# GEOINT usgif.org



United States Geospatial Intelligence Foundation 2018 ANNUAL REPORT

# MISSION

The United States Geospatial Intelligence Foundation's (USGIF) purpose is to promote the effective development and application of geospatial intelligence and to create a stronger community of action among commercial, governmental, and academic stakeholders. USGIF's focus is on thought leadership and support for education, training, and professional development.

# **USGIF EXECUTES ITS MISSION THROUGH ITS STRATEGIC PILLARS**



### **BUILD THE COMMUNITY**

USGIF builds the community by engaging professionals from across industry, academia, NGOs, international partners, and the overall defense, intelligence, and homeland security communities to discuss the importance and power of geospatial intelligence.



### **ADVANCE THE TRADECRAFT**

GEOINT is only as good as the tradecraft driving it. We are dedicated to working with our partners to push the envelope on tradecraft. Through education and lifelong professional development, USGIF provides ample opportunities to gain needed knowledge, skills, and abilities.



#### **ACCELERATE INNOVATION**

Innovation is at the heart of GEOINT. We work hard to provide our members the opportunity to share innovations, speed up technology adoption, and accelerate innovation.



The United States Geospatial Intelligence Foundation (USGIF) was founded in 2004 as a 501(c)(3) non-lobbying, nonprofit educational foundation.

# FROM THE CHAIRMAN ...... 3

### **EDUCATION IN ACTION**

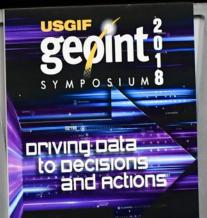
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# **FROM THE CHAIRMAN**

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UNITED STATES GEOSPATIAL INTELLIGENCE FOUNDATION

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Each year, USGIF hosts myriad activities to promote geospatial understanding—to build the community, advance the tradecraft, and accelerate innovation. 2018 was no exception. Government, academia, and industry form a powerful team when engaged in a shared cause.

As an educational foundation, USGIF's calling is to identify and align students, employers, and citizens through professional education, collegiate certifications, and outreach, mentoring, and engagement. This past year, two such examples stand out.

First, the Foundation hosted a program for dyslexic, middle school-age, STEM-focused students with the goal of introducing them to the power of visual thinking and learning strategies. Watching their youthful excitement and participation while solving geography challenges on USGIF's new "Portable Planet" floor map was truly rewarding.

Second, a high school student working on neural network technology participated in our student poster sessions at the GEOINT Symposium in Tampa. After a discussion with a representative from a USGIF member organization, the student was hired as a summer intern to help the company advance this mission-enabling technology. He will now go on to college with an improved understanding of the technology and its applications. We believe this student has a bright future.

These are but two examples among many of how USGIF educational initiatives yield demonstrable results. Through our scholarship and award programs we recognize potential and excellence. We dedicate financial resources and mentoring to fuel learning at all educational levels, up to and including Ph.D. and continuing education programs.

Finally, and perhaps most importantly, we are able to accomplish our goals through the strength of USGIF's Organizational Members and our community of dedicated volunteers. Through our working groups and committees, we provide a forum to bring together diverse skills to foster critical thinking, thus enabling better outcomes. We continue to expand the scope and focus of these working groups and committees, and we invite you to raise your hand to help shape GEOINT's future.

As you read this annual report, I hope you will share in our excitement and engage in supporting our progress. We are grateful to our stakeholders, thought leaders, and volunteers who provide the energy and resources to help educate the geospatial workforce of tomorrow.

On behalf of the USGIF staff and Board of Directors,

The Honorable Jeffrey K. Harris Chairman, USGIF Board of Directors

# Get Involved. Become a Member. Support USGIF.

# EDUCATION IN ACTION





Certificate of Recreditation

# United States Air Force Academy

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#### Geospatial Intelligence Program

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The U.S. Air Force Academy received its renewed certificate of academic accreditation.

# **USGIF Collegiate Accreditation Program**

The Collegiate Accreditation Program creates a pathway for undergraduate and graduate students to gain necessary knowledge and skills to contribute to the GEOINT Community. Students graduating from the program receive an academic GEOINT Certificate, giving them a competitive advantage in the job market.

#### 2018 Highlights

- Renewed academic accreditation for the U.S. Air Force Academy and James Madison University.
- Through partnership with the DigitalGlobe Foundation, granted all USGIF-accredited academic programs access to DigitalGlobe's satellite imagery archive and cloud-based Basemap service.
- Students from Penn State and the University of Southern California won the Hexagon Smart M.App competition at the GEOINT 2018 Symposium.
- Partnered with Boundless to provide all USGIF-accredited colleges and universities access to the company's data and training guides to complement Boundless software and support open-source learning.
- Partnered with Hexagon Geospatial to provide free software licenses and technical support to all USGIF-accredited academic programs.
- NOVA IMS partnered with the Portuguese Military Academy to offer a joint USGIF GEOINT Certificate.



"Receiving USGIF's GEOINT Certificate prepared me for a career in the geospatial intelligence field. I know I am not only prepared for my professional career but have a greater understanding of pressing national topics."

- Andrew Hopkins, University of Missouri, Columbia

In 2018, 126 students earned USGIF GEOINT Certificates, bringing the total to more than 960 students holding the Foundation's academic certificate.

North Carolina Central University, the University of Maryland College Park, and the University of North Carolina Wilmington achieved USGIF GEOINT accreditation in 2018.

# **USGIF Scholarship Program**

USGIF offers scholarships annually to outstanding doctoral candidates, graduate students, undergraduate students, and graduating high school seniors. Accompanying these scholarships are the Stu Shea Endowed Scholarship along with two awards, RGi and Ken Miller, funded entirely by USGIF Organizational Members.

USGIF partnered with Organizational Member Harris Geospatial Solutions to grant 12-month student ENVI+IDL licenses to the 2018 USGIF scholarship recipients.

