

WEBVTT

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00:03:16.310 --> 00:03:20.669

Amanda Carr (she/her): We're gonna give folks a couple more minutes to join, and then we'll go ahead and get started.

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00:05:19.910 --> 00:05:25.120

Amanda Carr (she/her): Okay, I'm gonna go ahead and get us started. It looks like we do have a few people

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00:05:25.130 --> 00:05:26.540

Amanda Carr (she/her): coming in.

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00:05:26.660 --> 00:05:40.110

Amanda Carr (she/her): Very excited to have with us today, Samantha, Peter introduced in just a second. But I wanted to give a couple of updates and some housekeeping. I'm Amanda Carr. I work with the division of research on the professional development team.

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00:05:40.210 --> 00:05:51.329

Amanda Carr (she/her): We do this series. We have speakers usually once or twice a month. So if you enjoy today, I encourage you to sign up for a newsletter and and come to future sessions.

6

00:05:51.470 --> 00:06:11.380

Amanda Carr (she/her): I did want to let everyone know that this November we have a really exciting event a week long week that we're calling. Accelerate your research week, and we'll have visitors from program officers, from different funding agencies as well as different types of support on campus that Samantha is presenting today will actually be on campus in person

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00:06:11.500 --> 00:06:37.320

Amanda Carr (she/her): that week. So if you enjoy her presentation today, I want to connect with her. That would be a great time to do that. There will also be some sessions during that week. That talk about the integration of art into engagement as well as your research and Samantha will be on a panel for that. So I'm gonna put the link in the chat here for our newsletter and definitely encourage you to sign up. If you are interested in hearing about future events

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00:06:37.760 --> 00:06:49.380

Amanda Carr (she/her): also, we will be monitoring the chat. So if you have any questions that come up as Samantha presenting, feel free to throw them in the chat, and we'll make sure to address them at the end of her presentation.

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00:06:50.090 --> 00:07:19.000

Amanda Carr (she/her): So I would like to introduce Samantha Peters. She is the science illustrator on our strategic proposal development services team, and she is here today to talk to all of you about how to use graphics in your proposal, and also know that she is available for individual consultations which I think she'll mention. But I will also put the email contact for that in the chat as well. So, Samantha, I'll let you introduce a little bit more about yourself and kick us off.

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00:07:19.750 --> 00:07:20.880

Samantha Peters: Thanks, Amanda.

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00:07:21.170 --> 00:07:26.590

Samantha Peters: I'm excited to be here today. So thank you all for coming.

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00:07:26.890 --> 00:07:55.299

Samantha Peters: I am a scientific illustrator. I studied art at the California State University of Monterey Bay. Before that I got a neurobiology degree from University of Texas, and had a very brief stint in medical school, where I realized that I liked illustrating my study guides more than actually studying them, so took a little career swerve there. But it's worked out very well for me

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00:07:55.580 --> 00:08:09.890

Samantha Peters: and, like Amanda, said, I'm part of the Speeds team here on campus so if you haven't worked with us before, you haven't heard about us before. It's a really great group. It's a really good resource for your Grant proposals.

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00:08:09.960 --> 00:08:15.590

Samantha Peters: And I'm the illustrator on the team. So I'm going to talk to you today about graphics.

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00:08:19.020 --> 00:08:26.159

Samantha Peters: We're going to cover 4 themes. First, the advantages of having impactful graphics.

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00:08:26.400 --> 00:08:32.859

Samantha Peters: Then how do you can choose elements that might benefit from being presented visually.

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00:08:33.250 --> 00:08:45.719

Samantha Peters: how you can make your own graphics a little stronger, using basic design principles, and then, finally, how you can request help from me, or speeds in general for your figures.

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00:08:46.380 --> 00:08:58.520

Samantha Peters: I hope that this presentation inspires you to think intentionally about your figure design. but it is not intended to be an all-encompassing guide for creating excellent scientific figures.

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00:08:59.010 --> 00:09:15.119

Samantha Peters: I am always more than happy to talk about all things designed with anyone who's interested. So if you have questions, thoughts, concerns, or compliments about this presentation today. Or if you just want to chat about color theory or get some design feedback, please reach out.

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00:09:17.580 --> 00:09:22.599

Samantha Peters: Okay, so what are the advantages of having impactful graphics?

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00:09:22.900 --> 00:09:23.960

Samantha Peters: Well.

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00:09:25.230 --> 00:09:27.209

Samantha Peters: they make your work memorable.

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00:09:28.580 --> 00:09:45.129

Samantha Peters: I love this figure because it is an excellent example of a lot of bad or questionable design decisions coalescing together to make absolutely no sense of what the paper is actually discussing.

24

00:09:45.640 --> 00:09:50.179

Samantha Peters: This is what good design is going to help you avoid.

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00:09:50.760 --> 00:09:57.869

Samantha Peters: My goal in my work is to make every image clear, concise, and informative.

