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## Networking among young scientists

Young scientists devote substantial time to academic training by learning sophisticated measurement, modeling, and data analysis techniques. This is challenging and leaves little time for activities such as additional training in transferable skills (such as scientific writing, project and time management, presentation techniques) and networking among colleagues. However, these skills and networking activities are indispensable for a successful career in science and require venturing beyond the confines of the university or research group.

The main source for connecting to a network of scientific colleagues is one's academic advisor. This source for networking largely depends on the advisor's willingness and active efforts to share their scientific network. An additional and independent source can be networks established among young scientists themselves that provide access to the international community of scientists in an early career stage. Today's young scientists may become future leaders in their field and active networking among these colleagues provides the foundation for future collabora-

tions and projects.

This article provides an overview of networking activities in two international young scientist networks. At first, the objectives of the networking activities are described, followed by discussing the tools used for connecting young scientists, membership statistics, and concluding with considerations for improvements.

The FLUXNET Young Scientist Network (YSN) and the GHG-Europe YSN are two examples from the iLEAPS community that connect young scientists internationally. Their overall objectives are to establish a network among colleagues at an early career stage, and to provide an informal exchange platform for questions regarding research, career and funding opportunities. Both networks consider young scientists to be students (from undergraduate to PhD level) or postdocs, who do not lead their own research groups and who are not main supervisors of PhD students. 'Young' in this case refers to the career stage, and not the actual age of the members ('academic age' concept).

The main tools used for networking among the young scientists are a mailing list, an interactive website, and more recently an online networking platform called ResearchGate (RG, www.researchgate.net). These internet-based

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Grants & Fellowships	With Abba <a href="http://www.abba.ethz.ch/...">http://www.abba.ethz.ch/...</a> 1 day ago by Enrico Tomelleri	3	6	🔔
Meetings	Dear GHG-EU young scientists, I ho... 23 days ago by Enrico Tomelleri	9	9	🔔
Summer Schools	5th EUFAR FP7-EUROSPEC Training Cou... Mar 13, 2012 by Enrico Tomelleri	10	10	🔔
Job Offers	Research Fellowship to support a Ph... Jan 18, 2012 by Enrico Tomelleri	9	9	🔔
General discussion	<a href="http://www.hukseflux.com/products/p...">http://www.hukseflux.com/products/p...</a> Jul 28, 2011 by Enrico Tomelleri	2	2	🔔
Specific issues	A collections of useful information... May 2, 2011 by Sebastian Wolf	1	1	🔔

Figure 1. GHG-europe workgroup at ResearchGate

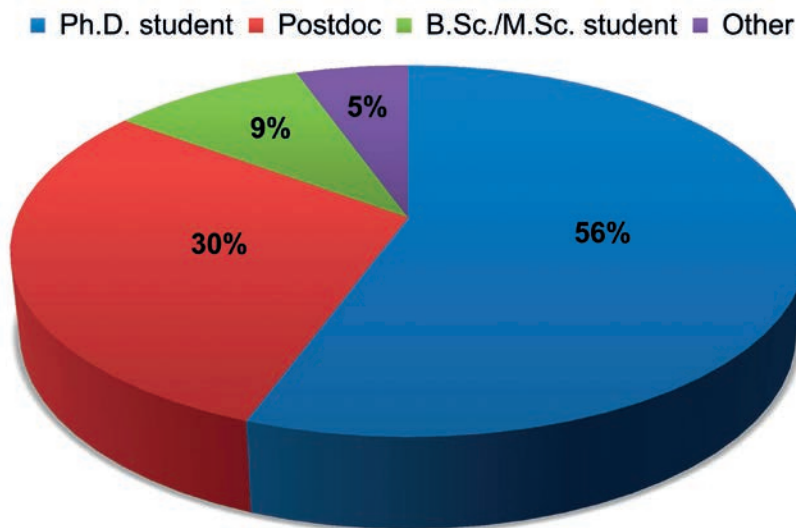


Figure 2. FLUXNET YSN member composition

networking activities are complemented by informal social meetings at conferences that provide the opportunity for direct interactions with colleagues. Such events are traditionally organized at big conferences (such as EGU General Assembly, AGU Fall Meeting, iLEAPS Science Conference) with attendance typically ranging from 20 to 40 people.

