



2025 MAS Fall Council Meeting
10 October, 2025, 11:00-13:00 EDT, via Zoom

Andrew Herzing	President 2024-2026
Patrick Camus	Past President 2024-2025
Assel Aitkaliyeva	President-Elect 2025-2026
Owen Neill	Secretary 2023-2025
Dale Burns	Treasurer 2025-2026
Katherine Burgess	Director 2023-2025
Jordan Hachtel	Director 2023-2025
Megan Holtz	Director 2024-2026
Jessica Riesterer	Director 2024-2026
Aurélien Moy	Director 2025-2027
Debangshu Mukherjee	Director 2025-2027
Steve Seddio	Commercial Director 2023-2025
Thomas Lam	AReS 2024-2026
John Fournelle	Archivist since 2010
Brad De Gregorio	Awards since 2020
Josh Taillon	Computer Activities since 2024
Mary Scott	Education since 2022
Abigail Lindstrom	Goldstein Scholar Coordinator
Vin Smentkowski	Fellows since 2022
Rhonda Stroud	Finance since 2025
Heather Lowers	International Liaison since 2018
Emma Bullock	Membership since 2020
Joe Boro	Social Media since 2024
Angela Halfpenny	Strategic Planning since 2023
Anette von der Handt	Topical Conferences since 2024
Ed Vicenzi	MAM Editorial Board
Stuart Wright	M&M2025 Co-Chair

Present on call: Assel Aitkaliyeva, Kate Burgess, Dale Burns, Brad de Gregorio, Jordan Hachtel, Andy Herzing, Megan Holtz, Thomas Lam, Aurélien Moy, Will Nachlas, Owen Neill, Jessica Riesterer, Steve Seddio, Vin Smentkowski, Rhonda Stroud, Josh Taillon

- Call to Order: 11:04 EDT (Andy Herzing)
- Approve Agenda (Andy Herzing)
 - Jessica Riesterer moved to accept the agenda of the meeting, Thomas Lam seconded.
 - Motion carried unanimously by voice vote.
- Presidential Opening Remarks (Andy Herzing)
 - Andy thanked those attendees currently on furlough due to the government shutdown.
 - Andy gave a brief outline of the meeting agenda.
- FIGMAS Progress Report (Will Nachlas)
 - Will Nachlas presented a report to Council on the strategic planning initiative to support the development of new reference materials and a K-ratio database for the microanalysis community.
 - This initiative was previously ratified by Council and is financially supported by MAS.
 - This presentation fulfills the annual reporting requirements for this support.
 - Results of this initiative were also presented in an invited talk by Will Nachlas at M&M2025, and in a presentation at the FIGMAS business meeting at M&M2025.
 - Will gave a brief review of the purpose and goals of the initiative.
 - One major purpose is to synthesize and distribute two high-purity standards for K-ratios for the most commonly measured elements in electron beam microanalysis.
 - This synthesis would create large enough volumes of materials to be distributed indefinitely.
 - Current microanalytical standards are inadequate due to impurities, inhomogeneity, limited supplies, and a lack of traceability, which is becoming a source of error.
 - To help correct this, the project looks to create a universal standard mount, as well as consensus K-ratio database available to all microanalysts.
 - This was previously discussed in a talk by Nicholas Ritchie at M&M2020.
 - Starting with 20 most abundant elements, using high-purity synthetics which can be produced in large volumes and distributed widely.
 - As proof of concept, Mg-Al oxides were distributed to 29 different labs, on

which Mg and Al K-ratios were measured by EDS and WDS.

