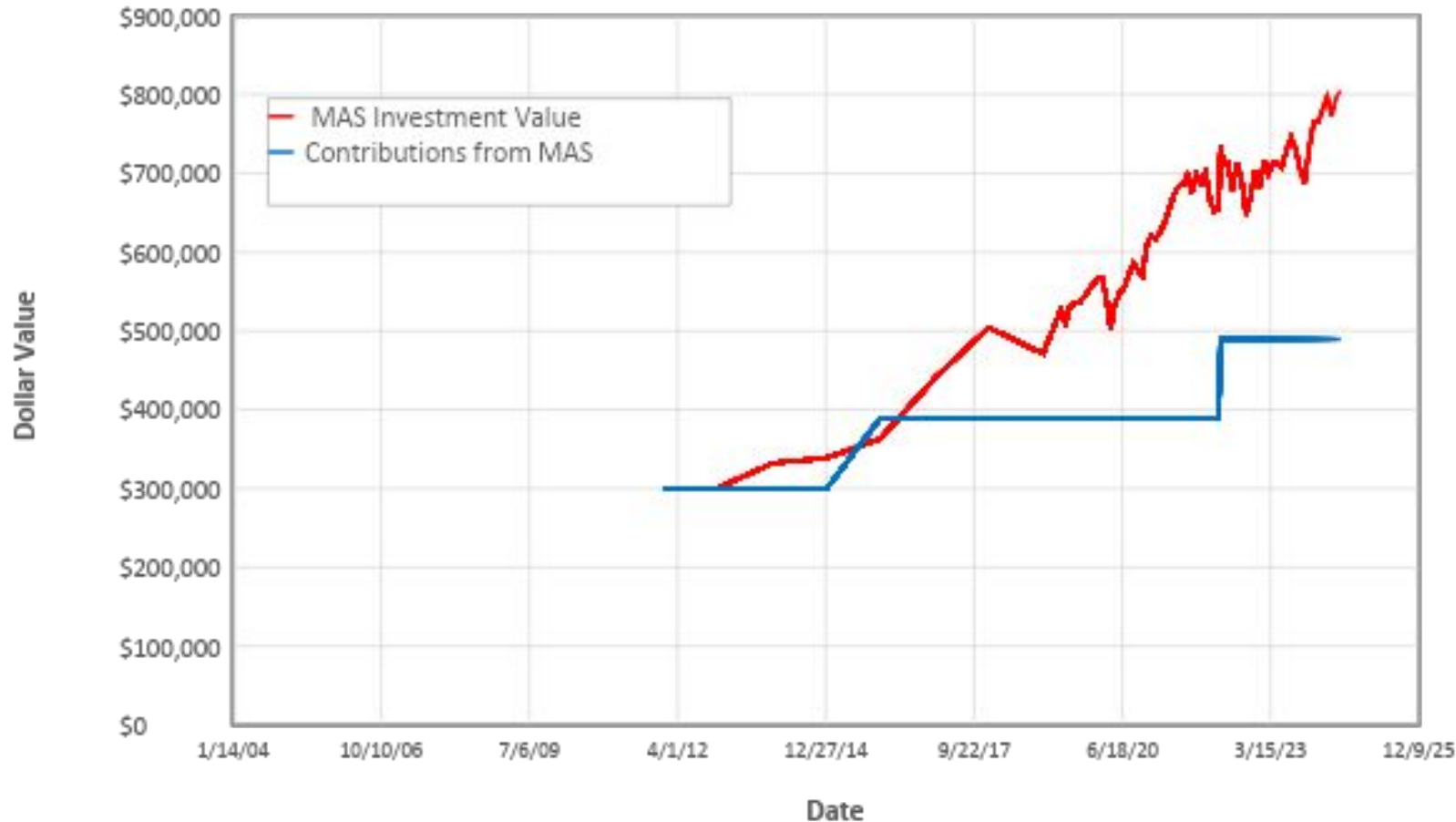
# Long-Term Investment Performance

MAS Long-term Investment Performance (2012- July 1, 2024)



