

## Michael Rapp

### Your Background and Experience

This section of the survey aims to gather information about your expertise in these areas to ensure that our board is equipped with the necessary skills and experience to effectively lead and support our mission. Your responses will help us assess your fit for a potential board role and identify areas where we may need additional training or support.

We don't expect any candidate to have relevant background in all these areas. Please respond to the topics for which you do bring experience, and feel free to skip the others.

### Strategic Plan Implementation

The new strategic plan expands AAVSO's mission and goals to encompass all aspects of astronomy where amateur activities (making observations, analyzing data, and educating the public) can contribute to scientific discovery. Our focus is now on implementation, working closely with the Executive Director to enhance current programs and develop new initiatives that will help achieve these goals.

#### **How much experience do you have with strategic planning and implementation?**

Moderate Experience: Actively participated.

#### **Please describe your experience and accomplishments in strategic planning and implementation.**

In my twenty-seven-year career at the University of Houston, I have participated in the design, implementation, and evaluation of several strategic plans at the departmental, college, and institutional level. These strategic initiatives have ranged from everything from donor engagement to accreditation to becoming a Tier One research university. My expertise and contributions have primarily been in the realm of designing and implementing information technology to achieve the strategic plans' goals.

#### **Please discuss your willingness to critically assess the implementation and effectiveness of the Strategic Plan if performance metrics and "gut feel" show that the plan is NOT working? Do you have experience with plans that failed to perform as expected?**

Being able to course-correct if metrics are not being met is very challenging to do. It requires constant vigilance and, most importantly, a courageous acceptance of the facts. It can be exceptionally difficult to regard evidence that a plan or project has gone off course and needs to be rethought, especially for a high-profile project that if it were to be curtailed or canceled would cause institutional embarrassment. One trap with which I have had repeated and significant experience is "throwing good money after bad." I have personally seen the financial and

reputational consequences of ignoring warning signs in the hopes that an initiative will simply get better on its own or if more money is allocated. It is critical that strategic plans and projects have cycles of brutally honest evaluation and adjustment built-in at frequent intervals.

## Governance and Oversight

Governance and Oversight, including policy development, financial oversight, resource allocation, program evaluation.

### **How much experience do you have in Governance and Oversight?**

Moderate Experience: Actively participated.

### **Please describe your experience and accomplishments in the area of governance and oversight.**

I was elected to the Houston Astronomical Society's Board of Directors in November of 2024. It has been a very fulfilling and fantastic experience. My primary aim has been to encourage members to enhance their enjoyment of astronomy — whether that be visual, imaging, or just relishing in discoveries — through the Society.

Also, in the context of my information security professional career, since 2014 I have served on the SANS/GIAC Advisory Board. SANS/GIAC is the preeminent training and certification body for the information security industry. I have worked on job task analyses, advised on the sunseting of obsolete certifications and modernizing current ones in an ever-changing industry.

## Advocacy and Public Relations

Including community engagement, campaigns and initiatives, being a spokesperson, event promotion, application of social media, storytelling, media relations, product and organization branding, government agency relations:

### **How much experience do you have with Advocacy and Public Relations?**

Basic Experience: Assisted, or have basic understanding.

### **Please describe your experience and accomplishments in the area of advocacy and public relations.**

I have been a member of The Planetary Society since 2002. With their guidance, I routinely advocate for funding and support of planetary science missions with both my State and Federal representatives.

## Fundraising

Including managing fundraising campaigns, soliciting sponsors, cultivating donors, preparing or evaluating grant proposals, building partnerships.

### **How much experience do you have with Fundraising?**

Moderate Experience: Actively participated.

### **Please describe your experience and accomplishments in the area of fundraising.**

While I generally am not involved in direct donor communications for the University at which I work, I try to advocate for donor financial support and, most specifically, set a good example. At the University of Houston, I am a member of the In Tempore Society, a group of alumni who have included the University in their estate plans, and my wife and I recently endowed a needs-based scholarship for students intending to become K-12 teachers.

## Education and Training

For life-long adult learners will be an important initiative for AAVSO in the next few years (including identification of learning objectives, development of classes/curricula, interaction with colleges/universities and grant agencies, assessment of effectiveness).