# 2018 USGIF SCHOLARSHIP WINNERS

#### Stu Shea USGIF Endowed Scholarship



Sanghui Han Rochester Institute of Technology

Named in honor of USGIF's Founder, the first ever \$15,000 Stu Shea USGIF Endowed Scholarship was awarded to Sanghui Han at the GEOINT 2018 Symposium. Han is pursuing a Ph.D. in imaging science at the Rochester Institute of Technology in Rochester, N.Y.

#### Reinventing Geospatial Inc. (RGi) Scholarship



David Runneals Northwest Missouri State University

The \$10,000 Reinventing Geospatial Inc. (RGi) Scholarship for Geospatial and Engineering, is awarded to an undergraduate student pursuing engineering and geospatial disciplines.

#### The Ken Miller Scholarship for Advanced Remote Sensing Applications

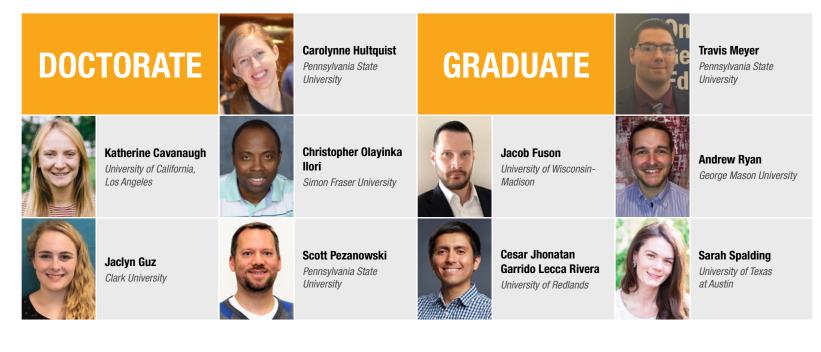


Joshua Michael Turner North Carolina State

The Ken Miller Scholarship for Advanced Remote Sensing Applications sponsored by Riverside Research, awards \$10,000 to a graduate student studying remote sensing who plans to enter the defense intelligence workforce.

Universitv

### More than \$1.2 million has been awarded since the program began in 2004.



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# USGIF awarded \$126,000 in scholarships in 2018, the highest amount of annual funds to date.

"Winning the USGIF Scholarship is a great academic milestone. Having more economic freedom allows me to be focused on my research. ... Also, the opportunity to obtain an annual ENVI license has come in handy for the second part of my project where I will analyze methods of automatic identification of elements in satellite images using machine learning techniques. Finally, the opportunity to obtain the USGIF membership will be a unique opportunity to connect to a network of top professionals in GIS."

- Cesar Jhonatan Garrido Lecca Rivera, University of Redlands, 2018 Graduate Scholarship Winner

#### **UNDERGRADUATE**



**Candice Lee** University of Georgia

#### GRADUATING **HIGH SCHOOL** SENIORS



Keelin O'Hara University of Mary Washington



Jake T. Burstein University of South Carolina



Pearl Leff

Macaulav Honors College at Hunter College & Lander College for Women



Alexander Chrvala University of Mary Washington



Adam Wallace Potter Massachusetts Institute of Technology



Milovan Dakic Indiana State University



**Claire Mercer** Ohio State University & Sijal Institute



Srijay Kasturi University of Maryland



**Brandon Staple** University of Colorado Denver



Margaret Hackney Mercyhurst University

Haley Kathryn King

George Mason University



**Rachel Pierstorff** University of Denver





**Christopher Lee** 

Madyson Larson

University of Cincinnati

University of Texas at Dallas



University of Wisconsin-

## **Professional Development**



#### **Certified GEOINT Professional (CGP™) Program**

Now named the Certified GEOINT Professional (CGP™) Program, this credential continues to be the gold standard for professional certification in the GEOINT Community. The professional designations, GIS & Analysis Tools (CGP-G), Remote Sensing & Imagery Analysis (CGP-R), and Geospatial Data Management (CGP-D), prove a deep and balanced understanding of the GEOINT tradecraft.

Beginning in 2018, USGIF's partner team members from ITPG, GSX, and Delta State University were engaged to provide ongoing support for test development, an update to the GEOINT Essential Body of Knowledge (EBK), training, and marketing and sales. Strategic plans in all of these areas were finalized and implementation began during the fourth quarter.

### In 2018:

- The CGP<sup>™</sup> received a new program logo and product logos comprising a unique brand.
- The certification program became available on the Army Credentialing Opportunities On-Line (COOL) and Marine Corps COOL websites.
- The content of the CGP<sup>™</sup> exams was reviewed by subject matter experts and updated accordingly to reflect the evolving, multi-faceted GEOINT tradecraft.



Exam Boot Camp

#### **Certification Boot Camp**

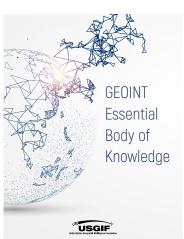
In 2018, Boot Camps were developed to assist in the preparation of the Certified GEOINT Professional (CGP<sup>TM</sup>) exams. It is anticipated that the GEOINT Boot Camps will be available for registration and administration in 2019.



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#### GEOINT Essential Body of Knowledge 2.0

In response to requests from the GEOINT Community, USGIF's GEOINT Essential Body of Knowledge (EBK) underwent a comprehensive update. During 2018, input was solicited from the community on necessary changes to the EBK content and the newest version was developed. The GEOINT EBK 2.0 is the foundation for USGIF's efforts to create a pipeline for the global GEOINT workforce via its K-12, Collegiate Accreditation, and Certified GEOINT Professional (CGP™) programs.





#### Training

USGIF offers training opportunities to help GEOINT professionals pursue professional development and better understand aspects of the GEOINT tradecraft.

- 1,025 people attended training sessions during the GEOINT 2018 Symposium.
- 29 courses were offered at GEOINT 2018 for a total of 58 hours.

*"USGIF is leading the world in the education of the GEOINT professional and growth of the geospatial intelligence discipline."* 

- Todd S. Bacastow, Ph.D., Teaching Professor, Department of Geography, Penn State

#### On the Road Again...

USGIF education and professional development staff spoke and presented at a number of events and educational venues in 2018.