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00:09:57.880 --> 00:10:04.110

Samantha Peters: And it's only after we achieve those 3 things that we consider trying to make something pretty.

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00:10:05.260 --> 00:10:14.099

Samantha Peters: So this is an actual, graphical abstract that was actually published in an actual journal with a pretty good impact factor.

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00:10:14.410 --> 00:10:21.790

Samantha Peters: And my first question is, why is it a beach scene like? Are they doing something that has to do with ocean cleanup?

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00:10:22.220 --> 00:10:24.259

Samantha Peters: Spoiler, alert? No.

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00:10:24.360 --> 00:10:39.190

Samantha Peters: there's a lot going on here that really gets in the way of the story that they were trying to tell. And it distracts from the actual takeaways of the paper. So it's memorable. But in the right way.

31

00:10:39.280 --> 00:10:46.620

Samantha Peters: I'd like to share 2 studies with you.

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00:10:47.230 --> 00:10:53.689

Samantha Peters: First, is this paper proving the value of visual design in scientific communication.

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00:10:54.190 --> 00:11:07.530

Samantha Peters: Karen, Chang, Yichi, Chen, Kevin, Larsen, and Marco Rolandi took graphical abstracts that had been published in the Journal Nano letters and redesigned them according to design best practices.

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00:11:07.980 --> 00:11:23.990

Samantha Peters: They then presented the original and redesigned

graphical abstracts in a survey to participants that regularly read journals. and asks them how much they agree or disagree with the following 6 statements.

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00:11:24.900 --> 00:11:34.160

Samantha Peters: number one, I have a sense of what this paper will be about. Number 2. The title and figure makes sense together.

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00:11:34.930 --> 00:11:50.439

Samantha Peters: Number 3. The paper will be clearly written. Number 4. The paper seems interesting. Number 5. The authors seem intelligent. and number 6. The science in the paper seems rigorous.

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00:11:51.790 --> 00:11:54.600

Samantha Peters: so, after they calculated all their results.

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00:11:54.830 --> 00:12:01.120

Samantha Peters: the redesigned figures scored more positively with more agree statements

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00:12:01.160 --> 00:12:03.279

Samantha Peters: on every single count.

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00:12:04.830 --> 00:12:07.030

Samantha Peters: That's important.

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00:12:09.970 --> 00:12:16.150

Samantha Peters: The second study I want to share is this paper by Lee West and Howe.

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00:12:17.050 --> 00:12:26.280

Samantha Peters: The authors used computer vision and machine learning techniques to classify over 8 million figures from pubmed into 5 figure types.

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00:12:26.540 --> 00:12:34.429

Samantha Peters: equations, so kind of visually representing a math equation or chemical structure.

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00:12:34.630 --> 00:12:40.799

Samantha Peters: a diagram which is where they included illustrations, figures, graphics.

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00:12:41.250 --> 00:12:52.870

Samantha Peters: photos, tables, and plots which would be like scatter plots or bar charts, and they found variation among the different fields.

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00:12:52.900 --> 00:13:05.430

Samantha Peters: But the interesting takeaway was that they found high impact papers tend to have more diagrams per page and a higher proportion of diagrams compared to the other figure types.

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00:13:06.410 --> 00:13:21.719

Samantha Peters: I could do an entire separate talk on. Why I tend to favor scientific illustrations over photos, not just because I enjoy job security that comes with getting a lot of requests for illustrations. But this is pretty amazing results.

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00:13:25.650 --> 00:13:27.729

Samantha Peters: So now we know that figures are important.

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00:13:28.290 --> 00:13:32.509

Samantha Peters: they make your work more reputable, understandable, and impactful.

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00:13:32.900 --> 00:13:41.879

Samantha Peters: So how do you choose what should be in a figure? I have a few categories to help you think through this process.

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00:13:44.600 --> 00:13:46.000

Samantha Peters: Number one

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00:13:46.070 --> 00:13:51.460

Samantha Peters: overview figures. I love a good overview figure.

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00:13:51.540 --> 00:14:08.229

Samantha Peters: If you can condense your project goals, or aims or findings into one succinct figure, slap that puppy across the top of page one, and give your readers something that they can remember and refer back to as they read the rest of your narrative.

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00:14:08.790 --> 00:14:12.959

Samantha Peters: I will always advocate for a good abstract. If there's room for one.

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00:14:14.760 --> 00:14:29.309

Samantha Peters: actions and relationships are always really great to show visually. something interesting is happening. If there's a process in your work that has multiple steps that is crying out for an illustration.

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00:14:32.600 --> 00:14:35.759

Samantha Peters: making the abstract concrete.

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00:14:37.260 --> 00:14:50.519

Samantha Peters: If you can give your reader a picture that they can hold in their mind as an analogy for a difficult concept that's going to help them understand what you're talking about in your narrative.

