



# PINEMAP

## Aim 1 Team Science Report

October 2013

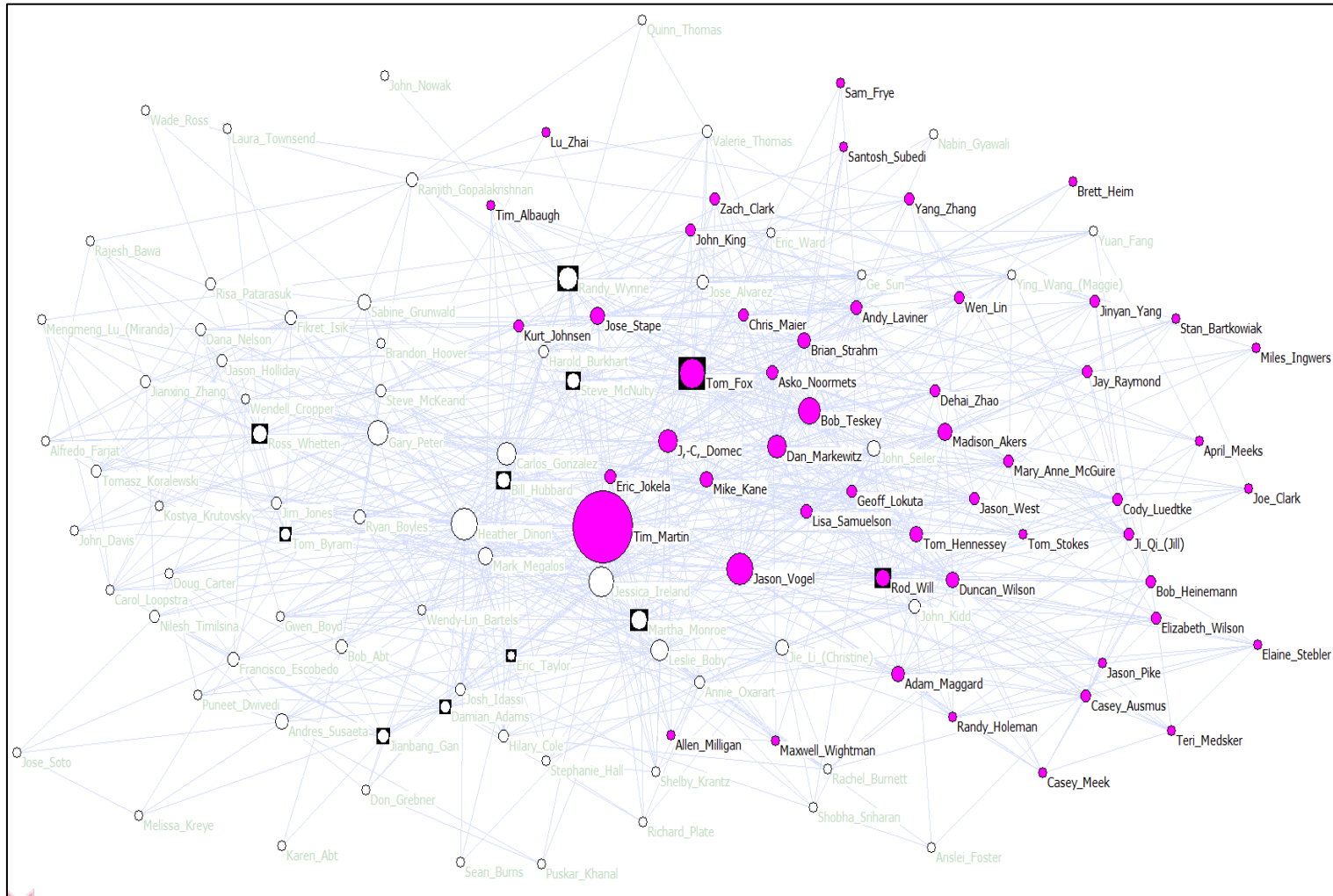
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This report is customized for Aim 1 to illustrate interactions among participants and network structure. This should be read with the complementary “Team Science in PINEMAP Report” and “PINEMAP Whole Network Team Science Report.”

