

# Imposter: Understanding, Discussing, and Overcoming Imposter Syndrome\*

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## 1 Why Care about Imposter Syndrome?

Imposter syndrome is the feeling that a woman or man does not deserve the success s/he has achieved, that s/he has so far been lucky, and that s/he will be uncovered as someone who does not rightfully belong. This feeling is common among people in all stages of life: high school, undergraduate, and graduate students; postdocs, researchers, and faculty; and professionals. Women more often experience imposter syndrome; the original term “imposter phenomenon” was used in an article about chronic self-doubt in high-achieving women [1]. Institutions focusing on increasing participation in STEM by underrepresented minorities have identified imposter syndrome as a relevant issue [2, 3].

Symptoms of imposter syndrome include stress, low self-esteem, and under-performance. The latter manifests itself as sufferers not applying for scholarships or jobs because they do not think they could possibly get them. Sufferers may also “self-sabotage” by not asking for help or speaking poorly about themselves, which leads to problems that “prove” they are imposters.

## 2 Talking about Imposter Syndrome

The MIT Department of Physics holds a monthly Diversity & Inclusion Luncheon. In December 2011, the topic was imposter syndrome, and we had the following two goals: (1) identify “symptoms” and causes of imposter syndrome for different demographics, and (2) brainstorm practical suggestions for (a) informing people (students and advisors) about imposter syndrome and (b) dealing with and overcoming it. After a brief introduction, the attendees broke into small groups (eight to ten people each, including the discussion leader) to discuss for 30 minutes.

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The small group discussions centered around the following five questions:

1. What are the symptoms/signs of imposter syndrome? Which of these could be assessed/observed by others?
2. What are causes/stressors of imposter syndrome? Which can be eliminated from the sufferer's life?
3. What are preemptive/preventative measures? What are ways to deal with an imposter syndrome "attack"?
4. For all of these, what are the differences for different demographics (women, men, minorities, students, academics, professionals) suffering from imposter syndrome?
5. What short message could MIT put on a bumper sticker for "Imposter Syndrome Awareness Week"?

Each group had a designated discussion leader, chosen for their deep understanding of the issues of imposter syndrome so that they could be a source of information. More importantly, the discussion leaders were tasked with keeping the discussion flowing and productive, which included making sure everyone shared. Afterwards, there was a ten-minute share-out by the groups and a five-minute synthesis, where the consensus points were summarized and a few final thoughts were made.

The attendees of the Diversity & Inclusion Luncheon represent a range of people in the MIT Physics Department; there are graduate students and postdocs, junior and tenured faculty,<sup>1</sup> and administrators. To be inclusive to the range of views, we carefully worded questions and statements. For example, we opted to use "researchers" instead of "scientists" because many administrators had science degrees. We also emphasized the value of the perspectives of the administrators, since their interactions with MIT undergraduates differ from those of academics and their jobs allow for different manifestations of imposter syndrome.

We were able to keep the introduction to imposter syndrome brief (hence leaving more time for the small-group discussions) because the attendees were sent a summary article [4] in advance. We also highlighted a few results from an informal survey of primarily Stanford graduate students and postdocs, conducted by Prof. Margot Gerritsen of their Department of Energy Resources Engineering.<sup>2</sup> First, the female respondents reported more strongly suffering from imposter syndrome. Second, these feelings adversely affected (the perception of) performance for all respondents. Third, when asked about what to do, the responses were approximately as follows: advisors can help (women: 75%, men: 50%); self must handle it (10%, 50%); and "don't know" (10%, 0%). Our discussion was centered around *practical* suggestions (for dealing and overcoming) imposter syndrome that can be implemented by sufferers, advisers, and/or institutions, at all stages of career and life.

To keep the conversation going, the discussion leaders also had a list of provocative questions. The following subset demonstrates the breadth of the issues of imposter syndrome:

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<sup>1</sup>We made sure to seat graduate students and their advisors at separate tables so that both might freely express their views.

<sup>2</sup>The informal survey and results by Prof. Gerritsen can be found at [http://serc.carleton.edu/files/NAGTWorkshops/careerprep2010/beating\\_impostor\\_syndrome\\_revi.pdf](http://serc.carleton.edu/files/NAGTWorkshops/careerprep2010/beating_impostor_syndrome_revi.pdf).

- Who/what is the primary cause of imposter syndrome? Upbringing? Societal/cultural cues? Internal or external pressure?
- Why do women appear to suffer more from imposter syndrome? Is it caused by stereotype threat, which is when a group performs poorly because they fear confirming a known or perceived stereotype [5]? Made worse by it? Perpetuates the stereotype?<sup>3</sup>
- How is it similar for underrepresented minorities? Different?
- Is the effect of imposter syndrome and stereotype threat additive? Is this why women and underrepresented minorities leak out of science at higher rates?
- Does affirmative action or diversity-oriented programs adversely affect the recipients/participants?
- What specific activities or procedures could/should institutions implement to bring the issues of imposter syndrome to the students' attention?
- How do non-academics (e.g., administrators) perceive imposter syndrome differently from academics?
- How do advisors (and even administrators) act that perpetuate the problem? Alleviate the problem?
- One way to combat imposter syndrome is to make “accurate, realistic assessments” of one’s performance [4]. Should this assessment be comparative with respect to others? Or to previous personal performance?
- The other end of the self-assessment spectrum from imposter syndrome is the Dunning-Kruger effect,<sup>4</sup> which, roughly, describes the situation when people lack the ability to assess their incompetence and so over-estimate their ability. With this in mind, is a little imposter syndrome suffering “healthy,” especially for researchers?