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00:14:50.800 --> 00:15:00.349

Samantha Peters: I remember this really great illustration from a scientific American a few years ago that used a coin flip as an analogy for quantum states.

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00:15:00.430 --> 00:15:10.050

Samantha Peters: The illustration was really really cool, and it gave the reader something concrete that they could grasp onto when the topic itself was really complicated.

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00:15:11.290 --> 00:15:18.050

Samantha Peters: You can use visuals to direct attention and clarify information.

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00:15:18.200 --> 00:15:27.610

Samantha Peters: A lot of designers, myself included, will advocate for making your figures as simple as possible, but no simpler.

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00:15:27.890 --> 00:15:32.929

Samantha Peters: So you can create figures that can expedite understanding

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00:15:37.670 --> 00:15:46.279

Samantha Peters: timelines and org charts. If you are required by your grant, or to include them, you might as well make them look nice.

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00:15:46.640 --> 00:15:57.799

Samantha Peters: and finally, if you want to leave your reader with a lasting impression, a quality memorable, striking visual is a really good way to do that.

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00:16:02.980 --> 00:16:06.680

Samantha Peters: Okay, so now we know why we want to illustrate.

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00:16:06.690 --> 00:16:12.170

Samantha Peters: and we know what we want to illustrate. How do we make our own graphics better?

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00:16:13.550 --> 00:16:17.009

Samantha Peters: The first step is knowing who your audience is.

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00:16:19.710 --> 00:16:22.860

Samantha Peters: who are you designing? For?

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00:16:23.780 --> 00:16:31.769

Samantha Peters: I see a lot of faculty creating figures more for themselves than for their reader.

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00:16:32.960 --> 00:16:43.410

Samantha Peters: They want to show off the really cool results, or they create something that makes a lot of sense to them because they have a lot of

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00:16:43.560 --> 00:16:44.929

Samantha Peters: hard earned

72

00:16:45.360 --> 00:16:50.069

Samantha Peters: subject matter expertise. But outside audiences

73

00:16:50.410 --> 00:16:53.449

Samantha Peters: tend to have trouble understanding it.



74

00:16:53.950 --> 00:16:59.309

Samantha Peters: So who are you designing for?

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00:17:00.090 --> 00:17:04.399

Samantha Peters: Are they program officers? Are they students?

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00:17:04.609 --> 00:17:07.109

Samantha Peters: Is it the general public?

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00:17:07.579 --> 00:17:20.529

Samantha Peters: How familiar are they with your subject area? How are they gonna view your design? Is this something that you're creating for a presentation? Is it something for a grant proposal where you have limited page space.

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00:17:20.990 --> 00:17:32.559

Samantha Peters: Think about. are they gonna view it on a tablet where they could zoom in? Or do you have to accommodate the fact that someone might be printing your paper, and you can, only

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00:17:33.220 --> 00:17:42.800

Samantha Peters: they can only see it at a hundred percent and also respect their time. Don't make your audience work hard to figure out your figure.

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00:17:43.470 --> 00:17:53.599

Samantha Peters: Another note with interdisciplinary grants. You may have to include more of a primer on the basics of your science.

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00:17:53.680 --> 00:18:02.650

Samantha Peters: Then you would if it was strictly going into. say, like a medicine, only

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00:18:02.700 --> 00:18:09.899

Samantha Peters: program. So right now, I'm working on a project that's a collaboration between cancer researchers and computer scientists.

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00:18:09.930 --> 00:18:12.380

Samantha Peters: And we're aiming to make

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00:18:12.480 --> 00:18:27.500

Samantha Peters: the more medicine heavy figures understandable to the computer scientists who are on the review panel and vice versa, creating figures that will help the medical side audience understand these machine learning concepts.

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00:18:32.520 --> 00:18:39.529

Samantha Peters: When you look at these 2 illustrations, who do you think the audience might be for each one?

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00:18:41.150 --> 00:18:43.730

Samantha Peters: Are they the same, or are they different?

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00:18:46.980 --> 00:18:48.030

Samantha Peters: These

88

00:18:48.220 --> 00:19:00.960

Samantha Peters: 2 illustrations are of very similar plants. They're actually in the same genus, but they were created for different purposes. They were created for different audiences. So that comes through stylistically.

89

00:19:01.200 --> 00:19:05.049

Samantha Peters: and that same concept is going to apply to your scientific figures.

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00:19:05.200 --> 00:19:10.569

Samantha Peters: So the one on the left was created as part of a scientific record for this plant.

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00:19:10.710 --> 00:19:15.929

Samantha Peters: and the audience is plant nerds and scientists who are plant nerds

92

00:19:15.960 --> 00:19:20.860

Samantha Peters: and then the other one was created for

93

00:19:20.910 --> 00:19:24.030

Samantha Peters: the Dallas Zoo Member Magazine.