- o Will briefly outlined the history of the development of the concept behind the project.
 - A framework for the project was developed in October, 2021 with Will (FIGMAS leader), John Donovan, Dale Newbury, Nicholas Ritchie and Ed Vicenzi.
 - In December, 2021, the Mg/Al samples were distributed to 29 different labs in 12 countries.
 - The results of this round robin were presented at M&M2023.
 - In September, 2022, a proposal was submitted to NSF EAR Instrumentation and Facilities to fund further efforts, which included a letter of support from MAS Past President Heather Lowers.
 - This proposal was declined despite largely positive reviews.
 - As of June, 2025, the NSF EAR Instrumentation and Facilities program has been archived.
 - In 2024, a similar proposal was submitted to the NASA C16 Characterization of Returned Samples program, including a letter of support from MAS.
 - This program has also been closed, and no funding was obtained.
 - In June, 2024, the strategic planning initiative was approved by the MAS council, providing \$10,000/year for five years, with additional funding of \$15,000/year for a further five years depending on performance.
 - The first results of this program were presented at M&M2025.
 - A new proposal is being prepared for submission to the NSF Chemical Evolution of Solid Earth and Volcanology program.
- o Will outlined the process behind how crystals to be evaluated as possible standards were obtained.
 - Crystals of Mg_2SiO_4 , $\text{Y}_3\text{Fe}_5\text{O}_{12}$, RbTiOPO_4 , Fe_3O_4 , MgAl_2O_4 , AlPO_4 , SiO_2 , GdPO_4 , $\text{KGd}(\text{WO}_4)_2$, CaTiSiO_5 and ZrO_2 had been previously acquired by the microprobe lab at University of Wisconsin – Madison.
 - A further eight materials were purchased using funds allocated by MAS through the strategic planning initiative.
 - TiO_2 (\$740, 23.524g).
 - SrTiO_3 (\$570, 78.057g).
 - PbMoO_4 (\$2376, 144.5g).
 - NdCaAlO_4 (\$100, 0.3115g).
 - $\text{Nd:YCa}_4\text{O}(\text{BO}_3)_3$ (\$50, 0.4374g).
 - PbWO_4 (\$374, 8.3565g).
 - CaF_2 (\$110, 8.204g).

- ZnS (\$165, 0.532g).
- Materials were obtained from commercial suppliers, who produce large volumes of material.
 - Three potential suppliers for KTiOPO_4 crystals have been identified.
 - For PbMoO_4 , MolTech (Berlin, Germany) was willing to sell a smaller volume sample at a reduced price, which is not always available.
 - o New duty fees were assessed for this purchase.
 - For Mg_2SiO_4 , a small cube was purchased from OxideCorp (Hokuto, Japan) for \$1,216, but a full boule would have cost \$22,100, which was beyond budgetary limitations.
- o Will described the process by which the purchased materials were prepared for analysis.
 - Wafers or bars were cut with a slow speed saw using the thinnest diamond blade available to minimize cutting waste.
 - Will estimated the amount of cutting waste as $\sim 0.127\text{g}$ lost per cm^2 of material prepared.
 - Another method of preparation was to score wafers with a diamond scribe and break them, which produced even less waste.
- o Will described the processes by which the materials were characterized.
 - Characterization was done in the University of Wisconsin – Madison electron microbeam labs.
 - Structural characterization was performed via XRD, Raman, and EBSD.
 - Chemical characterization was performed by BSE/CL, EDS, WDS, and ICP-OES.
 - The Mg_2SiO_4 was characterized by measuring a grid of 1034 points by electron microprobe across the full area of the mounted piece of the purchased sample.
 - While the sample did show a small decrease in Si and Mg concentration towards one side, this variation was $<1\%$ relative.
 - Will suggested that this decrease may be due to increased crystallographic vacancies near the edge of the crystal.
 - The TiO_2 was characterized by measuring a grid of 1099 points by electron microprobe across the full area of a piece cut as a cross-section through a cylindrical boule.
 - All points measured were within 1% of the reported value.
 - The SrTiO_3 was characterized by measuring a grid of 433 points by electron microprobe across the full area of a piece cut as a cross-section through a conical boule.