- 2018 American Association of Geographers Annual Meeting, LA
- 2018 Institute for Credentialing Excellence Annual Conference, TX
- Geography 2050, Columbia University, NY
- Los Angeles Geospatial Summit, CA
- The Impact of Applied Learning Conference at the University of North Carolina Wilmington, NC
- Delta State University, MS
- James Madison University, VA
- Saint Louis University, MO
- United States Air Force Academy, CO
- Inaugural SUNY DOD Day, VA
- ICARS panel about STEM at HBCUs, DC
- The American Society of Photogrammetry and Remote Sensing (ASPRS) Eastern Great Lakes Region Annual Meeting webinar
- Directions Magazine GEOINT Professionalism webinar
- University Consortium for Geographic Information Science (UCGIS) webinar



# **Events**

Providing forums for teaching, learning, and networking is at the core of USGIF. The Foundation produces a number of events throughout the year that reach thousands of constituents.







The annual GEOINT Community Job Fair provided a free opportunity for 231 job seekers to directly connect with 25 employers in the defense, intelligence, and homeland security communities.



USGIF hosted a workshop at the International Spy Museum on "When Space, Time, and Location are Critical: A GEOINT Mission." 30 people attended for a lively discussion on how GEOINT aids in humanitarian crises and national security.



The GEOINT 2018 Sneak Peek offered a preview of the GEOINT 2018 Symposium. Government leaders had the opportunity to talk about their agencies' plans for USGIF's biggest event of the year. About 125 attendees networked, enjoyed breakfast, and heard from NGA's Justin Poole and Anthony Vinci.

#### USGIF Small Satellite Workshop

March 6-7 NGA Campus East Industry and government experts discussed the evolving small sat ecosystem, hurdles, and what's on the horizon at this USGIF workshop titled, "Evolving Capabilities." The workshop attracted 255 attendees and 7 exhibitors.

### USGIF Workshops attracted more than 1,000 attendees throughout 2018.



#### GEOAcademic SUMMIT Sept. 28-29



USGIF hosted the Summit at its headquarters in Herndon, Va., bringing together nearly 50 members of academia representing 26 universities to discuss ideas, resources, achievements, and challenges. The summit was structured as an interactive forum for leaders in GEOINT higher education.



Tech Showcase West Oct. 16-17 · St Louis, Missouri

Held in St. Louis, Mo., Tech West events brought together a record-breaking 370 attendees and highlighted the region's vibrant and growing GEOINT Community. Day one included the unclassified Geospatial Gateway Forum held at T-REX with 15 exhibitors. The second day was classified and featured 29 technology demos at NGA Campus West.

# More than 900 attendees participated in GEOINT Community Week.



USGIF created a free K-12 STEM event for students, families, and teachers. The evening included interactive activities and demonstrations from 10 organizations local to St. Louis and attracted more than 140 attendees. Geospatial & Remote Sensing Law Workshop December 4

The Geospatial & Remote Sensing Law Working Group offered its annual free, half-day program on legal and policy matters critical to the GEOINT Community. Attendees heard panel discussions on topics such as bid protests and Other Transaction Authorities.

Machine Learning & Artificial Intelligence Workshop

NOVEMBER 13-14

As part of USGIF's 2018 GEOINT Community Week, experts discussed training data, GEOINT assurance, and more. The two-day unclassified and classified workshop drew 349 attendees.



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13TH ANNUAL USGIF GEOGALA Saturday, November 17, 2018 The annual black-tie event brought together more than 400 leaders from across the Defense, Intelligence, and Homeland Security Communities with USGIF Organizational Members, Individual Members, Foundation partners, and their guests for a night of exchanging ideas, reconnecting, and celebrating.

# GEOINTeraction Tuesday

Held the second Tuesday of every other month, GEOINTeraction Tuesday is a casual networking event featuring a guest speaker. On average, each event draws more than 100 attendees from across the GEOINT Community.

### **Severse** Industry Day

**NOV. 19** 

Hosted by the NGA Advisory Working Group, Reverse Industry Day was a non-traditional event in which industry provided NGA insight into how companies address NGA acquisition-related activities and challenges. Panel topics included how industry matches investment to government needs and requirements and how industry decides what opportunities to bid.

#### **GEOINTeraction Tuesday 2018 Speakers**

January - Collin A. Agee, Senior Army Operations Advisor to NGA, Army GEOINT Office

**March** - Teresa Smetzer, Digital Futures Director, CIA and Dr. Bob Metcalfe, Director of the UT Austin Innovation Center

May - Jim Long, Deputy Director, GEOINT Services Office, NGA September - Andy Francis, New Zealand GEOINT Liaison Officer Washington, New Zealand Defence Force; Gordon Muir, Senior Liaison Officer North America, Australian Geospatial-Intelligence Organisation; Kevin Ng, Lieutenant-Colonel, Canadian Army Senior Canadian Forces Intelligence Liaison Officer, NGA; Simon Wynn, Senior Liaison Officer United Kingdom, NGA

**November** - David Gauthier, Director, Commercial and Business Operations Group, NGA

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TAMPA CONVENTION CENTER

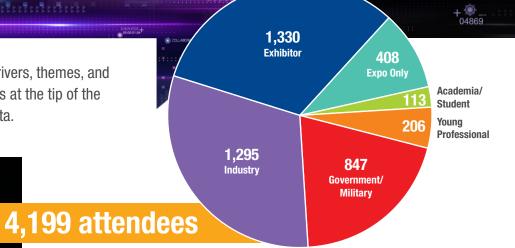
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# priving pata to pecisions and action

The GEOINT 2018 Symposium explored the major drivers, themes, and innovations helping decision-makers and warfighters at the tip of the spear gain actionable intelligence from disparate data.



GIF



#### Top three reasons for attending GEOINT 2018:

- Network with colleagues
- Benefit from the keynotes, panel discussions, and breakout sessions
- See the latest technologies, services, and solutions in the exhibit hall

Attendees included more than 260 representatives from NGA as well as members from each branch of the U.S. military and employees from the U.S. Geological Survey, the National Reconnaissance Office, the U.S. Census Bureau, the Office of the Director of National Intelligence, and more.