94

00:19:24.070 --> 00:19:30.820

Samantha Peters: where lots of families might read that with their kids. So it's stylistically very different.

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00:19:34.170 --> 00:19:43.190

Samantha Peters: Here's an example of a figure for a researcher who studies early childhood development. And this was going into A and Nih grant, or An and Nsf.

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00:19:43.360 --> 00:19:55.849

Samantha Peters: And a soft grant. The illustration style and the color choices are appropriate for her field, but would maybe not work as well for a researcher who was, say, studying astronomy.

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00:20:00.640 --> 00:20:05.490

Samantha Peters: You want to clarify the message and purpose of your figure.

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00:20:06.530 --> 00:20:14.629

Samantha Peters: Does anyone remember this poster insert from National Geographic is from like 2018.

99

00:20:15.170 --> 00:20:31.139

Samantha Peters: I put this in here, not because it's an example of bad design. It's actually incredibly beautiful and well done and packed with information, but it takes a long time to digest that

100

00:20:31.540 --> 00:20:51.359

Samantha Peters: you're supposed to spend time poring over and reading all the captions, tracing the flight routes, looking at the illustrations. It's part of the experience of getting that magazine, and this was also originally printed as a 24 by 32 inch poster.

101

00:20:52.250 --> 00:20:56.609

Samantha Peters: I put this in here because a lot of times what I see

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00:20:56.900 --> 00:21:02.870

Samantha Peters: folks trying to do is insert this quantity of information

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00:21:02.960 --> 00:21:06.590

Samantha Peters: into a graphic. That is a quarter of a page or less.

104

00:21:07.160 --> 00:21:12.499

Samantha Peters: and that is not readable because the fonts have been reduced so much.

105

00:21:12.650 --> 00:21:18.100

Samantha Peters: and the audience gets annoyed that they're being asked to try and interpret this.

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00:21:18.270 --> 00:21:23.909

Samantha Peters: So they skip over it, because if they were meant to read it, it would have been printed at a legible size.

107

00:21:25.460 --> 00:21:35.679

Samantha Peters: So while something can be a shining example of information design which I would consider this to be, it may not be appropriate for

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00:21:35.850 --> 00:21:39.040

Samantha Peters: the vehicle of, say, a Grant proposal.

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00:21:39.900 --> 00:21:41.040

Samantha Peters: So

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00:21:41.350 --> 00:21:45.600

Samantha Peters: for a hypothetical proposal, studying bird migration.

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00:21:45.700 --> 00:22:00.469

Samantha Peters: I would consider taking this same information and splitting it into multiple figures. have a graphic on the map of the flight patterns, another graphic on timing of migration, another on wing design.

112

00:22:00.610 --> 00:22:04.410

Samantha Peters: You really want to define

113

00:22:05.270 --> 00:22:06.440

Samantha Peters: the

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00:22:06.520 --> 00:22:21.940

Samantha Peters: key elements, the useful context, the details that need to be included in each figure, not what you want to include, but what you need to be there for audience understanding, and do that before you start designing.

115

00:22:22.730 --> 00:22:24.889

Samantha Peters: A really helpful exercise

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00:22:25.020 --> 00:22:29.489

Samantha Peters: is to clearly in one sentence

117

00:22:30.500 --> 00:22:33.240

Samantha Peters: not a paragraph, one sentence.

118

00:22:33.300 --> 00:22:38.100

Samantha Peters: describe what you want. The audience's take away message to be.

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00:22:39.950 --> 00:22:45.259

Samantha Peters: If you can't. If you don't know what that is, they're not gonna know, either.

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00:22:50.210 --> 00:22:57.129

Samantha Peters: That leads us to my next tip for good graphics which is to simplify and declutter

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00:22:58.630 --> 00:23:07.340

Samantha Peters: simplifying is not the same as dumbing down, but you are removing unnecessary elements that can hinder comprehension.

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00:23:14.150 --> 00:23:27.150

Samantha Peters: Good design is going to guide your audience through your work. So the composition, which is art speak for how the elements are arranged on the page

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00:23:28.200 --> 00:23:33.809

Samantha Peters: is going to tell your reader where to go, what to read first.

124

00:23:34.510 --> 00:23:49.470

Samantha Peters: and how they should progress through the work. So in English we read from left to right and top to bottom. Figures organized in this manner will be really intuitive for your audience to enter and read.

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00:23:49.530 --> 00:23:54.950

Samantha Peters: so I'd encourage you to use that as a starting point for your composition.

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00:23:55.180 --> 00:24:05.049

Samantha Peters: using a grid is really helpful. Try not to have your audience jump around in the composition to follow the main message.

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00:24:05.300 --> 00:24:13.049

Samantha Peters: and you can see from this very simple graphic. If you lay things out neatly on a grid, it's

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00:24:13.140 --> 00:24:24.529

Samantha Peters: the same information, but it actually takes up less space so well. Composed images can save you space in your Grant proposal, which I know everybody loves, they get so excited.