- Values were generally close to stoichiometric.
 - Wafers from different parts of the boule were measured and showed little variation.
 - However, of the five boules provided by four different manufacturers that were measured, one boule was found to deviate slightly from the rest.
- The homogeneity of the synthetic materials was much greater than that of natural materials commonly found in electron microprobe labs.
- o Will described how mounts of the materials were being prepared for distribution
 - Acrylic mounts with positions for 41 materials were prepared in the machine shop at the University of Oregon.
 - Materials were mounted in epoxy in disposable pipette tips and centrifuged to make densified epoxy cane to put into acrylic mount.
- o Will described the next steps in this project.
 - Will expressed thanks on behalf of FIGMAS for MAS' financial contribution to this project.
 - Future proposals for this effort will aim to host a workshop on microanalytical standards, pay for analytical time and external characterization of new materials, improve sample preparation, and support student involvement in this project.
- o Vin Smentkowski offered to facilitate SIMS analysis of these materials, if possible.
 - Will said that he would be interested, particularly in oxygen isotope measurements, and would follow up with Vin later.
- o Thomas Lam noted that he had good results with MSC supplies for XRF crystals.
 - Will said that he had purchased from MSC supplies before, but that they did not provide full boules, which is the focus of this project.
- o Andy asked for an update on the project's finances.
 - Will said that the full \$5,000 provided in 2024 and ~\$3,000 of the \$10,000 provided in 2025 had been spent.
 - The results of other external funding proposals are pending, which will determine future spending.
 - One future spending need will be trace element measurements of the obtained materials.
 - Will also noted that some companies are willing to sell cuttings and waste while others are not, which can put limits on what kinds of materials can be obtained.
 - For example, synthetic Mg_2SiO_4 may be too expensive to obtain in bulk.
- o Andy asked whether a potential workshop on microanalytical standards would be

sponsored by MAS.

- Will said that such a meeting would definitely involve MAS, but the exact format and platform has not been decided.
 - Outreach is an important part of this project, for which such a meeting would be useful.
 - o Andy thanked Will for his presentation.
- Secretary Report (Owen Neill)
 - o Megan Holtz moved to accept [the minutes of the 2025 MAS Summer Council meeting](#), Josh Taillon seconded.
 - Motion carried by voice vote with one abstention.
 - o Owen Neill provided a brief update on the 2025 MAS leadership election.
 - Andy noted that two candidates that had been previously nominated were found to have been ineligible and were removed from the ballot.
 - Jordan asked how many years of membership were required for a member to be eligible for election.
 - Owen said that two years of Regular or Honorary membership were required to be eligible for election, with an additional two years required to be eligible to be President-Elect, citing Article VI, Section 1 of the MAS bylaws.
- Treasurer's Report (Dale Burns)
 - o Dale Burns gave a brief outline of the status of the MAS finances as of 14 October, 2025.
 - Total income: \$92,433.64 (\$84,350.00 projected).
 - Dale reported that a payment from one Sustaining Member is still outstanding.
 - Andy asked whether the number of Sustaining Members had declined.
 - o Steve Seddio responded that one Sustaining Member had been lost, but another had been added.
 - Total expenses: \$62,723.54 (\$113,262.50 projected).
 - Operating expenses: \$34,585.88 (\$55,262.50 projected).
 - Meeting expenses: \$28,137.66 (\$58,000 projected).
 - Spending on regional conferences higher than expected due to re-scheduling of events that were budgeted for previous fiscal years.
 - The membership reconciliation for 2024 has been finished and the co-share for 2024 has been invoiced.

- Dale summarized the current state of the MAS accounts.
 - Total liquid assets: \$176,739.93.
 - Total charitable funds: \$48,486.04.
 - Schwab investment account: \$938,853.06.
 - Total encumbered assets: \$1,164,079.06.
 - Total unencumbered assets: \$1,115,593.02.
 - o Dale will begin finalizing corporate award sponsorship payments and will begin preparing 2025 IRS documents.
 - o Andy asked whether issues with payments for the Duncumb Award had been resolved.
 - Dale said that they had.
 - o Andy, Dale, and Dave Tomlin will meet offline later in the year.
- Membership (Andy Herzing for Emma Bullock)
 - o Andy outlined upcoming changes to the MAS and MSA membership databases, due to the current database reaching end-of-life status and needing to be transferred to a new platform, and asked for comment from Council on MAS' involvement.
 - VirtualInc has researched and identified a new contractor to handle the migration and subsequent maintenance of the database, member portal integration, etc..
 - The company is Wicket (<https://wicket.io>).
 - The cost for the migration would be \$72,000, with an annual maintenance cost of \$33,000/year once this migration is completed.
 - This is approximately double the current cost for the database.
 - The cost for this change to the database is a major change to the MSA budget, and the MSA president has asked whether MAS would be willing to support some of these costs.
 - MSA has also indicated that the contract with Wicket has already been signed, and that this change will be proceeding regardless of MAS' involvement.
 - The migration fee will be paid by the end of 2025, and the annual maintenance costs will be assessed beginning in 2026.
 - So far, MAS has not made any commitments regarding cost sharing.
 - Josh asked whether MAS already pays database fees.
 - Andy said that this was not clear and that he would discuss this further with Dale.
 - Josh expressed concern that MAS was not involved in the research

process that led to the new contractor and platform being identified.