Your feedback on the usefulness and limitations of this research is welcomed and important. Please send any questions and input to [wendylin@ufl.edu](mailto:wendylin@ufl.edu).

# WHOLE PINEMAP Network: Aim 1 highlighted

Visualization is based on strong ties (3 & 4). Node Size is betweenness centrality for the whole PINEMAP network. Leaders = boxes



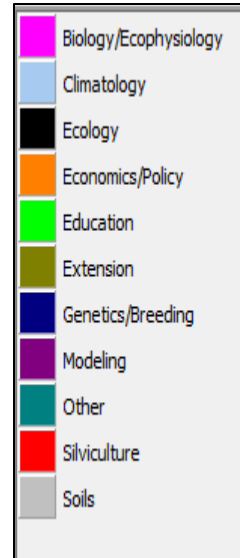
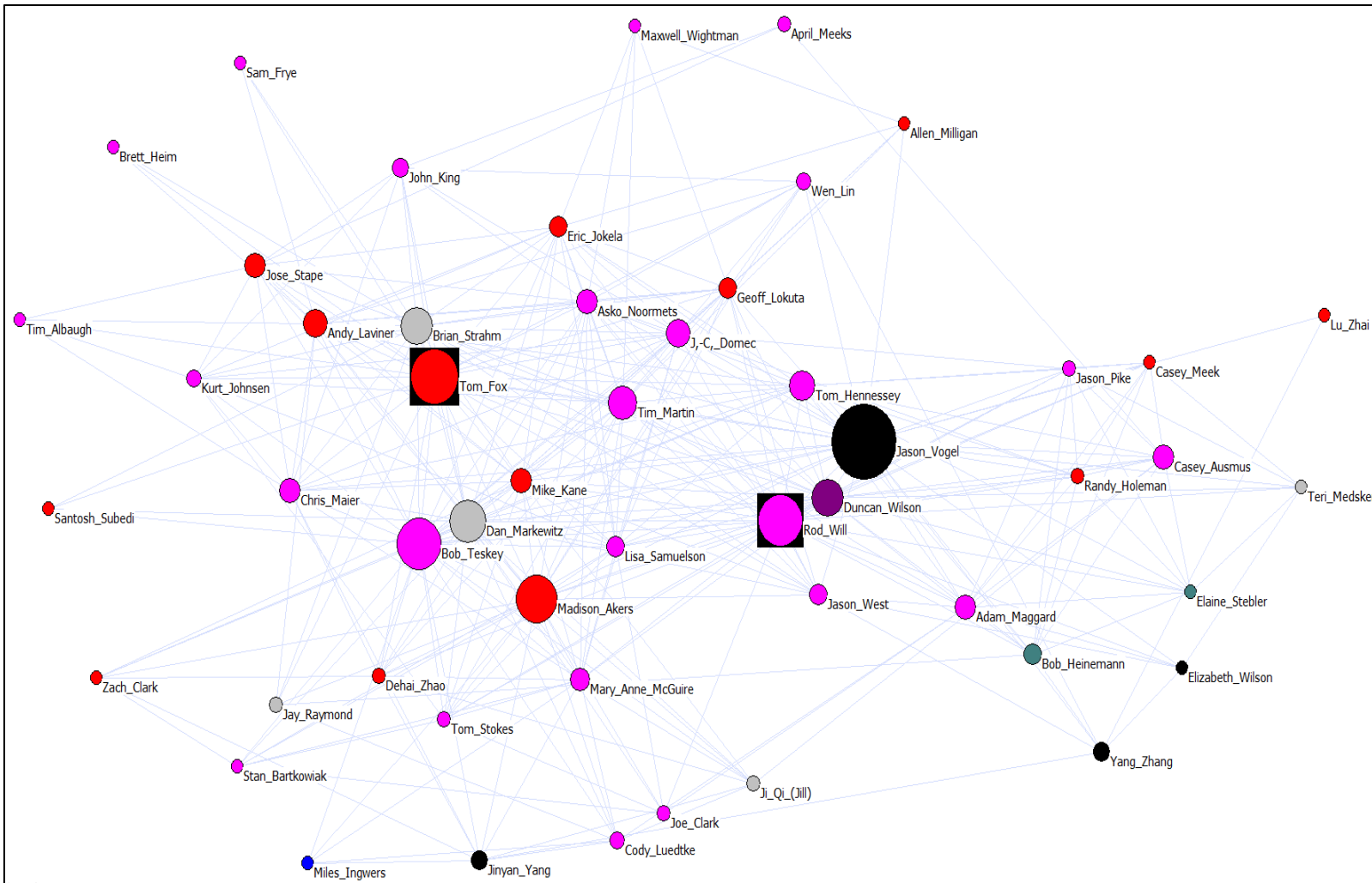
The AIM 1 sub-network is the biggest Aim group, representing 42% of the whole PINEMAP network (52 members). Aim 1 participants occupy a large proportion of the whole PINEMAP network. Many Aim 1 participants are more centrally located in the whole network than other Aim group members, who remain on the periphery. Larger nodes indicate key brokerage positions. These individuals are well connected to participants in the whole PINEMAP network and may facilitate strong cross-Aim interactions.