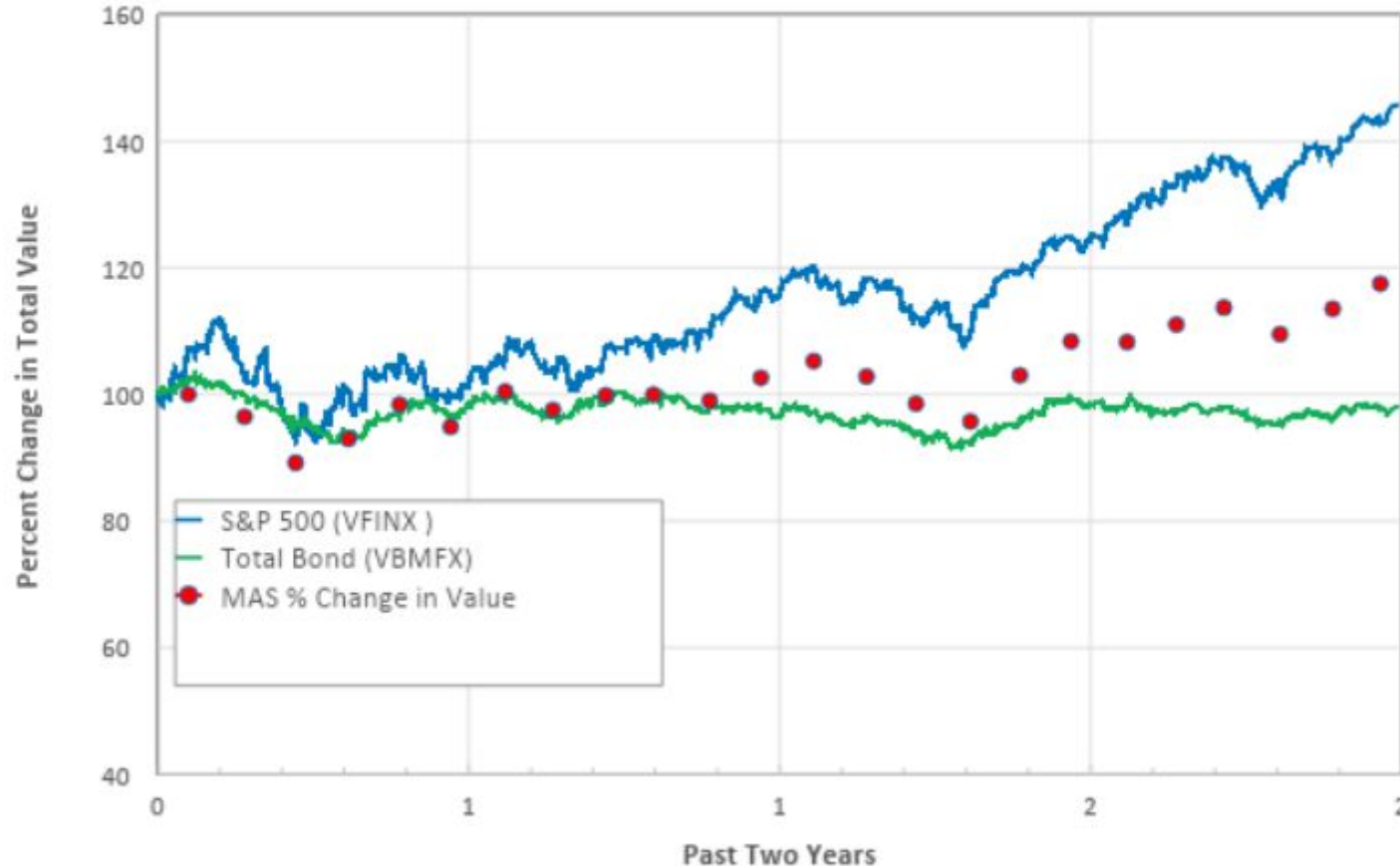
# Total Investment Performance

MAS Net Worth vs Contributions (Initial Investments)