### 3 Bumper Stickers (and Conclusions)

The strongest consensus of the small-group discussions was that people need to know about imposter syndrome. It is useful to learn that there is a well-known and well-studied name for any self-doubt one has felt, is feeling, and/or will feel. Hopefully, it is also comforting to know that others feel this way. The majority of the bumper stickers for MIT’s hypothetical Imposter Syndrome Awareness Week encapsulate this. For example, this article’s title “I!mposter” can be read as embracing: “I am an imposter! But so are you! (And if everyone is an imposter, then imposter is the new normal.)” Or as affirming: “I != imposter. I am not an imposter!” Either interpretation acknowledges the issue and suggests a way to handle it. Other slogans in this vein were pretty self-explanatory: “Imposters unite!”; “Feel like an imposter? So do I! We are the 99%.”; or “Imposters Welcome!” One professor related what she was told when she started at MIT: “fake it until you make it.” An administrator shared her favorite quote by Eleanor Roosevelt: “no one can make you feel inferior without your consent.” A group thought it would be useful to display posters of well-known MIT

<sup>3</sup>For more about stereotype threat, visit <http://reducingstereotypethreat.org/>.

<sup>4</sup>For more information about the Dunning-Kruger effect, see <http://opinionator.blogs.nytimes.com/2010/06/20/the-anosognosics-dilemma-1/>.

faculty that did *not* get accepted to MIT as undergraduates (but still obviously succeeded).

In the synthesis, we presented the idea of being the worst on the team. “Legendary jazz guitarist Pat Metheny has a stock piece of advice for young musicians: ‘always be the worst guy in every band you’re in.’” [6]. First, being surrounded by and working with people at a higher level of skill stretches and improves one’s ability. Second, “attempting to be the worst actually stops you from selling yourself short. [...] Acknowledging outright that you’re not the best wipes away the fear of being discovered for the not-best person you are.” For MIT undergraduates, the message would be that they chose to come to MIT for the challenge and the quality of the education; they should focus on that and keep track of their absolute (not relative<sup>5</sup>) improvement.

All students should know that the zone of proximal development [7] is uncomfortable. When a person is pushing to learn something new, s/he is ripe to feelings of frustration and incompetence. On the other side of the problem, the answer may seem obvious, and likely, the person moves quickly on to the next problem. So the cycle repeats. Researchers likely spend most of their time in the problem-solving stage and not much in the glowing success phase.

In addition, researchers, and other highly educated people, may be too knowledgeable for their own good, in the sense that the more one knows, the more one understands how much more there is to know. It is pretty easy to feel ignorant. However, it is a researcher’s job *not* to know but to find out what is unknown. This requires a careful balance of confidence that one can figure out the problem and of openness to being wrong because not every avenue of investigation leads to fruition and not every result stands up to new data.

Fostering an environment where people know about imposter syndrome will also help people feel comfortable talking about it. There were several senior MIT professors in attendance that had never heard about imposter syndrome but realized that it was exactly what they had felt as graduate students. Basically, no one knows what anyone else is feeling. Often research careers are isolating. Researchers typically sit by themselves and work on something specialized. They have no idea what someone else would feel like doing exactly what they are doing, and there are not many people doing exactly what they are doing, especially nearby.

Lastly, the attendees determined that it is crucial for people to have a community that can help keep self-assessment reasonable. Though advisors’ actions weighed heavily into what the respondents to Gerritsen’s informal survey thought would help imposter syndrome, reliance on a single individual can lead to a skewed perspective. It is important that the community be realistic since no one trusts someone who always rains praise. (Unfortunately, people may trust someone who always criticizes.) The community must help the imposter syndrome sufferer give appropriate weights to successes and failures. Too often failures weigh more heavily than successes; people tend to focus on them disproportionate to their

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<sup>5</sup>In a podcast “Imposter!”, Prof. Peter Fisher, MIT Department of Physics, points out that people often conflate the achievements of *all* others around them, which necessarily sum to more than the achievement of any individual. More about the Fisher Files can be found at <http://scripts.mit.edu/~podcast/wordpress/about/>, and the “Imposter!” podcast is episode 1 of sequence 2.

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## 4 Malleable Mindset May Be the Key

There are two views of ability: fixed and malleable [8]. People who have a fixed mindset think that ability and intelligence are innate and cannot be changed—one just grows and learns until one reaches the predetermined limit. They view success as a sign of their inherent skills. Failure is a sign of having attempted something beyond one’s abilities and that one is not smart enough to “get it.” People with fixed mindsets tend to under-achieve because they fear attempting and failing, showing they have reached their limit.

People who think that ability and skills can be improved through effort have malleable mindsets. Success comes with effort, and failure can be overcome with hard work. People with malleable mindsets are more successful because they *can* handle momentary failure.

Embracing the idea that hard work can improve one’s abilities leads to the view that struggle is the way one improves. So to really have a malleable mindset, one must observe and monitor self-improvement. This is the metric and assessment that can keep a person from mistaking herself/himself as an imposter.

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