Search for the Executive Director
Institute of Marine and Environmental Technology
Baltimore, Maryland

THE SEARCH

The Institute of Marine and Environmental Technology (IMET), a joint research institute within the University System of Maryland (USM), seeks a dynamic and accomplished Executive Director to strengthen and position the Institute for the future—capitalizing on the strengths of the University of Maryland Center for Environmental Science (UMCES), the University of Maryland Baltimore County (UMBC), and the University of Maryland Baltimore (UMB). Uniquely governed by these three member institutions of the USM, IMET stands at the forefront of marine and environmental science research, training, and technology innovation and application. The Executive Director has a singular opportunity to organize, inspire, and lead some of the world's most talented marine and environmental science scholars to new heights of research excellence, technology innovation, and societal impact.

IMET's domain expertise in both fundamental inquiry and application, combined with its commitment to intellectual and organizational diversity, defines its unique strength. As a collaborative effort between UMCES, UMBC, and UMB, IMET's annual operating budget exceeds $1.5 million, with external research expenditures of $9.5 million. With the help of 22 faculty, 30 graduate students, and three Assistant / Associate Directors, IMET is home to one of the world's most potent groups of scholars working on marine and environmental research using cutting-edge technologies that span molecules to ecosystems.

At this transformative juncture, with the nation's most ambitious climate goals per capita, the state of Maryland and the USM—leaders and Regents alike—stand as a deeply synergistic collective unified behind the long-term success of IMET. Strategically co-located with the Chancellor's Headquarters and the USM Board of Regents' main office in the Rita Rossi Colwell Center in Baltimore's Inner Harbor, IMET transcends the confines of a traditional academic research institute. It has the strategic positioning and collective expertise to influence and innovate for the betterment of Maryland and beyond and embodies the commitment of the USM to sustainability, community engagement, and transformative impact.

Building on the exciting momentum fostered by outgoing Executive Director Dr. Russell Hill, IMET seeks a visionary scholar-leader and ambassador who will collaborate toward bold, strategic directions for IMET's future. The Executive Director will be charged with expanding IMET's research footprint and visibility; advancing the Institute's dedication to diversity, environmental health equity, and an inclusive and supportive environment for emerging leaders; identifying and securing diverse funding sources;

accelerating commercial and applied research initiatives with an entrepreneurial approach; and upholding IMET's commitment to sustainability and addressing issues of environmental inequity in its diverse community. The successful candidate will leverage strategic partnerships within IMET, the broader USM enterprise, and external stakeholders to further the Institute's reach and impact.

The USM has engaged Isaacson, Miller, a national executive search firm, to work with the search committee. All confidential applications, inquiries, and nominations should be directed to the parties listed at the conclusion of this document.

INSTITUTE OF MARINE AND ENVIRONMENTAL TECHNOLOGY (IMET)

Founded in 2010 by the Board of Regents of the USM, IMET is located in Baltimore, Maryland—a mosaic of metropolitan dynamism juxtaposed with the natural abundance of the Chesapeake Bay, among the world's single most productive estuaries and a real-world laboratory for some of the most impactful scientific inquiry and innovation today. This region has one of the country's most significant concentrations of commercial, cultural, and scientific activity, and IMET's integration with both policy and the socioeconomic evolution of the region is profound and growing.

IMET's central mission is to develop innovative approaches to safeguard and rejuvenate coastal marine systems and their watersheds, utilize sustainable resources to benefit human well-being, and merge research excellence with education, training, and economic development. It strategically supports an ecosystem of inquiry, advancement, and practical application across three key research areas: Sustainable Seafood Production; Environment, Animal & Human Health; and Energy, Water & the Environment. Its 22 core faculty members are comprised of world-class experts in these scientific domains who combine their skills with an intimate understanding of the needs of the environmental science community. IMET is supported by a shared team of professional staff deeply committed to its mission. Its efforts focus on the use of aquaculture and genomics to foster conservation and the creation of marine resources, including marine bioenergy, environmental sensor development, environmental remediation, developmental biology, marine biomedicine, molecular and cellular systems, and sustainable urban ports and ecosystems.