## Reflection Questions

- Where are students located in this network?
- Are mechanisms being explored to facilitate changes in students' positions over time?

## Aim 1 Sub-network: DISCIPLINES

Visualization based on strong ties (3 & 4). Node size indicates betweenness centrality for the Aim 1 sub-network. Node color = **DISCIPLINE**, Leaders = boxes.



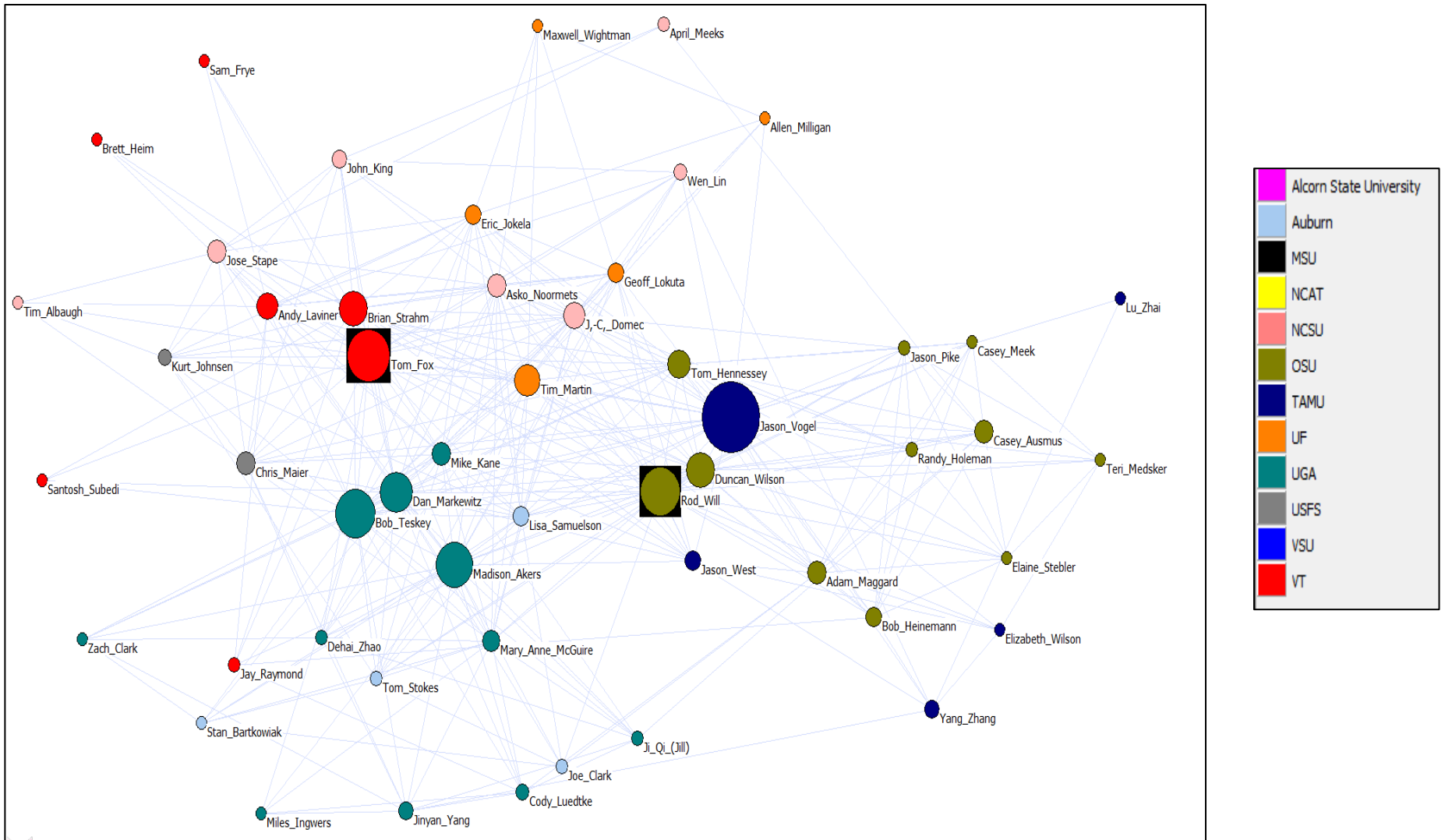
The Aim 1 sub-network brings together the largest number of disciplines in PINEMAP. However, ecophysiological/biologists and silviculturalists dominate. Larger nodes represent key brokerage positions. Individuals in these positions likely facilitate strong interactions among members WITHIN Aim 1.