### International participation from 36 countries





#### **GEOINT Foreword**

There were 710 participants in GEOINT Foreword, the pre-symposium science and technology day. The Foreword agenda featured presentations on GEOINT in decision-making, human performance, disaster planning, and medical services as well as a keynote address by Dawn Meyerriecks, deputy director of the CIA's Directorate of Science and Technology.

# EXHIBIT HALL

- 251 exhibitors and 55 sponsors
- Nearly 100,000 square feet of exhibit space
- 95% of exhibitors plan to return for GEOINT 2019
- The Government Pavilion Stage included 14 sessions with more than 30 government speakers
- For the first time, the exhibit hall housed an Innovation Corner, which featured dozens of 7-minute lightning talks relevant to the 2018 theme



*"As a retired first responder, I see the great value of geospatial intelligence for improved public safety. The GEOINT Symposium is the best place in the world to see that future arriving."* 

- Kate Dargan, Intterra



*Trajectory* magazine's award-winning *Show Daily* produced 106 pages of content in 5 days, and *Trajectory on Location* produced 55 videos.

96.17% of attendees would recommend the GEOINT Symposium to a friend

# **USGIF Young Professionals Group**

The Young Professionals Group (YPG) serves to unite GEOINT professionals in the early stages of their career. YPG offers programs that parallel the Foundation's mission and are tailored to the unique needs of the younger workforce.





#### 2018 in Review:

- · Launched an Acquisitions 101 seminar series
- Led Tampa area high school students in a data gathering activity at GEOINT 2018
- Co-hosted a Geospatial Tech Talk with GeoSTL in St. Louis, Mo., to kick off USGIF's Tech Showcase West
- Co-hosted two networking socials with Esri's Young Professionals Network
- · Hosted a networking reception on GIS Day for the second year
- · Participated in the International Spy Museum's annual Spy Fest for the sixth year
- Volunteered at the K-12 STEM Symposium at the Nysmith School for the Gifted in Herndon, Va.
- Judged the Fairfax County and Loudoun County Regional Science Fairs, awarding \$1,000 to winners
- Participated in a Lunch & Learn with young professionals from Radiant Solutions
- Offered an introductory coding course in collaboration with IBM
- Volunteered at the EOD Warrior Dash in Washington, D.C.





#### **Golden Ticket Program**

The YPG selected 25 individuals from 20 organizations for the GEOINT 2018 Symposium Golden Ticket Program. Since it began seven years ago, the program has helped 150 young professionals who might not otherwise have the opportunity to attend the Symposium gain valuable insights and in-person connections with industry leaders.

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"The 2018 Golden Ticket program was a great way to connect with fellow rising GEOINT professionals. It also provided an opportunity to network with and seek advice from industry thought leaders and innovators through mentoring sessions and access to exclusive events."

- Mike Airosus, GEOINT Analyst, NGA







# INVOLVEMENT

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Attendees at the Geospatial and Remote Sensing Law Working Group Workshop.

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# **Committees**

USGIF members volunteer for and direct six committees, with the exception of the Strategic Committee, which is led by the USGIF CEO and comprises only Strategic Partner Member representatives.

#### **Academic Committee**

The Academic Committee is responsible for USGIF's educational initiatives. In addition to providing scholarships for high school, undergraduate, and graduate students, the committee spearheads USGIF's Collegiate Accreditation program.

#### **USGIF Academic Planning Committee Members**

- Chair: Dr. Todd S. Bacastow, Penn State University
- Arie Croitoru, George Mason University
- Col. Steven D. Fleming, University of Southern California
- Dr. George F. Hepner, University of Utah
- Lt. Col. Ian J. Irmishcer, Ph.D., U.S. Military Academy
- Dr. Helmut Kraenzle, James Madison University
- Dr. Rakesh Malhotra, North Carolina Central University
- Dr. Marco Painho, Universidade Nova de Lisboa
- Dr. Cordula Robinson, Northeastern University
- Dr. May Yuan, University of Texas at Dallas

#### **Outreach Committee**

The Outreach Committee is responsible for delivering USGIF's message to public and private partners as well as to policy- and decision-makers. The Outreach Committee oversees Congressional education initiatives, the Interagency Working Group, and the USGIF Awards Subcommittee.

#### **Planning Committee**

The Planning Committee is responsible for overseeing all USGIF events, to include the GEOINT Symposium, GEOINT Community Week, the USGIF Workshop Series, GEOINTeraction Tuesdays, and more. Volunteers select which programs they feel strongly about and assist in identifying topics, confirming participants, and working with speakers.

#### **Strategic Committee**

The Strategic Committee sets the direction of the Foundation and is composed of Strategic Partner Member representatives. Subject to oversight by the Board of Directors, this committee researches and recommends areas of strategic opportunity for Foundation operations.

#### **Technical Committee**

#### Chairs: Barry Barlow (Vencore) & Robert Mott (Hexagon U.S. Federal)

The Technical Committee identifies emerging trends and is a collection point for community needs, developing technical aspects of the tradecraft to demonstrate true interoperability from common community standards. Subcommittees include the Interoperability Outreach Subcommittee and the Emerging Technologies Subcommittee.

#### Tradecraft and Professional Development Committee

### Chairs: Mike Hauck (Consultant), Renard Paulin (Trusted Knowledge Options) & Steve Thomas (Ball Aerospace)

The Tradecraft and Professional Development Committee determines the basic and advanced qualifications for GEOINT professionals and assesses education and training programs, which prepare individuals for entry into or advancement in the profession. In 2018, the committee:

- · Planned and supported the execution of GEOINT Foreword.
- Developed the Lexicon Subcommittee that is focusing on developing a dictionary that "translates" GEOINT terms between the commercial and DoD/IC geospatial communities.
- Met with and received a briefing from the Army GEOINT Battalion at NGA.

Committees make decisions regarding all USGIF events, as well as the Scholarship Program, GEOINT Certification Program, Awards Program, and more.

# **Working Groups**

#### **Geospatial and Remote Sensing Law**

**Chairs: Gary Campbell (Womble Bond Dickinson) & John Martinez (Raytheon)** The Geospatial and Remote Sensing Law Working Group aims to educate its members on legal issues and developments related to geospatial information. Members are in-house counsel or legal representation for USGIF member organizations.