This is a time of remarkable growth for the Institute, as total external research funding in financial year 2023 was over $9.5 million, up a staggering 64% over the previous year in 2023. In addition to a significant new award from the Department of Energy supporting green tech and carbon capture, IMET also has substantial ongoing support from the Department of Agriculture supporting Atlantic salmon production, NOAA funding addressing harmful algal blooms, and numerous other projects that exemplify the breadth and depth of IMET's scientific community. IMET has had particular success in winning multi-year awards that will help provide robust funding for the following several financial years, boding very well for the future funding base for IMET research.

IMET scientists are deeply committed to advancing public understanding of its scientific research, actively engaging with the community to build trust in science and demonstrate its direct benefits to society. IMET

is uniquely positioned to extend the reach of research and insights beyond the laboratory by showcasing how discovery can solve problems and benefit communities. The Institute serves as a pillar and pivotal advisor to the state of Maryland. Dedicated to forging long-term, deep, and sustainable links with its broader community, IMET's presence is more essential now than ever before. As the Baltimore shipping channel reopens after the Francis Scott Key Bridge collapse in March of 2024, IMET's role in highlighting the urgent need for substantial environmental and marine research, policy, and infrastructure resilience assumes greater importance. Furthermore, as Maryland stands as one of the most ambitious and progressive states per capita regarding renewable energy initiatives and climate impact reduction plans, this position is a critical opportunity to have a meaningful impact.

Research

IMET emerged from the USM's Marine Biotechnology Institute (UMBI); its coupling of fundamental inquiry and application is a foundational element of IMET's lineage. In the last ten years, IMET programs have contributed mightily to regional economic development, establishing startup companies and providing critical scientific infrastructure for Baltimore's tech sector, all while undertaking world-class research. IMET now looks to enhance its role as a world leader in marine and environmental biotechnology. In a coordinated effort of all IMET faculty members, with the help of IMET's Program Committee and Governing Council, IMET has recently launched its strategic plan, which outlines the Institute's strong emphasis on research excellence, inclusive education, broad public outreach, and economic development in its future endeavors. The plan also establishes programmatic growth goals for the next five years, charted to enhance IMET's scientific contributions to Maryland and the nation's environmental sustainability, economic, and health goals in the face of climate change and other anthropogenic impacts on the environment. Research at IMET spans three distinct themes:

Environmental, Animal and Human Health

IMET is a leader in the research of protozoan, bacterial, and viral diseases of economically and ecologically important marine and estuarine species, including Chesapeake Bay species such as the blue crab and the eastern oyster. Research spans innate immune recognition mediated by protein-carbohydrate interactions and acquired immunity in model and non-model systems, including in sharks. An important area for the application of this research is in vaccine development, including gene-based vaccine antigens and archaea-derived vaccine delivery technology. IMET also contributes to human health through work in established and emerging model systems for studying human infectious diseases, including SARS-CoV-2, influenza A, pneumococcal pneumonia, and sepsis, and the role of Helicobacter pylori in gastric inflammation and cancer.

Sustainable Seafood Production

The IMET Sustainable Aquaculture program focuses on key research areas that address the main biological and technological challenges aquaculture faces today. The Institute's Aquaculture Research Center (ARC)

provides unique capabilities for research on land-based, fully contained, precision aquaculture systems, focusing on improving water conservation through recycling, solid waste conversion to energy, and aquaculture system engineering. The aim is to provide biosecure, environmentally sustainable, and economically viable seafood.

Energy, Water, and the Environment

Research at IMET on energy, water, and the environment includes renewable energy and biofuels, climate change and nutrient cycling, ecosystem restoration, and sustainable waste management. Genomic and metagenomic studies of marine and estuarine microbes at IMET contribute to understanding microbial biodiversity and microbes' roles in biogeochemical cycles, including the critically important cycling of carbon in the deep ocean. Modeling of microbial metabolic fluxes contributes to understanding of processes driving climate change. IMET researchers are conducting research in microbial bioremediation to develop novel technologies for sustainable, in-situ treatment of organic pollutants such as PCBs in sediments and soils. By developing mitigation strategies and approaches, the Institute is also lessening the impact of harmful algae and nutrient pollution.

Education

IMET has a culturally and socioeconomically diverse student body and a very strong track record of excellence in training graduate students. Over 30 graduate students train and work in the laboratories at IMET. These students take courses at one of IMET's three partner universities while completing the research component of their work in the Institute's state-of-the-art laboratories.