### **How much experience do you have with Education and Training?**

Advanced Experience: Lead a successful team.

### **Please describe your experience and accomplishments in the area of Education and Training.**

I have been at the University of Houston since 1998 and have a Master's degree in Education, of which I am exceptionally proud. I have taught both undergraduate and graduate classes in general computing, web design, database development, digital video production, and information security.

Moreover, I regularly volunteer at the George Observatory (run by the Houston Museum of Natural Science) southeast of Houston. No greater thrill exists to introduce people to the joys of the night sky, whether it be pointing out the constellations, helping them understand what they see in an eyepiece, or evoking wonder at what a modern astronomical camera can reveal.

## Astronomy Research Projects

Identifying and pursuing Astronomy Research projects with Citizen-science activities will be an important initiative for AAVSO in the next few years (including identifying research questions/problems, recruiting participants, organizing and leading teams, defining approaches, forming professional-amateur collaborations, identifying funding needs, evaluating interim results and course-corrections, reaching conclusions, publication).

**Please describe your experience and accomplishments in the area of Astronomy Research Projects**

As I am not a professional astronomer, my experience with formal astronomical research is limited. I am involved, however, peripherally in a very important aspect of scientific research: data integrity. In my professional work, my team and I are responsible for protecting the research data of a public Division I Research University from attack. I have extensive experience in preparing for, identifying, and defending against cyberattacks directed at research data, including ransomware, extortion, and unauthorized access and alteration.

**How much experience do you have with Astronomy research projects**

Basic Experience: Assisted, or have basic understanding.

**Citizen Science**

AAVSO is one of the oldest and most respected Citizen Science organizations in the world. Expanding on this legacy will be an important initiative during the next few years (including engaging participants both within and beyond the AAVSO community, expanding opportunities for collecting new data and for mining existing databases, maintaining primary focus on achieving tangible scientific outcomes, engaging both professional and non-professional participants, maintaining communication among team members).

**How much experience do you have with Citizen Science**

Moderate Experience: Actively participated.

**Please describe your experience and accomplishments in the area of Citizen Science**

My experience is mostly in data collection as an amateur. In addition to my AAVSO work of the past thirteen years, I have done a few projects aimed at increasing the quality of the data in the Washington Double Star Catalog. I also participated in asteroid discovery efforts in the 2000s.

**Please describe your experience in areas that are NOT science oriented but might provide insight into promoting effective citizen science. For example, many of the challenges of running an arts organization may feed directly effectively managing and motivating volunteers in a Citizen Science organization.**

As an educator, my aim has always been to have the students in my classes experience a sense of enjoyment, engagement, and what they are learning is useful. The same approach is very applicable to citizen science activities, especially those in the realm of the AAVSO. If a citizen science project or activity is rote, repetitive, or unrecognized, members won't want to do it for very long. They'll burn out. External validation is important; members want to know and feel that their work is valuable to the endeavor of science, either now or in the future. My educator experience directly ties into the notion that it is critical that the AAVSO communicate to members a sense of value, genuinely and repeatedly.

**Other skills & experience: What experiences and skills in your background – NOT directly related to the AAVSO – do you think would be valuable for the AAVSO? We need people who bring diverse perspectives and experiences to the organization.**

As part of my work for the Association for the Advancement of Computing in Education (AACE), I have helped run academic conferences and facilitate academic publishing for nearly thirty years. I am very familiar with working with venues and doing everything from the room setups to the catering orders to the internet & audio/visual equipment. I also have strong expertise in managing the ever-increasing costs of face-to-face conferences. On the publishing side, I was the technical editor of the Journal of Contemporary Issues in Teacher Education from 2004-2010.

## Your current/past involvement with AAVSO

This section of the survey is designed to gather information about your experience with the AAVSO. Understanding your familiarity and involvement with our organization helps us assess your potential contributions as a board member and ensures that we have a diverse range of perspectives and expertise to guide our mission. Your insights are invaluable in helping us build a stronger, more effective leadership team.

**How many years have you been involved with the AAVSO (as a member, a non-member participant, or in other ways)?**

13 years

**Why do you want to serve on the AAVSO Board of Directors?**

Observing variable stars and being a member of the AAVSO has been some of the most fun I have had in my 30+ years in amateur astronomy. This is a vibrant organization with a long and wonderful history. I would welcome the opportunity to help it thrive in these rapidly changing and challenging times.

