ISIF WORKING GROUPS

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ISIF WORKING GROUPS: BE ENGAGED!

According to its stated vision, the International Society of Information Fusion (ISIF) is the premier global information resource for multidisciplinary approaches for theoretical and applied information fusion techniques. As such, the Society provides its community with a number of activities that aim at fulfilling the six main thrusts of its mission: advocate, serve, communicate, educate, integrate, disseminate, and collaborate.

Most people would easily recognize the FUSION conference series and the *Journal of Advances of Information Fusion* as major initiatives sponsored by the Society, while its own members might also list the membership services as another great activity supporting ISIF's mission. Although the Society is actually involved in many more activities that support its mission, there is a fourth key component within its portfolio of benefits—one that many of us are not even aware of—the ISIF Working Groups (WGs). This brief article is meant to provide an overview of what ISIF WGs are and how beneficial they are to our community.

FOSTERING GROUPS OF INTEREST

Information fusion is as fascinating as it is broad. After all, its definition accommodates a plethora of techniques and research topics that are key to ISIF's vision. Some of those topics have already reached maturity, and we, as stellar researchers and practitioners in our ranks, bring new advances every year. However, there are situations in which topics of interest to the overall science of information fusion need a little help to reach maturity and become a regular source of success stories. These include new ideas that must be developed, specific research problems in need of some structuring, groups of interest that must gather critical mass to thrive, and others that would need a kick-start before getting up to speed. WGs are an amazing tool to address this problem, and it is relatively easy to create one.

CURRENT AND PAST ISIF WORKING GROUPS

WGs are by no means a new ISIF feature. In fact, the Society already has a number of positive experiences in this area, which are listed in the following.

The Multistatic Tracking WG (MSTWG) was founded in 2004 and became an ISIF WG in 2007, with the objective of promoting collaboration among its members in multisensor fusion and tracking, and a focus on multistatic sonar and radar. This collaboration has been achieved through 17 regular meetings, five teleconferences, 11 special sessions at conferences, and the analysis of seven common data sets. The MSTWG ended its activities in July 2016, and it is fair to say that the group achieved excellent results and was very influential in its field.

The Fusion Process Model and Frameworks WG (FPM-FWG) was created in 2010 to promote discussion and consensus development on the characterization and specification of a canonical fusion process, major fusion functions (e.g., situational estimation), and related software frameworks. At inception, it was clear that this was an ambitious charter, especially in the sense of achieving consensus on such process and framework specifications. As a result, the basic goal for the FPMFWG was to become the agent or mechanism for promotion of lively collegial discussion and archiving of alternative ideas and models and serve to keep this topic in front of the community. The FPMFWG was decommissioned in 2015, and its activities continued separately as a discussion group.

The Evaluation of Techniques for Uncertainty Representation Working Group (ETURWG) was created in 2011 with the intent of bringing together experts, researchers, and practitioners from the fusion community to leverage the advances and developments in the area of evaluation of uncertainty representation to address the problem of assessing uncertainty representation and reasoning approaches for high-level information fusion systems. The group aims at establishing features required for any quantitative uncertainty representation to support the exchange of soft and hard information in a net-centric environment, developing a set of use cases involving information exchange and fusion requiring reasoning and inference under uncertainty, and defining evaluation criteria supporting unbiased comparisons among different approaches applied to the use cases.

ETURWG remains active, and as of this writing, it has conveyed 101 meetings (mostly telecons, averaging 1 h), published 43 papers in the seven special sessions, and created a draft of an evaluation framework.

WHY AND HOW TO BE ENGAGED

The principal advantage to ISIF for the formation of a WG is an enlargement of its active base of researchers engaged in collaborative efforts and supporting ISIF's mission and activities. Currently, there are a couple of groups that can potentially engage.

The advantages members have when forming an ISIF WG include the following:

► Official recognition and status as an ISIF WG.

► Minimal bureaucratic overhead. ISIF asks that each group report in writing or with a brief presentation to the annual meeting of the ISIF board of directors. The group is free to manage its membership, meeting schedule, and activities.