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00:24:26.490 --> 00:24:30.169

Samantha Peters: Here's an example of a redesign

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00:24:31.430 --> 00:24:39.889

Samantha Peters: this figure. This grant was about the use of technology to aid in activities of daily living.

131

00:24:40.150 --> 00:24:50.710

Samantha Peters: simply reorganizing and consolidating the information. If you'll notice on the the before side. Smartwatch is listed twice.

132

00:24:51.510 --> 00:25:02.779

Samantha Peters: Technology was actually subsequent. You see it after you read the activities of daily living. And then we have a.

133

00:25:03.240 --> 00:25:10.740

Samantha Peters: you know, more information, more context, simply reorganizing that. So that we put technology first

134

00:25:11.070 --> 00:25:12.310

Samantha Peters: and then

135

00:25:12.700 --> 00:25:22.219

Samantha Peters: how it's used. And then a little bit more detail. We saved so much space in this proposal. And it's much more clear what

136

00:25:22.430 --> 00:25:23.980

Samantha Peters: he was studying.

137

00:25:28.010 --> 00:25:32.730

Samantha Peters: You want to remove distractions so

138

00:25:32.980 --> 00:25:38.729

Samantha Peters: everything that you encode, everything that you are trying to tell your audience.

139

00:25:38.810 --> 00:25:47.080

Samantha Peters: You encode it in a visual that then has to be decoded on the other side before they can achieve understanding

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00:25:47.950 --> 00:26:00.980

Samantha Peters: so unnecessary elements, like thick strokes on boxes. unnecessary colors, big, chunky arrows drop shadows, gradients, those type of things.

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00:26:01.490 --> 00:26:11.689

Samantha Peters: They just eat up visual processing power and attention, space for your audience. So if there are ways that you can simplify things,

142

00:26:12.750 --> 00:26:17.189

Samantha Peters: removing distracting or unnecessary elements.

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00:26:17.260 --> 00:26:20.929

Samantha Peters: you're going to help ensure that your message is received.

144

00:26:25.980 --> 00:26:28.270

Samantha Peters: Here's an example.

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00:26:28.880 --> 00:26:43.419

Samantha Peters: just a very simple graph. But we went through and streamlined things. Because we have the lines. We don't necessarily need all of the data markers for each point.

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00:26:43.690 --> 00:26:55.460

Samantha Peters: So that was the first thing to go. Having more subdued colors really kind of keeps it from like vibrating a little bit.

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00:26:55.500 --> 00:26:59.330

Samantha Peters: so that helped, we removed

148

00:26:59.690 --> 00:27:01.509

Samantha Peters: redundant zeroes.

149

00:27:02.630 --> 00:27:10.930

Samantha Peters: I am an advocate for directly labeling things. if possible. Instead of having a key

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00:27:11.260 --> 00:27:19.600

Samantha Peters: so that you're not forcing your audience to go back and forth between, what's the information? What does that mean? What's this information? What does that mean?

151

00:27:19.840 --> 00:27:35.490

Samantha Peters: They're not skipping around so much? So they're it's all just right there. You're serving it to them on a silver platter like, here's the message, and the overall effect of this redesign is a cleaner and more legible graph.

152

00:27:39.770 --> 00:27:45.269

Samantha Peters: Okay, the next tip is color considerations, and this one



153

00:27:46.210 --> 00:27:49.470

Samantha Peters: sometimes surprises people

154

00:27:51.020 --> 00:27:55.139

Samantha Peters: use color purposefully or don't use color.

155

00:27:55.860 --> 00:28:06.070

Samantha Peters: It should really be used with intention to create emphasis or clarity, or just leave it out.

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00:28:06.770 --> 00:28:15.660

Samantha Peters: it's really helpful to ask yourself why you want to use color.

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00:28:17.010 --> 00:28:22.429

Samantha Peters: Do you need to highlight important information? Do you want to

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00:28:23.210 --> 00:28:29.940

Samantha Peters: create contrast? Do you need to help set the tone. If we think back to that.

159

00:28:30.950 --> 00:28:32.250

Samantha Peters: the Graphic

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00:28:32.350 --> 00:28:39.899

Samantha Peters: for the early childhood development researcher. Lots of bright colors very kid themed.

161

00:28:39.980 --> 00:28:42.220

Samantha Peters: That was setting the tone.

162

00:28:43.330 --> 00:28:47.429

Samantha Peters: If you don't have a good reason beyond just

163

00:28:47.490 --> 00:29:05.879

Samantha Peters: adding something colorful to your paper, it's it might be best to just design in grayscale design in black and white.

So for this figure we only used color to highlight the locations of these geomagnetic sensing cells.

164

00:29:06.060 --> 00:29:12.759

Samantha Peters: and if you can imagine, like a fully rendered monarch butterfly

165

00:29:12.820 --> 00:29:16.040

Samantha Peters: with really saturated oranges.