The mailing lists are currently the most actively used component of the YSNs, and are used to distribute job offers and announcements for workshops, summer schools and social meetings. To archive announcements, for scientific discussions, file exchange and to present oneself, the FLUXNET YSN has been using an interactive website (MS SharePoint -based). This setup is, however, limited to one particular network and cannot be linked to other platforms easily (*nota bene*: many members are part of several networks), or retained when not being ‘academically young’ anymore. Therefore, and with the increasing popularity of social networking media, both YSNs have recently implemented the platform RG to complement the networking activities.

RG is a social networking platform that can be seen as the ‘Facebook for Scientists’, but which extends Facebook’s capabilities into a professional context and provides specific tools for the scientific community. While Facebook is mainly used for private networking, RG is intended for professional networking among scientific

colleagues. Among these tools are discussion, file sharing and poll functionalities as well as the sharing of publications including citation and impact statistics. RG also provides a personal profile to present oneself with scientific interests and expertise, a key feature that is largely underestimated by young scientists so far.

Once an RG profile is created, it can be easily linked to other workgroups at RG, such as the recently emerging FLUXNET group with experienced scientists. The workgroups within RG are closed (on invitation only) and used within the YSNs to compile information on job offers, conferences, workshops and summer schools, to discuss emerging research topics, and to assemble helpful information on scientific writing, reviewing and young scientist life (Fig. 1). First experiences with this new and powerful tool have shown the potential for improved networking among young and experienced scientists across the globe, and also for bridging the gap between them.

The number of members in these two YSNs has been increasing since establishment (FLUXNET YSN in 2004, re-launch in 2009; GHG-Europe YSN in 2011) and regular status renewals are performed to keep the member lists updated. In April 2012, the FLUXNET YSN had about 300 members from 38 countries with the majority being PhD students (56%) and post docs (30%, Fig. 2). Because of project-related ge-

ographical confinement, the GHG-Europe YSN is much smaller (25 members) but with similar composition (mainly PhD students) and some crossover; with 20% of the members also being members of the FLUXNET YSN.

Much potential still remains for young scientists to benefit more from their membership in these networks, where most of the contributions are currently made by the organisers. The increasing popularity of social networking media provide great potential for young scientists to participate more actively in networking activities using state-of-the-art communication technology.

Further information about both YSNs can be found on their websites: FLUXNET YSN ([fluxnet.ornl.gov/young-scientists-network](http://fluxnet.ornl.gov/young-scientists-network)), GHG-Europe YSN ([www.ghg-europe.eu/index.php?id=165](http://www.ghg-europe.eu/index.php?id=165)). A good overview on RG is given by an article published by the New York Times in January 2012 ([www.nytimes.com/2012/01/17/science/open-science-challenges-journal-tradition-with-web-collaboration.html](http://www.nytimes.com/2012/01/17/science/open-science-challenges-journal-tradition-with-web-collaboration.html)). ■

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# FLUXNET Young Scientist Network (YSN)



The FLUXNET YSN aims to connect early career scientists working within the FLUXNET community and the regional networks.

Young scientists are considered to be students (undergraduate to PhD) and Postdocs, who do not lead their own research groups and who are not the main supervisor of PhD students.

The YSN consists of a mailing list, interactive website and a ResearchGate workgroup. Together, these resources constitute an informal exchange platform for questions regarding research, career and funding opportunities. Social meetings at conference complement these online tools.

Further information and details about how to register can be found on the FLUXNET Website ([fluxnet.ornl.gov/young-scientists-network](http://fluxnet.ornl.gov/young-scientists-network)).