# Investment Performance vs the Markets

MAS Investments versus Total Bonds & S&P 500



# Investment Holdings over the Past Few Years – 1

Target Range	Category		12/31/20	12/31/21	12/31/22	12/31/23	6/30/24	% of Acct
	<b>Equities</b>							
	<b>Large Cap Equity</b>							
	Large-Blend	S&P 500 Index fund (SWPPX)	\$ 100,813.79	\$ 48,409.91	\$ 39,634.33	\$ 50,038.56	\$ 57,677.82	7.17%
	Large-Blend	US Broad Market ETF (SCHB)	\$ 66,293.16	\$ 83,405.53	\$ 67,171.86	\$ 84,753.38	\$ 96,009.15	11.93%
	Large-Value	US Dividend Equity ETF (SCHD)	\$ 65,012.80	\$ 84,393.99	\$ 81,628.64	\$ 85,354.92	\$ 87,853.15	10.92%
	Large-Growth	Schwab Large-Cap Growth (SCHG)		\$ 39,926.56	\$ 27,184.48	\$ 40,794.97	\$ 49,653.97	6.17%
10 - 30 %	<b>Total Large Cap</b>		<b>\$ 232,119.75</b>	<b>\$ 256,135.99</b>	<b>\$ 215,619.31</b>	<b>\$ 260,941.83</b>	<b>\$ 291,194.09</b>	<b>36.19%</b>
	<b>Mid/Sm Cap Equity</b>							
	Mid-Cap Blend	Vanguard Mid Cap ETF (VO)	\$ 32,445.62	\$ 40,457.30	\$ 32,880.87	\$ 38,145.79	\$ 39,853.75	4.95%
	Small-Cap Blend	Schwab Small-Cap Index Fund (SWSSX)		\$ 40,770.64	\$ 32,446.06	\$ 37,980.39	\$ 38,646.31	4.80%
5 - 25%	<b>Total Mid/Sm Cap</b>		<b>\$ 32,445.62</b>	<b>\$ 81,227.94</b>	<b>\$ 65,326.93</b>	<b>\$ 76,126.18</b>	<b>\$ 78,500.06</b>	<b>9.76%</b>
	<b>Non-US Equity</b>							
	Foreign Large Blend	International Equity ETF (SCHF)	\$ 63,626.91	\$ -				0.00%
	Foreign Large Growth	Vanguard International Growth Fund (VWIGX)		\$ 98,380.13	\$ 68,025.61	\$ 78,001.04	\$ 84,017.98	10.44%
5 - 25%	<b>Total Non-US Equity</b>		<b>\$ 63,626.91</b>	<b>\$ 98,380.13</b>	<b>\$ 68,025.61</b>	<b>\$ 78,001.04</b>	<b>\$ 84,017.98</b>	<b>10.44%</b>
<b>35 - 65%</b>	<b>Total Equity</b>		<b>\$ 328,192.28</b>	<b>\$ 435,744.06</b>	<b>\$ 348,971.85</b>	<b>\$ 415,069.05</b>	<b>\$ 453,712.13</b>	<b>56.39%</b>



# Investment Holdings over the Past Few Years – 2

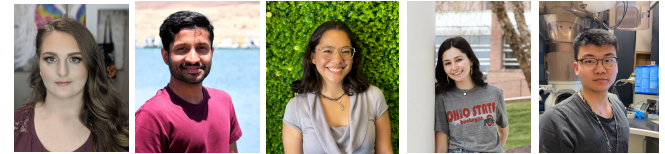
		<b>Fixed Income</b>						
15 - 35%	US Interm Core Bonds	US Aggregate Bond Index ETF (SCHZ)	\$ 234,625.78	\$ 230,588.87	\$ 200,258.30	\$ 211,468.39	\$ 210,134.87	26.12%
	Inflation Protected Bond (TIP)	Schwab US TIPS ETF (SCHP)			\$ 68,180.12	\$ 70,843.15	\$ 71,373.21	8.87%
	High-Yield Bonds	Fidelity Capital & Income Fund (FAGIX)						0.00%
	Long-term Corp Bonds	Vang Long-Term Invest-Grade Fund Investor Shares(VWESX)						0.00%
0 - 20%	International Bond							0.00%
<b>20 - 50%</b>	<b>Total Fixed Income</b>		<b>\$ 234,625.78</b>	<b>\$ 230,588.87</b>	<b>\$ 268,438.42</b>	<b>\$ 282,311.54</b>	<b>\$ 281,508.08</b>	<b>34.99%</b>
		<b>Alternative Investments</b>						
	Real Estate	US REIT ETF (SCHH)	\$ -	\$ -				0.00%
<b>0-20%</b>	<b>Total Alternative Investments</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0.00%</b>
		<b>Cash</b>						
	Money Market	Treasury Obl. Money Market fund (SNOXX)	\$ 58,306.51	\$ 33,062.52	\$ 63,928.54	\$ 67,020.46	\$ 68,586.18	8.52%
	CD	CD Merchants Bank of Ind FDIC due 9/16/22			\$ -	\$ -	\$ -	0.00%
	Cash	Cash	\$ 40.62	\$ 1,051.68	\$ 743.08	\$ 746.94	\$ 748.82	0.09%
<b>0-15%</b>	<b>Total Cash</b>		<b>\$ 58,347.13</b>	<b>\$ 34,114.20</b>	<b>\$ 64,671.62</b>	<b>\$ 67,767.40</b>	<b>\$ 69,335.00</b>	<b>8.62%</b>
	<b>Total</b>		<b>\$ 621,165.19</b>	<b>\$ 700,447.13</b>	<b>\$ 682,081.89</b>	<b>\$ 765,147.99</b>	<b>\$ 804,555.21</b>	<b>100.00%</b>