- Held monthly calls and presentations to include topics on legal issues associated with a government shutdown, regulatory issues potentially impacting contractors and their sub-contractors, the European Union's General Data Protection Regulation, and the Space Policy Directive aimed at streamlining licensing and regulations on commercial space.
- Hosted the annual Geospatial and Remote Sensing Law Workshop in December.

#### **NGA Advisory**

### Chairs: Jim Kwolek (Kwolek Consulting), Skip Miselli (Radiant Solutions) & Fredrick Turman (Peraton)

The NAWG brings industry and academia together to advise, recommend, and promote actionable ideas to improve NGA's acquisition processes.

- Held a discussion at the GEOINT 2018 Symposium with the USGIF NRO Industry Advisory Working Group on "Aligning Acquisition Strategies and Business Models for Decisions and Action."
- As an answer to NGA leadership, the NAWG produced the "Industry List of Top 10 Topics and Issues" to address concerns that affect NGA-industry interaction.
- NAWG hosted a successful Reverse Industry Day at NGA in November. The day is a continuing partnership with USGIF to provide NGA employees a unique opportunity to engage the industrial base to foster procurement and acquisition culture.

# Working Groups have more than **150 USGIF members** who actively volunteer their time to contribute.

#### **Machine Learning and Artificial Intelligence**

Chairs: Kevin Berce (NVIDIA), Scott Jachimski (Booz Allen Hamilton), Mike Rampino (Preferred Systems Solutions) & Holly Russo (MHM Innovations) The MLAIWG helps the community capitalize on the meaningful advances already achieved in this area and support progress in tackling near-term hard problems through education, information sharing, workshops, and other activities.

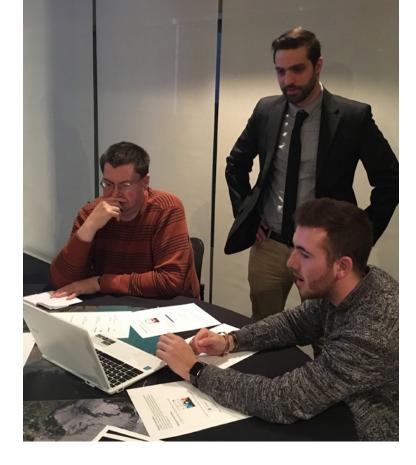
- The MLAIWG has built a community of interest approaching 150 people from government, academia, and industry.
- During GEOINT 2018, the MLAIWG held a panel on "Introduction to Machine Learning & Artificial Intelligence."
- Through meetings, events, and the State and Future of GEOINT report, the MLAIWG shared information across the community, helping to advance the applications of Machine Learning and AI.
- To close out the year, the group hosted a workshop during GEOINT Community Week with nearly 350 attendees.

#### **NRO Industry Advisory**

#### Chair: Nick Buck (Buck Consulting Group)

The NAIAWG brings together industry professionals from hardware, software, systems integrator, and SETA/FFRDC organizations to help the government achieve its agency transformation objectives.

- Based on government and IAWG member feedback, the working group name was modified from "NRO ASP" IAWG to "NRO" IAWG. The change reflects the more comprehensive, NRO-wide impact of our scope.
- Participated in a joint NAWG-NAIAWG panel session at GEOINT 2018 on "Aligning Acquisition Strategies and Business Models for Decisions and Action."
- Formed five "Action Teams" around a variety of challenge areas related to achieving the NRO FGA vision: Agile & DevOps, Software Acquisition Make-Buy Trades, Accelerating Speed to Capability, FGA Adoption & OCI, and Attracting Talent.
- Conducted three government-industry engagements to share action team results, capture government perspectives, and coordinate team exploration.



#### **Small Business Advisory**

Chairs: Randy Brown (Intelligence Consulting Enterprise Solutions, Inc.), Kelly Allen (Allen Integrated Solutions) & John Hartman (H2M Group) The SBAWG's primary objective is to assist small business members seeking to gain traction in the GEOINT market by facilitating opportunities to build relationships with the Intelligence Community, Department of Defense, civil agencies, prime contractors, and other small businesses.

- Held a Small Business Panel discussion on "Data for Small Business Decisions and Action" during the GEOINT 2018 Symposium.
- Hosted several meetings with guest speakers to include Diana Hughes, Director, NGA Office of Small Business Programs; and Ian Ahearn, NGA Deputy Director of Small Business Programs.

#### **Small Satellite**

**Chairs: George Flick (Noblis) & Timothy Deaver (Airbus Defence and Space)** The Small Sat WG educates the USGIF community on the user needs for and technical capabilities of small sats and associated tasking, processing, exploitation, and dissemination systems.

- Kicked off 2018 with its fourth Small Satellite Workshop, March 6-7. Held at NGA, the workshop featured an unclassified and classified day focused on evolving capabilities.
- Held a panel discussion at GEOINT 2018 titled, "Small Sat Interoperability: The Art of the Possible."

#### St. Louis Area

#### Chairs: Justin Bennett (Geodata IT), Andy Dearing (Boundless), Tara Mott (Esri) & Sekhar Prabhakar (CEdge Software Consultants LLC)

The SLAWG brings together professionals from the government (both NGA and local), military, industry, academia, and the local community to create lasting educational and community pathways to geospatial degrees, certifications, and/or careers in the St. Louis region.

- Outreach and participation grew to more than 200 participants.
- The SLAWG became involved with the St. Louis Development Center Project Connect working groups and open houses, and with the State of Missouri Department of Education to support STEM education and workforce development activities.
- SLAWG members created a whitepaper: "NGA and Beyond Building a Geospatial Industry Cluster in St. Louis, Missouri."
- SLAWG helped plan the content and agenda for the USGIF Geospatial Gateway Forum as part of Tech Showcase West at T-REX.

#### **Young Professionals**

#### Chairs: Bill Pilotte (ISPA Technology) & Isaac Zaworski (VRICON)

The YPWG is dedicated to promoting, supporting, and encouraging active involvement in the GEOINT Community through the development of projects and activities for young professionals.