The USM enterprise proudly supports around 37,000 strong graduate students. Every year, the Board of Regents awards only four highly selective "Student Excellence Scholarships for Academics, Scholarship, and Research," and in 2023, two of those four awards went to students at IMET, from UMCES and UMBC.

IMET currently offers the following undergraduate internships and partner graduate programs:

- IMET Summer Internship
- Sustainable Aquaculture Lab Course
- Marine Estuarine Environmental Sciences Graduate Program (MEES)
- Graduate Program in Life Sciences (GPILS)
- James Albrecht Graduate Student Fellowship

Entrepreneurship and Innovation

Committed to bringing science out of the laboratory and into society through education training and mentorship, IMET leads comprehensive programs in entrepreneurship to train students, faculty, and staff to explore the potential business applications of their research. IMET's entrepreneurship activities are crucial to its mission, integrating research excellence with education, training, and economic development. IMET is the home to Harbor Launch at IMET, a startup incubator and community for science and science support companies. Through Harbor Launch at IMET, IMET offers startup-friendly office and wet lab space in addition to business services, generating revenue for the Institute from underutilized lab space. In partnership with the Philip E. & Carole R. Ratcliffe Foundation, IMET also offers the REEF program for Student Entrepreneurship, which enables environmental science UMCES and IMET graduate students to apply basic business concepts to their research to plan innovation-based companies. In 2024, IMET graduated its tenth REEF cohort of 5 IMET and 1 Horn Point Lab (UMCES) graduate students. IMET startups include RemBac, Minnowtech, and AlgenAir.

Philanthropy

IMET's successes in scholarship, technological impact, and education outcomes are inextricably linked to the support of partners like the Philip E. & Carole R. Ratcliffe Foundation, The G. Unger Vetlesen Foundation, Dr. James Albrecht, IMET Angel Investors, and the unwavering support of the Bunting Family Foundation, among many other community partners who recognize its transformative potential. Dr. Russell Hill made great strides in engaging with philanthropic funding as a material support source and a mechanism to expand IMET's reach. With its recent hiring of a communication and development coordinator and outreach staff, IMET is on a pathway to expanding this support and cementing these critical, generative relationships for the long term.

ROLE OF THE EXECUTIVE DIRECTOR

The Executive Director of IMET plays a multifaceted leadership role in a highly matrixed environment, leading IMET's scholarly endeavors at a high level—including recruitment and mentorship of faculty; managing IMET's facilities in concert with partner institutions in the USM and externally; and advocating for support for IMET with the leadership of its partner institutions, from whose schools and colleges derive tenured lines, material support for physical space, and key staff, among other critical resources. The Executive Director oversees a budget exceeding $1.5 million, with three direct reports and several critical dotted-line staff relationships across the three-university governing structure. The Executive Director will address the following opportunities and challenges:

Provide bold strategic leadership to sustain IMET now and into the future

The Executive Director will define, refine, and execute a shared vision for IMET that fulfills its most ambitious aspirations. The ED will have the opportunity to strengthen the position of IMET as a leader in

the environmental and marine sciences that both enhances its scientific excellence and expands its real-world impact. To build toward the future, the Executive Director will support the execution of the current strategic plan and identify future strategies to remain nimble and responsive within a dynamic state and federal funding landscape. This will require a consultative approach and continuous innovation to best position IMET collaboratively with UMCES, UMB, UMBC, and other potential USM partners. The Executive Director will inherit a strong foundation of existing programming to steward and strengthen. In furthering the work of the Institute, the Executive Director will ensure that structures and processes are both effective and sustainable.

Leverage IMET's highly matrixed structure to strengthen its scholarly position and enhance its collaborative impact

The Executive Director will enhance scholarship through partnerships with UMB, UMBC, and UMCES. The successful candidate must have the tools and experience necessary to strengthen the underpinnings and collaborative pathways that enable the entire Institute to thrive and grow, attract top graduate students, and leverage its geographic advantages. IMET must strengthen these collaborations by incentivizing team science that leverages the "economies of scale" afforded by larger institutions and broader faculty collaborations. Having the ability to work across institutions as both a convener and ambassador to all three universities is a crucial skill set that the next ED must bring. With its significant visibility, IMET is central to advancing the sustainability objectives of the System and the state of Maryland.

Uphold IMET's traditions of applied research, entrepreneurship, and innovation

The Executive Director will wield IMET's unique position in the heart of Baltimore to further its mission as an innovation engine for the city and beyond. Already home to several nascent and established companies, IMET's ED will expand on its incubation and acceleration activities, ensuring that the Institute remains a critical asset to the region's future.