166

00:29:16.940 --> 00:29:22.330

Samantha Peters: You might miss the important element if that had been created in color.

167

00:29:28.450 --> 00:29:34.480

Samantha Peters: Here's another example of a table that was redesigned.

168

00:29:36.400 --> 00:29:38.030

Samantha Peters: the initial

169

00:29:38.620 --> 00:29:41.140

Samantha Peters: version on the left

170

00:29:41.370 --> 00:29:51.490

Samantha Peters: has a lot of color coding happening. And the the orange and the green are really close in value.

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00:29:51.660 --> 00:30:01.290

Samantha Peters: So they just kind of vibrate against each other, and it's hard to look at so instead of color coding.

172

00:30:01.580 --> 00:30:05.610

Samantha Peters: which you know, category of researchers.

173

00:30:05.970 --> 00:30:21.260

Samantha Peters: We moved that information into the table caption, and then just had 2 things that we were denoting with color in the actual table and overall. It's a much easier

174

00:30:21.460 --> 00:30:25.799

Samantha Peters: it's a much easier table to read, but all that information is still there.

175

00:30:30.750 --> 00:30:39.249

Samantha Peters: Other color considerations. If there are standard colors for certain elements in your field.

176

00:30:39.390 --> 00:30:43.709

Samantha Peters: Use them. Please don't reinvent the wheel. You're going to confuse people

177

00:30:43.760 --> 00:30:56.819

Samantha Peters: and whenever possible I try to stick to Msu brand colors in case these figures can then be repurposed to communicate about winning an award.

178

00:30:56.830 --> 00:30:59.770

Samantha Peters: So if you want information on

179

00:31:00.060 --> 00:31:04.190

Samantha Peters: the Mizu identity, I included a link there for you.

180

00:31:07.300 --> 00:31:11.290

Samantha Peters: Text treatments. The next

181

00:31:11.350 --> 00:31:16.549

Samantha Peters: step in creating well-designed visuals.

182

00:31:19.770 --> 00:31:25.240

Samantha Peters: Text is potentially the most important

183

00:31:27.140 --> 00:31:34.400

Samantha Peters: part of your figure, say potentially because it depends on the amount.

184

00:31:34.880 --> 00:31:46.129

Samantha Peters: the amount of text there. Font choice and size has a really big impact on readability and clarity of your figures. Message

185

00:31:46.390 --> 00:31:54.540

Samantha Peters: most journals and grantors, except aerial typeface. So that's kind of my go to default

186

00:31:54.900 --> 00:32:01.960

Samantha Peters: and minimum font size should ideally be 7 point or larger.

187

00:32:03.230 --> 00:32:08.879

Samantha Peters: but always check your journal or grant author guidelines.

188

00:32:09.170 --> 00:32:24.720

Samantha Peters: I just did a few figures that were intended to be submitted to nature, microbiology, and their recommended font size was 5 point, which is way below what I would normally consider using. So always double check

189

00:32:32.990 --> 00:32:35.549

Samantha Peters: having a functional

190

00:32:35.570 --> 00:32:47.729

Samantha Peters: font. Hierarchy, a functional text. Hierarchy is going to direct your reader where to look. And when this is like having a super power, you can control how they are reading your figure.

191

00:32:48.100 --> 00:32:53.099

Samantha Peters: this can be created through font choice size and weight.

192

00:32:53.670 --> 00:33:01.110

Samantha Peters: It applies to headings, titles, subheadings, body copy labels, and captions.

193

00:33:01.390 --> 00:33:08.119

Samantha Peters: And it's gonna guide your reader through your figure. So what do I mean by hierarchy?

194

00:33:17.430 --> 00:33:20.770

Samantha Peters: As you guys laugh? This is my joke. Slide. Okay?

195

00:33:23.660 --> 00:33:44.720

Samantha Peters: Readability tips in general. Left. Justification of blocks of text is less work for your reader to interpret, because it gives the eye a consistent starting point to return to on each line. I know a lot of people really favor center line text, and

196

00:33:44.830 --> 00:33:49.170

Samantha Peters: I always kind of try and get them to left. Justify

197

00:33:50.590 --> 00:34:01.530

Samantha Peters: aligning text and labels where possible, and placing labels near the object they describe, rather than creating a separate legend, is going to help

198

00:34:01.560 --> 00:34:04.589

Samantha Peters: with overall readability.

199

00:34:06.050 --> 00:34:18.549

Samantha Peters: I try to avoid hyphenation and widows and orphans, which is where there's maybe like one word on a line by itself. At the end of a paragraph. I was kind of try and adjust those

200

00:34:18.710 --> 00:34:25.129

Samantha Peters: and be succinct. You wanna say what you need to say in as few words as possible.