- YPWG developed and supported more community events than ever in 2018 with 26 total projects. This included 10 networking events, 5 community outreach activities, 4 educational events, and 7 professional development & training programs.
- Highlights were YPG Third Thursdays, the GEOINT 2018 Golden Ticket Program, participation in the International Spy Museum's Spy Fest, and a Toys for Tots drive.

# OUTREACH & COMMUNITY ENGAGEMENT

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George Presiden The Mey



USGIF Awards Subcommittee Chair, Kevin Jackson, announces 2018 award winners.

#### OUTREACH

# 2018 Arthur C. Lundahl-Thomas C. Finnie Lifetime Achievement Award Recipient

The USGIF Board of Directors presents this award annually to an influential member of the GEOINT Community who has dedicated much of his or her life's work to the tradecraft. USGIF announced **Dr. Edward M. Mikhail**, professor emeritus of civil engineering at Purdue University, as the 2018 recipient of the Foundation's Arthur C. Lundahl-Thomas C. Finnie Lifetime Achievement Award. Mikhail is the 14th individual to receive this prestigious award and was recognized on stage during USGIF's GEOINT 2018 Symposium general session.

"I am profoundly honored to receive this award. As the only educator to be selected, I consider myself very privileged to join such a respected group of outstanding past awardees who have been stalwarts in safeguarding the security and well-being of our nation."

- Dr. Edward M. Mikhail



### **2018 Awards Program**

The USGIF Awards Program annually recognizes the exceptional work of the geospatial intelligence tradecraft's brightest minds. The awards are presented during the GEOINT Symposium. Anyone in the Community may nominate an individual or a team for an achievement award.

#### **ACADEMIC**



Dr. Kathleen M. Carley, professor, Carnegie Mellon University



Foundation Career Service Team, National Geospatial-Intelligence Agency

#### GOVERNMENT



Glen Canyon Dam Modeling Team, the U.S. Bureau of Reclamation and Autodesk Inc.

#### **INDUSTRY**



SpaceNet Team

#### **MILITARY**



Dr. Richard Massaro, USACE-ERDC Geospatial Research Lab

# **K-12 STEM Education and Outreach**

The Foundation's K-12 Program aims to foster general awareness of GEOINT and the myriad career opportunities the field offers.

#### **NEW IN 2018**

"In reflection after the GEOINT Symposium trip, many students shared that their favorite activity of the day was the map. Although we had practiced latitude and longitude coordinates over the course of the year, the map activities helped kids strengthen and solidify this skill. It was fun to watch the students moving around the map-estimating, collaborating, and sharing their thinking to find locations to solve puzzles. Running around the map with the purpose of finding locations was so much more engaging for the students than using a paper map at their desks."

- Sandra Janack, fifth grade social studies teacher, Shorecrest Preparatory School, St. Petersburg, Fla.

#### **Portable Planet**

Portable Planet is a 35-by-26-foot vinyl floor map designed for children and teachers to engage with, walk on, and explore its many features to complete geography and geospatial activities. The map, which is now available for schools and after-school programs to rent, was used by more than 530 students in 2018.

#### **STEMulate St. Louis**

USGIF created a free K-12 STEM event for students, families, and teachers. The evening included interactive activities and demonstrations from 10 organizations local to St. Louis, Mo. More than 140 people attended.









#### K-12 Subcommittee This subcommittee guides USGIF's promotion

of geographic literacy and GEOINT awareness among K-12 students, educators, and families.

#### **New School Partnerships**

USGIF gained educational partnerships with Seneca Ridge Middle School in Sterling, Va., and John Champe High School in Aldie, Va. These schools join Moorefield Station Elementary School in Ashburn, Va., as valued USGIF partners.



"We continue to be excited about the partnership between USGIF and Moorefield Station. Each year I feel that we have expanded the activities and opportunities for our students with this partnership. It started with the map and one grade level and now we have multiple grade levels working with USGIF on a variety of activities. USGIF has worked with our teachers to develop lessons and activities that push our students to use critical thinking skills and 21st century skills to become collaborators and contributors to our world."

- Karen Roche, principal, Moorefield Station Elementary School

# Special Thanks to the Partners Who Supported USGIF's K-12 Activities in 2018

- AGI
- BAE Systems
- Boundless
- CEdge Software
- Esri
- Harris Corp.

- LaunchCode
- LGS Innovations
- Maxar Technologies
- NGA
- St. Louis Science Center
- Saint Louis University

USGIF educated more than 2,000 students about GEOINT in 2018.

#### **ONGOING INITIATIVES**

#### **GEOINT 2018 K-12 Program**

USGIF invited 120 Tampa area students to experience GEOINT in action. Activities Included:

- USGIF's Portable Planet
- Exhibit hall booth tour
- A presentation on STEM careers
- A workshop hosted by Hexagon Geospatial

#### **Intro to GEOINT**

USGIF developed an "Intro to GEOINT" presentation that provides an interactive overview of the discipline. USGIF staff and volunteers shared the presentation with schools across the country, and reached more than 580 students in 2018.

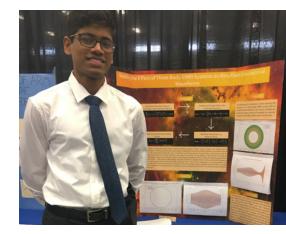
#### **Community STEM Events**

The Foundation participated in events that promoted science, technology, engineering, and mathematics (STEM). Events included STEAM Family Day at the Udvar Hazy Center, NGA's Family Day, and Altamira's STEM Showcase: Celebrating Fearless Women in STEM event in Dayton, Ohio.

USGIF collaborated with LearningPlunge's GeoPlunge Tournaments in St. Louis, Mo., and Washington, D.C., through which 300 students competed in the geography card game.

#### **Science Fairs**

USGIF awarded \$1,000 in science fair prizes at the Fairfax and Loudoun County Regional Science Fairs. Staff also participated as science project judges in the South Lakes High School Science Fair.