- Rhonda Stroud noted that MAS receives a 10% share of the M&M meeting revenue, and as such a 10% cost share related to the database seems appropriate.
 - Rhonda also noted that MSA makes revenue off sales of their member list, and that this revenue is not shared with MAS.
 - Andy agreed, while noting that the number of MAS membership and associated revenue has increased significantly due to the shared portal and database.
- Jordan Hachtel asked what MAS currently uses for a membership database.
 - Andy responded that MAS currently uses the system that MSA maintains, noting that this is a key part of the integration with the membership portal.
- Andy added that other societies use management platforms that are even more expensive than what is being proposed.
- Owen asked whether it would be possible for MAS to get greater direct access to the membership database during this transition.
 - Currently access is controlled by MSA and VirtualInc, and the Membership Chair has to go through them for membership information, which adds time and often leads to incomplete information.
 - Owen suggested that better and more direct access could be a condition of any cost sharing.
- Andy said that he would approach MSA with a cost-sharing offer of 10% (\$7K for migration, \$3.5/year for maintenance), and would also ask for MAS to have more direct access to the database.
 - Any agreement on this issue would be presented to Council for approval before being finalized.
- Strategic Planning Report (Andy Herzing for Angela Halfpenny)
 - o Andy described a new proposed Strategic Planning initiative, aimed at providing a discounted rate for M&M registration for members who have lost jobs or funding.
 - This was inspired by a similar program being instituted by the American Geophysical Union.
 - The discounted rate would be a break-even rate, and is still to be determined.
 - Also to be determined is the number of discounted slots to be made available.

- The Strategic Planning committee is also working on developing appropriate eligibility criteria, as well as how that criteria would be reviewed and evaluated.
 - This would include proof of loss of employment or loss of employment.
 - Andy supported the idea, while also noting that depending on how long the current funding situation lasts, this program may not be able to continue indefinitely.
 - Rhonda suggested that the eligibility criteria include that the person applying had previously been a regular attendee, as well as limiting the number of years in which a person can receive an award.
 - Andy agreed with this idea, noting that it serves as an extension of discounted member dues via the hardship waiver.
 - Josh noted the need to define “loss of funding” clearly.
 - Jessica agreed, as how much funding has actually been lost may vary significantly.
 - Some researchers who have lost funding may still have significant other resources, while other researchers who may have lost less funding in terms of actual dollars may have fewer secondary resources to tap into.
- AReS (Thomas Lam)
 - o The Great Lakes Microscopy Society meeting took place on 7 October at the University of Michigan.
 - The Great Lakes Microscopy Society is a reconstitution of the former Michigan Microscopy and Microanalysis Society
 - Speakers included MAS Tour Speaker Jotham Austin (University of Chicago) and Student Council speaker Justin Warner (Michigan Tech).
 - o The Mountain States Society of Electron Microscopists meeting will take place on 16 October at the University of Colorado.
 - Speakers will include MAS Tour Speaker Ed Vicenzi.
 - Thomas will reach out to Dale about reimbursement for Ed, as Ed is currently furloughed due to the government shutdown and traveling as a private citizen.
 - o Thomas will reach out to Josh about updating the AReS website.
 - o Owen asked if high-resolution MAS logos and brand materials could be provided to the speakers to include in their talks.
 - Thomas will work on this.

