



## Putting the Discipline in Interdisciplinary (Speed-Dating Research)



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Our future is filled with enormous promise for the development of radically new technologies to empower humankind. This unusual time in science, with nearly limitless opportunities for unparalleled advancement, will thrive only if scientists in different disciplines can work together creatively. Never before has the need for an interdisciplinary approach to research been so critical to the success of the research itself. If engineers can talk with biologists and theoretical physicists can brainstorm with experimental chemists, if mathematicians work closely with protein folders and computer scientists talk to system integration engineers, only then will the next era of scientific discovery and technology flourish. Unfortunately, it is frequently very challenging to have these kinds of interdisciplinary conversations in the context of academia, which separates disciplines by departments, faculty, programs, and classes.

In the COINS program, we have an unusual situation within academia where more than thirty faculty members from eleven different departments are working together. The challenge we face, though, is how to best produce and maximize opportunity from this highly interdisciplinary team. Given our unique environment, how do we take advantage of it?

To respond to this dilemma, we applied a new approach to attempt to foster scientific collaboration across disciplines. Our idea relies on a concept called “thin slicing,” a term that Malcom Gladwell uses in his recent book, *Blink*. According to Gladwell, thin slicing is a way of thinking quickly that we are constantly applying. When we sense danger, read a stranger, or react to a new idea, we tap our “adaptive unconscious” to instantly evaluate a complex situation. In his book, Gladwell affirms that this approach is a valid, powerful, and useful way to make decisions. Perhaps one of the best-known examples of thin slicing is the rapidly growing phenomena of speed dating, wherein equal numbers of men and women are lined up across from one another, and then given several minutes to meet each other before moving on to the next person. Using thin slicing, potential candidates can be screened much more quickly than the more old fashioned, shall we say, dinner-and-a-movie approach. The value of speed dating is that compatibilities can be assessed as powerfully in the first several minutes of an encounter as they can over a much longer period of time. With speed dating, one can more efficiently “cut to the chase.”

At COINS, we decided to apply this approach to scientific research, which to our knowledge has never been done. With a group of ten nanoscience graduate students and postdocs, we speed-dated research: we split the group up into pairs, gave them exactly three minutes to talk (using an egg timer), and then had them rearrange into a new “research date.” Rather than think about whether or not the person sitting across from them would be a good lifelong partner, we asked them to think about what they might collaborate on together and what scientific challenges and aspirations they shared. Each couple was given a sheet of paper and asked that at the end of the four minutes they write down a title for a joint collaborative project. In this manner, with a small test group of students and postdocs (specifically, ten people from six departments and five different research groups), we produced 45 proposal titles in less than two hours. In some cases, the titles reflect merely convenient commonalities of interest. However, a number of research titles are highly creative, interesting, and innovative in the way that they rely on interdisciplinary approaches to define and solve a problem. The outcomes of these proposed collaborations remain to be seen; but we believe that we have made a powerful first step in the direction of increasing interdisciplinary dialogue. This alone is an important development, and we feel optimistic of the benefits that it will bring.