# **GEOINT 2018 Symposium Student Assistant Program**



The Student Assistant Program is a fantastic opportunity for students from USGIFaccredited or affiliated schools to experience the GEOINT Symposium. These volunteers assisted with training, answering attendee questions, and more. Students also had the opportunity each day to attend Symposium events as well as to network with GEOINT professionals.

#### USGIF hosted 18 volunteers from 14 schools at the GEOINT 2018 Symposium

#### SCHOOLS REPRESENTED

Fayetteville State University George Mason University Gettysburg College James Madison University North Carolina Central University Northeastern University NOVA Information Management School, Universidade Nova de Lisbon

.....

Pennsylvania State University United States Military Academy University of Missouri – Columbia University of Redlands University of Southern California University of South Carolina University of Utah

# Externship Program



In summer 2018, USGIF hosted seven students from Gettysburg College, George Mason University, and The College of William & Mary for a geospatial intelligence and national security externship. Over the course of three days, the students visited a variety of companies and government agencies to gain a better understanding of the GEOINT Community, the skills needed to perform in the industry, and technologies used in the past, present, and near future.

"The USGIF Externship was a unique learning experience providing the opportunity to gain valuable insight into the expanding GEOINT field through visiting specific companies such as VRICON, Tesla Gov., Amazon Web Series, the Army Geospatial Center, and NGA."

- Alec Smith, sophomore, Gettysburg College

# **In Other USGIF News**

- USGIF welcomed Karin Fitzgerald as its new chief operating officer and Ronda Schrenk as the Foundation's new vice president of programs.
- Dr. Camelia Kantor's article on "GEOINT Education Foresight: A World of Micro-credentials" was featured in the July edition of the American Society of Photogrammetry and Remote Sensing's *Photogrammetric Engineering & Remote Sensing* publication.
- USGIF participated in GIS Day events at George Mason University.
- Shameka Jordan presented at the 2018 GAIN Conference on USGIF's successful GEOINT 2018 Symposium marketing campaign.
- USGIF sponsored or exhibited at:
  - 2018 Esri Federal GIS Conference
  - 2018 Esri User Conference
  - Geography 2050



# FUNDRAISING

# oport EdGEOcation

d providing programming for K-12

### **Donate Today B8693**

editing collegiate GEOINT programs

usgif.org/donate

Awarding \$100,000+ in scholarships annually

IT TAKES COURAGE AND STRENGTH TO ASK FOR HELP

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USGIF

CFC#88697

Support EdGEOcatio

**Donate Today** 

USGIF exhibited at CFC charity fairs to promote the Foundation's annual EdGEOcation Giving Campaign.

# **EdGEOcation Giving Fund**

The Giving Fund is a way for GEOINT supporters to give back and support USGIF's K-12 educational programming.

#### **Donations Directly Support**

- Providing Intro to GEOINT presentation materials to classrooms
- Sponsoring STEM events and judging science fairs
- Developing and delivering learning materials for broad use
- Purchasing and donating Earth science and geography materials to underserved schools
- Collaborating with USGIF Organizational Members and partners to provide hands-on learning activities

#### 2018 Giving Campaign

In October, USGIF launched its third EdGEOcation Giving Campaign. As part of the 2018 campaign, USGIF offered pledge cards to attendees at its annual Fall GEOGala as a new way to donate. The evening raised \$3,000, and the overall campaign, which ran from October 2018 to January 2019, **generated a total of \$9,700**.



#Give4GeoEd

# The Giving Fund Raised \$17,780 in 2018



For the second year, LGS Innovations generously donated \$7,500 in support of EdGEOcation.



#### **USGIF participated in these CFCNCA charity fairs**



### **PUBLICATIONS** 20,000+ receive the *trajectory* enewsletter 15,000+ subscribe to the print edition of *trajectory* magazine

# **State and Future of GEOINT Report**

USGIF's annual State and Future of GEOINT Report is an unclassified collection of articles by volunteer authors intended to foster knowledge sharing and discussion about the future of the global GEOINT Community. The 2018 report featured 17 articles by 85 authors who participated in a virtual call for abstracts as well as in-person content exchanges in Denver, Los Angeles, St. Louis, and Northern Virginia. 2018 marked the first year an Editorial Review Board of subject matter experts contributed to the editing of the report.



# **Homeland Security**

In September, USGIF released a new report titled "Building Resilient Communities Through Geospatial Intelligence." GEOINT has emerged as a valuable tool for disaster management, demonstrating tangible benefits toward enhancing capabilities and infrastructure in the advent of more frequent, increasingly catastrophic disasters. The U.S. Department of Homeland Security selected USGIF to explore the rapidly evolving domain of GEOINT as it relates to community resilience. The final report includes articles on critical infrastructure protection, emergency communications, climate change, case studies, lessons from the military and the developing world, and more.

# **Trajectory**

*Trajectory*, the official magazine of USGIF, is a multi-channel content platform that provides high-level thought leadership for USGIF members as well as the overall defense, intelligence, homeland security, and commercial GEOINT communities. *Trajectory* focuses on the future of GEOINT, and its goal is to be the preeminent resource on issues of significance to the global GEOINT Community.

#### In 2018, trajectory produced feature articles on:

- Commercial GEOINT
- Operational Machine Learning
- Safety of Navigation
- ODNI LeadershipThe State of Al
- USGIF's Young Professionals Group
- U.S. Domestic Crisis Mapping
- GEOINT Law & Policy
- The "Five Eyes" International Intelligence Alliance

*Trajectory* won a platinum Hermes Creative Award for its website and also received an honorable mention in the category of Technology Publications from the Content Marketing Institute.



# In 2018:

- 223 articles were posted on the trajectory website.
- The *trajectory* website had nearly 90,000 visits by approximately 65,000 users.

#### As a result of reading trajectory:

- 47% of readers have attended a USGIF event
- 30% of readers have recommended USGIF membership to a colleague
- 61% of readers discussed or shared an article with a colleague



12%

Overhead

\$6.90M

Revenue

88% Programming

\$7.18M

**Expenses** 

# **Financial Report**

#### **Revenue & Expenses**

For fiscal year 2018, ending June 30, 2018, USGIF saw a slight decrease in membership dues and GEOINT Symposium revenue due to company consolidations. Expenses were higher for GEOINT 2018 due to a slightly more expensive host city. Programs and services increased in FY2018 while keeping member and sponsorship investments low.