- Awards (Brad de Gregorio)
 - Brad said that the Awards Committee was preparing to evaluate the Best Paper award nominees from M&M2025.
 - Brad sent a welcome email to Awards Committee members, including a spreadsheet with the list of nominees and a link for voting.
 - The Awards Committee consists of two second-year directors (Jessica and Megan), two at-large members (Brian Caffrey, Rosalind Franklin Institute; and Junghwa Kim, MIT) and a student council representative (Lynn Massenburg, ORNL).
 - Brad said that he is looking to place order for a new set of sports towels to use as rewards for those who provide Best Paper nominations
 - Brad is planning to triple the number of towels ordered, as they have been popular and a good incentive.
 - Brad said he would notify Council of the cost before placing the order.
- Computer Activities (Josh Taillon)
 - Josh asked that any new content for the website be sent to him.
- Fellows (Vin Smentkowski)
 - Vin said that he had received one nomination package for a new Fellow, and that he would send it out to the committee in the next few weeks.
 - Vin said he had identified a second potential candidate for Fellowship, and would reach out to potential nominators.
 - Vin asked whether Fellowship nominees should attend M&M.
 - Andy said that given the difficulty of finding nominations, it would not make sense to make this mandatory to make criteria more restrictive.
 - Andy further suggested that every effort be made to encourage new Fellows to attend M&M, but that this should not be a requirement.
- Finance (Rhonda Stroud)
 - Rhonda reported that the value of the MAS investment account has risen steadily in the last 3 months.
 - This corresponds to a relatively positive period for the stock market.
 - The value of the MAS investment account as of 30 September, 2025 was \$941,091.43.
 - The value as of 30 September, 2024 was \$855,355.95.
 - There was a small shift from bonds to stocks, but the balance of the portfolio remains within the guidelines of MAS' investment policy statement.
 - Rhonda said she and the Finance Committee will look at rebalancing at

the end of the next quarter.

- o Rhonda noted the need to continue to invest in strategic initiatives, as well as increase some budgeted expenses like the meeting and social costs, to use the resources in the investment account.
 - o Andy asked whether rebalancing is automatically triggered.
 - Rhonda said that decisions about rebalancing would be made at the next meeting of the Finance Committee.
 - Finance Committee Meetings are held quarterly.
 - o Rhonda also said that she would also reach out to two people who had volunteered to serve on the Finance Committee.
- International Liaison (Andy Herzing for Heather Lowers)
 - o Owen reported that the preparations for the IUMAS-9 meeting in Xi'an, China, are proceeding well.
 - Owen also added that IUMAS needs a new Secretary/Treasurer, and asked that anyone interested in the position contact him.
 - o Andy reported on efforts to establish stronger relations with the Brazilian Society for Microscopy and Microanalysis.
 - Andy discussed the possibility of reciprocal travel arrangement with the Brazilian Society, similar to MAS' agreements with EMAS and AMAS.
 - Andy will follow up on this.
- Topical Conferences (Andy Herzing for Anette von der Handt)
 - o Andy will follow up with Anette regarding planning for the virtual Topical Conferences proposed previously.
- M&M 2026 Update (Steve Seddio)
 - o Steve reported that despite issues regarding communication between co-chairs, planning for M&M2026 is ongoing.
 - o Steve is working to confirm the plenary speakers for M&M2026.
 - MAS has suggested one candidate as a plenary speaker but are waiting on guidance from MSA.
 - Andy will reach out to Paul Voyles about this.
 - o Steve will talk to VirtualInc about clarifying deadlines for different milestones regarding M&M planning.
 - o Steve noted again that there were 36 symposia proposals submitted, which has been reduced to 32 by the Program Committee.
 - Symposia include 14 Analytical Sciences, six Biological Sciences, two Interdisciplinary Sciences, and 14 Physical Sciences.

- Sustaining Members (Steve Seddio)
 - Steve said that he would send renewal notices to Sustaining Members in November, with reminders in Spring.
 - Steve said that there was some uncertainty regarding renewals due to the current funding environment.
- Next Meetings (Andy Herzing)
 - Andy suggested that the MAS Winter Council meeting will be held in February, and the Spring Council will be held in May.
- Adjourn (Andy Herzing)
 - Assel moved to adjourn the meeting, Jessica seconded.
 - Motion carried unanimously by voice vote.
 - The meeting was adjourned at 12:29 EDT.