# International Liaison – Heather Lowers

- Asia-Pacific Microscopy Conference 13  
February 2-7, 2025 in Brisbane Australia
- EMAS 2025 - 18th European Workshop on Modern  
Developments and Applications in Microbeam Analysis  
May 11-15, 2025 in Mataro Spain
- AMAS 2026 in Melbourne  
Dates not yet decided but hosted by Colin MacRae  
CSIRO
- IUMAS 9 2026 in Xi'an China



# The 2023–2024 StC – PP Andres Marquez

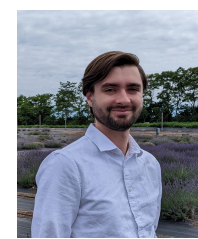


EC Committee

PMC Committee

RL Committee

PD SubCommittee



# PMCx60 2024 - Thank you, MAS!



**Thank you for coming!**






# PMCx60 2024

- Friday Night Social: Meet your StC and other community members
- Saturday All-Day: PMCx60
  - Scientific Program
  - Poster Sessions
  - Professional Development
- Saturday night banquet - The Event Space at Nuevo (Riverfront Experience)
  - Socializing, raffles & poster prizes announced
  - Professional Networking
  - Open bar!
- New sponsors has joined!

## Iridium Level

**MAS** Microanalysis Society

## Platinum Level

**ThermoFisher**  
SCIENTIFIC  
**MSA**  
Microscopy Society of America



## Silver Level



## Copper Level



**GATAN** + **EDAX**  
AMETEK

**HITACHI**  
Inspire the Next



**DiATOME**

**Protochips**  
Creating the Connected Lab



*Saturday Night Banquet*  
*On Mississippi River*

**Thank you to our sponsors!**

**Iridium Level**



**MAKS**  
**Microanalysis Society**

# Sustaining Members – Steve Seddio

- 22 SMs have paid dues for 2024
  - 2 are MAS-only
- Lost 2 SMs
  - Gatan+EDAX
  - Bruker+Nion

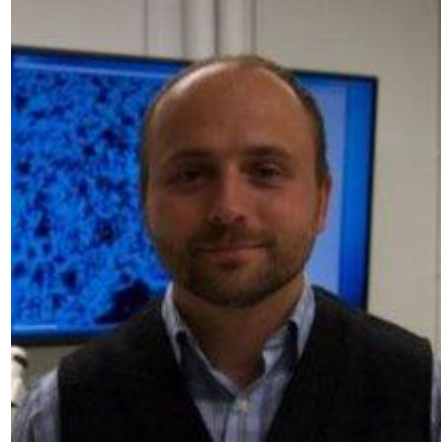
# Nominations Committee – Andy Herzing

- Assel Aitkaliyeva
- Thomas Lam

# Executive Council Nominations



**President-Elect**  
Assel Aitkaliyeva  
*Univ. of Florida*



**Treasurer**  
Dale Burns  
*Stanford Univ.*



# Director Nominations



**Debangshu Mukherjee**  
*Oak Ridge*



**Aurélien Moy**  
*Gatan*

# Closing Remarks

- Thank You to:
  - All Council members

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- Thank You to:
  - All Council members
  - All MAS members

# Closing Remarks

- Thank You to:
  - All Council members
  - All MAS members
- Welcome Andy Herzing as President

# SOCIAL

- Southern Tier Brewing Company
  - 811 Prospect Ave E