201

00:34:25.190 --> 00:34:34.580

Samantha Peters: Especially for very small graphics and grant proposals. Another thing that I see a lot from faculty is

202

00:34:34.800 --> 00:34:36.010

Samantha Peters: they have

203

00:34:36.150 --> 00:34:47.310

Samantha Peters: really long scientific words, and it'll just fit if they just kinda tilt it at 27 degrees, and you know, maybe make it arch a little bit.

204

00:34:47.830 --> 00:34:55.829

Samantha Peters: Try not to do that as much as you can. You really don't want to force your audience to be a bobble head.

205

00:34:55.880 --> 00:35:00.669

Samantha Peters: if you absolutely have to turn your text.

206

00:35:00.900 --> 00:35:08.000

Samantha Peters: turn it to the left so that it reads from sort of, so that they're still looking at the

207

00:35:08.300 --> 00:35:15.169

Samantha Peters: at the image kind of directing their eye to the inside. So read from bottom to top.

208

00:35:19.810 --> 00:35:23.570

Samantha Peters: And then I just have a few points on accessibility.

209

00:35:23.830 --> 00:35:35.860

Samantha Peters: It really is the gold standard. You really need to be thinking about creating figures that are colorblind, friendly.

210

00:35:35.890 --> 00:35:43.299

Samantha Peters: the web content, accessibility. Guidelines are a really good base to start from for creating accessible figures.

211

00:35:45.700 --> 00:36:05.969

Samantha Peters: Text size, and colors should be chosen to make your figures accessible. This is where I tell you, even though Miss Zoo fought, or missou colors, or black and gold, you really shouldn't be using like gold text, unless it's like super big and super bold. It's really gonna be hard to read.

212

00:36:07.270 --> 00:36:23.020

Samantha Peters: Type smaller than 7 point will not be legible for most readers when it's viewed at 100. So I always think of the program officer that's gonna print your narrative and take it on the train or something to read it.

213

00:36:24.230 --> 00:36:31.190

Samantha Peters: you wanna make sure that they're getting that information. So you really wanna make sure that the type is not too small.

214

00:36:33.860 --> 00:36:39.099

Samantha Peters: Red and green and color combinations are not accessible to colorblind viewers.

215

00:36:39.750 --> 00:36:46.559

Samantha Peters: Approximately one in 12 males have some form of color blindness. So think about who's on your

216

00:36:46.630 --> 00:36:58.710

Samantha Peters: proposal committee like, who's reviewing this? How many is it? A panel of 12 males? Did you just make your figures inaccessible to like 1 12 of your reviewers.

217

00:36:59.200 --> 00:37:01.689

Samantha Peters: So avoid red and green.

218

00:37:03.470 --> 00:37:25.220

Samantha Peters: You wanna ensure that you have good contrast from your background. So really light text on a really light background is not gonna be readable. This is where I would prefer you back to the web content accessibility guidelines. There's a lot of really great accessibility checkers where you can kind of dial in the colors and see if they're

219

00:37:25.310 --> 00:37:30.780

Samantha Peters: if they're accessible or not. There's a million of them. If you search on Google.

220

00:37:32.610 --> 00:37:34.390

Samantha Peters: And

221

00:37:34.500 --> 00:37:44.429

Samantha Peters: consider adding all text to your figures to make your graphics accessible for screen readers. this is something that

222

00:37:44.850 --> 00:38:00.789

Samantha Peters: we'll kind of few future-proof, your papers, future

proof, your presentations. And I included a formula here that's kind of been circulating in science illustration. Circles for a while

223

00:38:00.970 --> 00:38:13.329

Samantha Peters: about how you can write good alt text for charts and graphs. Because I know that can be a little bit more tricky for folks than just writing a description for another type of figure.

224

00:38:17.110 --> 00:38:21.529

Samantha Peters: Okay. so we have a good primer on

225

00:38:21.770 --> 00:38:24.209

Samantha Peters: why we want good figures.

226

00:38:24.800 --> 00:38:43.620

Samantha Peters: What might make a strong figure in your paper, and how you can create stronger figures yourself if you're designing in Powerpoint or your program choice. But let's say you want to request help from me from speeds for illustration support.

227

00:38:44.990 --> 00:38:54.060

Samantha Peters: so we make it really easy. There's an intake form on the speed section of the Rai website.

228

00:38:54.430 --> 00:39:05.820

Samantha Peters: You'll want to reach out at least 8 weeks in advance of when you're going to need the graphics. And I would suggest earlier, if you're requesting a lot of graphics, or if they're very complex.

229

00:39:06.290 --> 00:39:15.140

Samantha Peters: we will have a kickoff meeting to talk through your needs. We'll talk about deadlines. We'll talk about

230

00:39:15.450 --> 00:39:19.729

Samantha Peters: you know. Go through each of your figures. We'll, you know, work through a timeline

231

00:39:19.740 --> 00:39:32.139

Samantha Peters: and then, I'll you know, get started and help you. If you have any questions about speed services. You can email us



232

00:39:34.270 --> 00:39:53.710

Samantha Peters: if you have fewer than 8 weeks of notice. I know that some grantors are notoriously short deadlines. You can request strategic guidance or consultation of figures that you create, and I can just look for things like legibility and accessibility, and make some recommendations for you to fix your figures yourself.