### Reflection Questions

- To achieve Aim 1 goals, are disciplines appropriately integrated?
- Do you notice differences among Aim 1 brokers in cross-Aim interactions (previous network diagram) vs. within-Aim interactions (this diagram)?

## Aim 1 Sub-network: INSTITUTIONS

Visualization based on strong ties (3 & 4). Node size indicates betweenness centrality for the Aim 1 sub-network. Node color = **INSTITUTION**, Leaders = boxes



The Aim 1 sub-network congregates members from virtually all institutions engaged in PINEMAP. UGA and OSU seem to have higher representation, followed by VT, NCSU, TAMU, and Auburn.

### Reflection Question

- Do members of other universities need to be better positioned as brokers to enhance Aim 1 activities?

## Aim 1 Sub-network visualized differently

Figure 1 is based on strong ties (3&4).  
Figure 2 also includes communication (2).  
Node size = betweenness centrality for the whole PINEMAP network.

### Reflection Questions

- The Aim 1 network displays differently when we consider different types of interactions.
- Notice the greater number of ties when we include communication.
- Do you notice changes in the nodes that occupy brokerage positions? Remember, larger nodes are facilitating interactions across the whole PINEMAP network. Collaboration and communication may require different types of brokers...

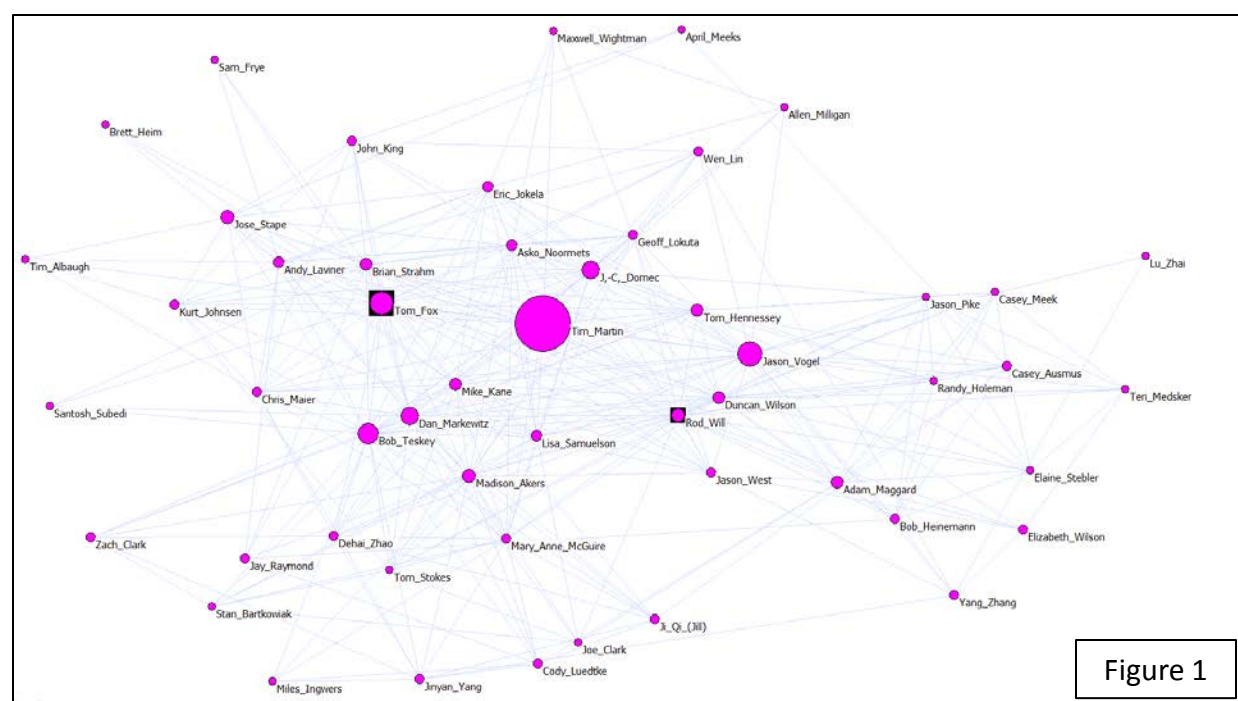


Figure 1

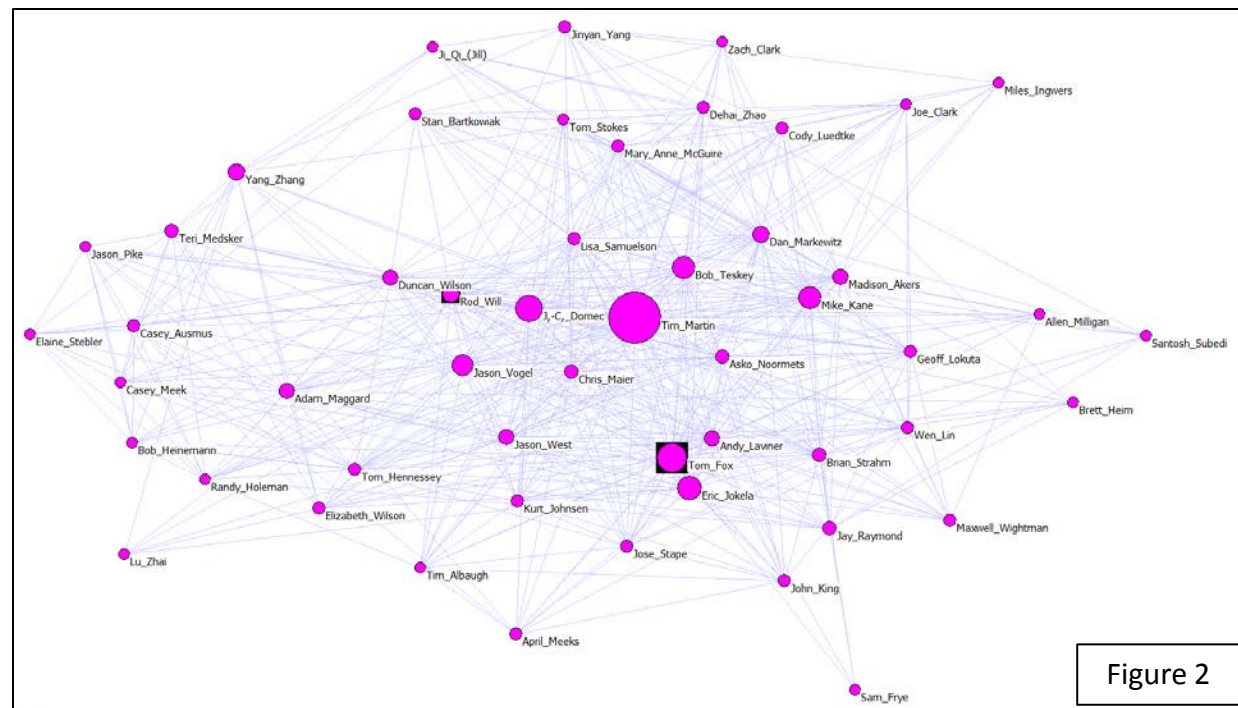
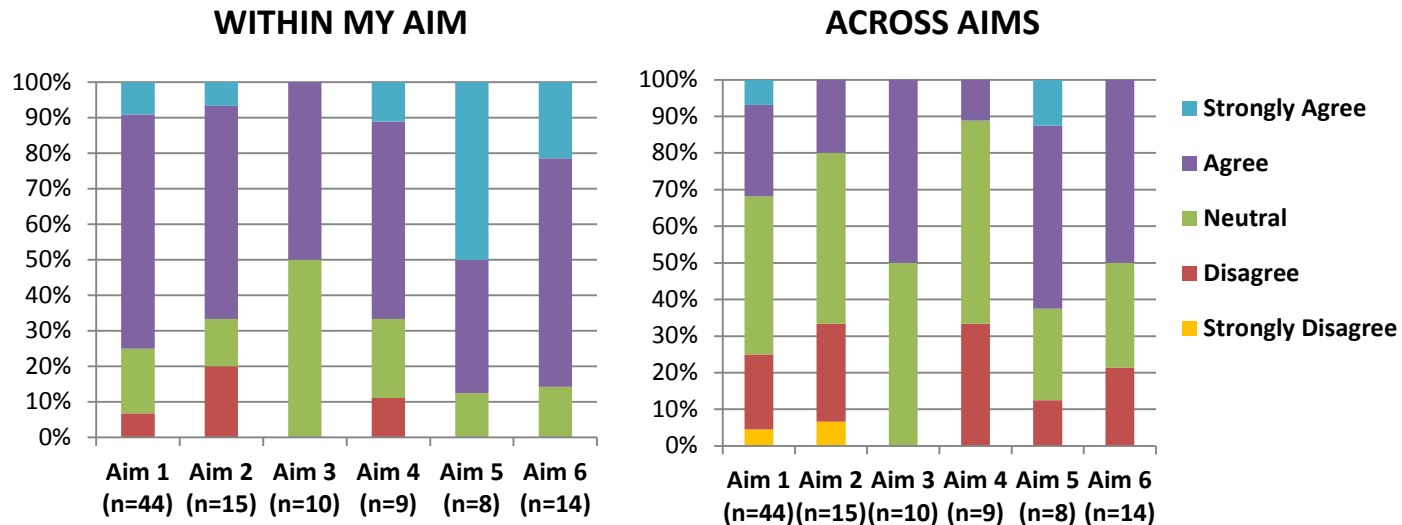


Figure 2

# Communication and Integration

In the April 2013 survey, we asked respondents to rate their level of agreement with the statements “Communication within my Aim is working well” and “Communication across Aims is working well.” Responses to these questions are summarized in the graphs below. In addition, during an activity at the annual meeting, we asked Aim groups to brainstorm and identify platforms that promote integration among Aim 1 and other Aims. The platforms identified by Aim 1 are listed below.



**PLATFORMS** identified at the 2012 annual meeting for how Aim 1 integrates with others in PINEMAP:

- Aim 2 – Class, WaSSI (LAI, ET, other data), 3PG, Tier I, II, III, G&Y, website, annual meeting
- Aim 3 – Class, WUE/Isotope, Tier II, website, annual meeting
- Aim 4 – G&Y, carbon, soil C, Tier I, Tier II, WaSSI, fert. efficiency, website, annual meeting
- Aim 5 – Internship, modules, website, annual meeting, class
- Aim 6 – DSS, outreach, class, webinar, fact sheets, class, website, annual meeting
- TerraC

## Reflection Questions

- Does Aim 1 need to improve cross-Aim communication?
- How is C (Carbon) an integrative platform? What about fertilizer efficiency? How do they foster collaborative interactions across Aims, disciplines, geographies or institutions?
- Are mechanisms in place to facilitate on-going interaction within the integration platforms that have been identified?