Furthermore, the ED will actively pursue commercialization opportunities for innovative technologies and methodologies developed at IMET. The Executive Director will invest in entrepreneurship programs to train students, faculty, and staff to explore the potential business applications of their research. The Harbor Launch Incubator at IMET will also be leveraged to provide additional wet lab space, office space, and core research services to companies developing products and services that positively impact the environment and human health.

Expand IMET's philanthropic support and structural stability through community engagement, outreach, and education

As a highly visible resource for the city and the state of Maryland, IMET provides the Executive Director with a platform to develop increasingly strong ties to the philanthropic community of Baltimore and beyond. The Executive Director will expand on these relationships, seeking opportunities for endowed

professorships, support for graduate students, and furthering commitments to IMET's work in the entrepreneurial space. IMET's role in the environmental stewardship of Baltimore and of the Chesapeake Bay's broader renewal serves as a success story and an exemplar of the role that public research institutions can play at their very best. It is a story that IMET leadership has told well and upon which the next Executive Director will build.

Furthermore, IMET and its talented faculty are increasingly sought after for expertise and guidance in one of the nation's most dynamic metropolitan regions and ecosystems. From the development of the Inner Harbor to green stormwater infrastructure to the shipping lanes of Baltimore Harbor—all juxtaposed with the rockfish and crabs that call it home—IMET stands at the center of a truly unique environment. Furthering IMET's interface with the life of the city and the region will be crucial to its long-term success.

Champion IMET's efforts to address environmental health inequities and environmental justice throughout the region and ensure that IMET faculty and staff reflect the communities they serve

The Executive Director will advocate for and encourage IMET's role as a force multiplier in the expanding fields of environmental justice research and practice, situated in the heart of the fourth most diverse state in the country and whose diverse ecosystems serve as a microcosm for the world's climate challenges. The ED must orient the Institute toward the future of environmental and marine science as fundamental mechanisms to address historic environmental inequities. The Executive Director will provide critical and timely leadership in environmental monitoring and sustainable development, ensuring that those historically excluded from engagement and impact are brought into the fold.

The Executive Director will be instrumental in ensuring that the faculty and staff at IMET reflect the diversity of the communities the Institute serves. Cultivating all of IMET's capacities, the ED will nurture and uphold USM's long-standing commitment to a culture of diversity and inclusion, continuing the work and development of new strategies to advance programming and further inclusive academic discourse on issues surrounding DEI and climate justice. The successful candidate will have a proven track record of increasing representation and inclusivity for historically underrepresented groups in the field for the benefit of the public at large.

Qualifications and Characteristics

- An earned doctorate or requisite terminal degree in a field represented at IMET;
- Distinguished scholarly reputation and a strong record of academic accomplishment commensurate with appointment as a tenured full professor;
- Strong administrative experience in a complex, highly matrixed organization;
- Financial acumen, including evidence of fiscally responsible management practices, a history of pursuing the alignment of resources with strategic goals, and a record of fiduciary transparency and accountability;

- Proven success in academic leadership in the context of shared governance and a deeply held commitment to and belief in the value of collaborative decision-making;
- A personal appreciation for and understanding of the wide variety of disciplines and thematic foci represented by IMET faculty;
- Strong and persuasive communications skills and the ability to advocate for the importance of marine and environmental sciences to a variety of stakeholders, internal and external;
- Demonstrated successes in building effective working relationships and partnerships across structures, systems, and bureaucracies;
- Demonstrated fundraising success; the proven ability to connect scholarly impact with material philanthropic support;
- An entrepreneurial track record and an innovative approach to applied research and impactful scholarship;
- A deep appreciation for and understanding of the role public research institutions play in people and place and of the potential of the environmental and marine sciences to address historic inequities;
- A demonstrated commitment to the value of diversity in students, faculty, and staff; cultural awareness and an aptitude for navigating cultural differences

APPLICATIONS, INQUIRIES, AND NOMINATIONS

Screening of complete applications will begin immediately and continue until the completion of the search process. Inquiries, nominations, referrals, and applications (including CVs and two- to three-page letters of interest responding to the opportunities, challenges, and qualifications outlined above) should be sent via the Isaacson, Miller search website.

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