► Support for WG meetings. It is customary (though not required) that each WG hold a day-long meeting in conjunc-

tion with the annual FUSION conference. The meeting is generally held on conference premises, on the day immediately preceding or following the conference. The cost of the meeting is usually covered under the conference budget.
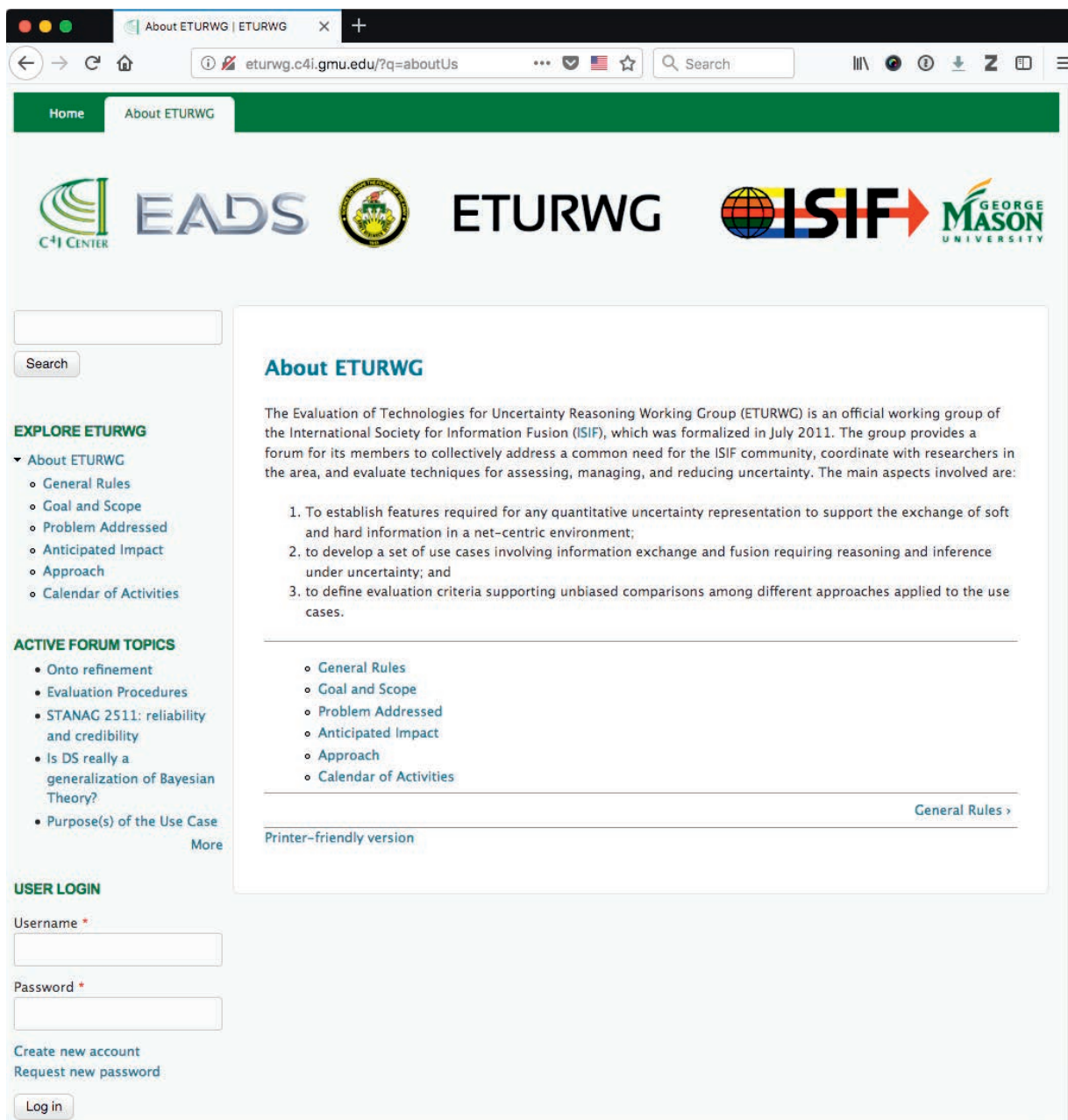
► Conference special sessions. Official ISIF WGs are encouraged to hold a special session on their topic as part of the annual fusion conference. Approval of the special session proposal, while not guaranteed, is highly likely.

Any ISIF member can submit an application for forming a WG, and all ISIF members can participate in the WGs. The application process is straightforward and basically involves crafting a proposal that explains what the goals of the group are,

how it benefits the IF community, and other details that would then be presented to the ISIF Board of Directors.

Once formed, the logistics, level of commitment, modus operandi, and other aspects of the WG are entirely at the discretion of their members, and the coordination with ISIF will be the responsibility of the WG chairs.

WGs are a powerful tool that ISIF brings to its members and a key part for the Society to realize its vision. It is available to all of us and constitutes a wonderful way of developing ideas and contributing to the advancement of our community. If you are interested, send an e-mail to the ISIF vice president for WGs (contact available at http://isif.org/working-groups/isif-working-groups).

The ETURWG website.