**What are your current and past activities involving AAVSO?**

I am primarily a visual variable star observer, with 90% of that being with binoculars and participating in the binocular program, which I find enthralling. The latter 10% is with so-called smart telescopes, with which I am exploring diligently to see how they can be used in our endeavors.

**In your opinion, what are the greatest strengths of AAVSO?**

We have many, but I will highlight two. First, the AAVSO is one hundred fourteen years old. The number of organizations made up of amateurs that can show they have over a century of demonstrated robust, resilient, and innovative usefulness to professionals is very few. Our members, whether they do visual or imaging, take their data collection and analysis activities seriously. Our data are high quality, commonly cited in professional journals outside of our own JAAVSO. We are able to respond quickly to observing campaigns. Moreover, we are fairly unique in that we are a global network of observers, able to provide highly-coordinated near-continuous coverage of transient stellar events. Additionally, over decades we have

demonstrated the repeated capability to remain agile and adaptable to professionals' needs. We are incredibly innovative. As detectors improved, the AAVSO was very quick to experiment and come up with standard practices. We are also creative. We take care to note where professional data collection is difficult – bright stars, for example – and develop means to focus on those areas. The recent SNEWS endeavor is a perfect example of that.

**If elected to the Board, how would you help AAVSO translate those strengths into opportunities?**

Primarily, I would encourage members to continue their projects, highlighting our vast store of data to which they are adding and our historical value to professionals. Moreover, there is so much to do in the AAVSO! Of course, we have the mainstays of visual and CMOS, but now there's spectroscopy, there's exoplanets, there's gamma ray bursts ... a myriad of things to explore. Whether one's budget (in money and in time) is zero or several thousand, there is always something new and exciting to do. A key activity I would pursue as a member of the board is to encourage and help members to be active. Passionate activity generates good data, which keeps us relevant to professionals.

**In your opinion, what are the greatest weaknesses of AAVSO?**

I see two key weaknesses: funding challenges and the competition from modern automated surveys. Our dues are already quite high, especially for an amateur astronomy organization. Moreover, our endowment provides monies, but we should be very careful in how we utilize that. Obtaining external funding should be a focus. It is very difficult, especially in the current federal grant climate. Still, I think it would be worthwhile to vigorously and regularly pursue it with all available affordable means.

The competition from automated surveys is certainly daunting, even discouraging at times. I do believe that the AAVSO has a vital role in this new era. Surveys can't do everything. There are and will be gaps in what they can observe. Furthermore, embargos will restrict data dissemination. Finally, there is the data analysis. Nearly every citizen science project on the web relies on common people who have no training in data analysis (or even astronomy, for that matter) to contribute towards a scientific aim. I believe can capitalize on this with our own data.

**If elected to the Board, how would you help the AAVSO effectively meet those challenges?**

Seeking external funding is going to be key for the AAVSO in the coming years. I will lend my experience in writing and editing to this end. Moreover, I will leverage my decades of experience in academic publishing to offer suggestions on how to improve the JAAVSO's standing in the professional community, which may be key to getting funding. To address the automated surveys, I can model and encourage activities. For example, I mention nearly at every chance I get the fun and fulfillment I get from visual variable star observing. Additionally, I can encourage members to getting involved; try something new. The AAVSO has always been a very adaptable and agile organization and the creativity needed to keep and increase our usefulness to the professionals arises from members trying new things, working collaborative, and having fun doing so.

**In your estimation, does the AAVSO run the risk of becoming too narrow, when the Strategic Plan (see above) suggests a continuing need to adapt to changing conditions and to think laterally?**

No, I do not think so. In the 114 years of its existence, the AAVSO has shown that it is agile and adaptable. Astronomy is the most accessible of the sciences to non-professionals and that is a huge advantage for us and our mission. At a certain scale, stars are the basic building blocks of the universe. Even with professional surveys increasing in capabilities, the AAVSO should be in no danger of running out of potential targets. We will have to be creative on how to gather data on them, but that is what we have done for over a century.