Year Ended June 30, 2018	2018	2017
Revenue		
Convention and trade show	\$4,961,786	\$4,788,266
Events	472,332	855,905
Membership dues	1,197,534	1,373,676
Academic Programs*	86,011	12,070
trajectory magazine	145,208	211,276
Other revenue	37,657	6,631
Total revenue	6,900,528	7,247,824
Expense		
Program services		
Convention and trade show	4,804,673	4,514,705
Events	480,524	705,285
Membership Services	335,373	344,051
Academic Programs*	433,078	201,354
trajectory magazine	264,975	285,490
Total program services	6,318,622	6,050,885
Supporting services		
General and administrative	866,161	826,140
Total expense	7,184,783	6,877,025
Change in net assets before investment income	(284,255)	370,799
Investment income	20,288	34,174
Change in net assets	(263,967)	404,973
Net assets, beginning of year	3,353,597	2,948,624
Net assets, end of year	\$3,089,630	\$3,353,597

Net assets, end of year \$3,089,630 \$3,353,597 USGIF's fiscal calendar ends June 30; FY18 financials are reported for July 1, 2017, through June 30, 2018. \*100% of scholarship donations are distributed.

**2018** 

# MEMBERSHIP

"USGIF meetings and online discussions have expanded my professional network, assisted me in learning new geospatial analysis techniques, and keep me up-to-date on national GEOINT issues and initiatives."

- Dan Steiner, Owner, Orion Mapping, LLC

"USGIF increases my opportunities to grow my GEOINT awareness, expertise, and network. The interactions and knowledge shared are invaluable to evolving and maturing crossdiscipline innovation across agencies, industry, and academia."

- Joseph P. Boutte, CTO, QuadTech Analytics

"USGIF Membership provides an excellent forum where government, industry, and academia can come together and where the individual member's contribution is equally valued."

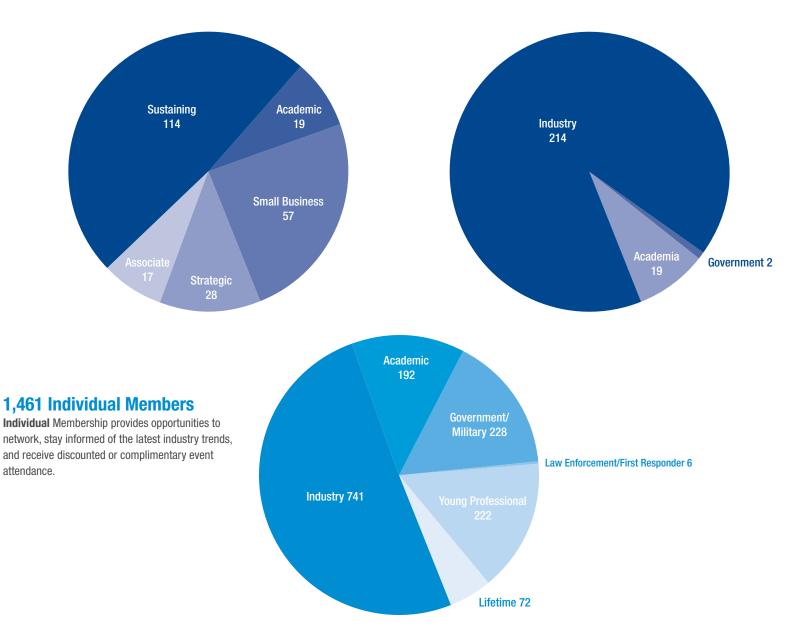
- Peter Makowsky, Consultant

# **Organizational & Individual Membership**

USGIF offers Organizational and Individual Membership, each of which provides its own unique set of benefits to different subsets of the GEOINT Community.

#### **235 Organizational Members**

**Organizations** seeking to establish themselves as thought leaders in the GEOINT industry, raise brand awareness, or participate in the GEOINT Symposium are well served by becoming Organizational Members.



# **Organizational Members**

#### **STRATEGIC PARTNER**

accenture	()_BOEING	THE SCIENCE OF WHERE	IBM.	Person and	<b>perspecta</b> .
Adobe	Booz   Allen   Hamilton	GENERAL DYNAMICS	JACOBS	NORTHROP GRUMMAN	Raytheon
AGI	CACI EVER VIGILANT	HARRIS	leidos	OGSYSTEMS a PARSONS Company	TEXTRON Systems
BAE SYSTEMS	carahsoft.	Hewlett Packard Enterprise	LOCKHEED MARTIN		
Ball	ENGILITY Engineered to Make a Difference	HEXAGON US FEDERAL	MAXAR	Peraton	

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LizardTech Luciad ManTech Mapbox MapLarge MapR Technologies MarkLogic Corp. Mellanox Federal Systems Micron Technology Neo4i NetApp Next Century Corp. NJVC I I C Noblis NVIDIA Corp. Observera Inc. Octo Consulting Group Inc. Open Geospatial Consortium Inc. (OGC)OpenText **Orbit Logic Incorporated** Orbital Insight Inc. PAE PAR Government Systems Corp. (PGSC) Pitney Bowes PIXIA Corp. ProCleared LLC PTFS Pure Storage PwC Quadrint Inc. **Radiance Technologies** Rafael Advanced Defense Systems Red Hat Red Hen Systems LLC **Riverside Research** S2 Analytical Solutions Safe Software Inc. SAIC Sierra Nevada Corp.

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for supporting USGIF through your membership, donations, sponsorships, volunteering, and involvement. Our success is truly a result of your commitment to the GEOINT Community.



# USCAFF

United States Geospatial Intelligence Foundation Build the Community | Advance the Tradecraft | Accelerate Innovation

The only organization dedicated to promoting the geospatial intelligence tradecraft and building a stronger community of interest across industry, academia, government, professional organizations, and individuals.

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