233

00:39:54.920 --> 00:40:03.370

Samantha Peters: So here's sort of the timeline of working with me. Will After you submit a request

234

00:40:03.910 --> 00:40:17.320

Samantha Peters: you will meet to discuss your needs and the scope of the project, and we'll determine the timeline. I'll go to my literal drawing board and do a first round of figures. I'll send those to you.

235

00:40:18.050 --> 00:40:29.810

Samantha Peters: I usually plan that so that you have time to circulate it amongst your team. Get some feedback, show them to folks. You'll come back with any revision, requests, questions, compliments.

236

00:40:29.820 --> 00:40:40.309

Samantha Peters: and then I'll go to a second round and hopefully by the second round. Most of the big things have sort of been figured out already, and we can just like fine tune and tweak

237

00:40:40.450 --> 00:40:42.109

Samantha Peters: and then

238

00:40:42.650 --> 00:40:46.470

Samantha Peters: final artwork will be delivered digitally.

239

00:40:46.670 --> 00:40:56.130

Samantha Peters: I usually set this final deadline to be about a week before your proposal is due to Spa. So that way you have time to make sure that the figures

240

00:40:56.140 --> 00:41:07.800

Samantha Peters: work well in your narrative. Word isn't going to flow your text weird around things. If there's any little issues that pop

up, we have time to address them.

241

00:41:12.610 --> 00:41:23.570

Samantha Peters: I have a few frequently asked questions, but if you have any additional questions, I would encourage you to add them to the chat, and Amanda's gonna help me with that?

242

00:41:23.980 --> 00:41:32.400

Samantha Peters: One of the most frequent questions that I get asked is, can I help with images for publications?

243

00:41:32.500 --> 00:41:37.000

Samantha Peters: And the answer is, yes. depending on my availability.

244

00:41:37.270 --> 00:42:02.179

Samantha Peters: In order to be eligible, the article has to be related to a current or prior grant award, and the first author must be from the Zoo, and there's a link which I will share at some point. We have a slightly different intake form for publication support than for our regular grant proposal support just so that it keeps things clean on the back end.

245

00:42:02.740 --> 00:42:30.770

Samantha Peters: can I reuse the images you create for another grant or publication or presentation. And the answer to that is, yes, absolutely. I love to hear when these images that we work hard on can be recycled for additional uses. So let us know if any things are. If any of the images are published, or using other successful grants, I'd love to hear that

246

00:42:31.070 --> 00:42:37.840

Samantha Peters: and then just reiterating. If I have a too too short of a deadline till less than 8 weeks, until my grant is due.

247

00:42:38.570 --> 00:42:58.399

Samantha Peters: I know that that comes up often. I will always try to help if I have the capacity to do so. So if you want to reach out and ask if I have availability of my schedule, or if you just want an illustration consultation where I can make suggestions for you. Just please always feel free to reach out.

248

00:42:58.400 --> 00:43:23.760

Samantha Peters: I do also keep office hours on the second Friday of the month at noon. It's a just a standing team's meeting, so folks can drop in if they just want to chat really quickly, quick questions, I can make suggestions. So if you're interested, you wanna have that kind of backed up on your calendar. Let me know, and I can invite you

249

00:43:23.810 --> 00:43:27.780

Samantha Peters: or send you the link. And

250

00:43:28.330 --> 00:43:33.649

Samantha Peters: yeah, that's it. Thanks for thanks for having me today. I'm happy to take additional questions.

251

00:43:35.720 --> 00:43:50.740

Amanda Carr (she/her): So, Samantha, we do have a couple of people asking are these services for anyone at Mmu? Not just faculty like staff as well. And then I did already answer that these services are free. But if you just want to talk a little bit about who utilizes these services.

252

00:43:50.770 --> 00:43:53.310

Samantha Peters: Yeah. So

253

00:43:55.310 --> 00:43:56.460

Samantha Peters: yes.

254

00:43:56.730 --> 00:44:00.609

Samantha Peters: Anyone at mu My

255

00:44:01.260 --> 00:44:12.720

Samantha Peters: primary my primary workload is related to grants. So if you're looking for like, if your staff and you're looking for an illustration for

256

00:44:12.790 --> 00:44:16.549

Samantha Peters: a program that might not

257

00:44:16.850 --> 00:44:20.630

Samantha Peters: quite be my forte.

258

00:44:20.770 --> 00:44:25.059

Samantha Peters: But I'm also happy to, you know, help connect with

259

00:44:25.550 --> 00:44:33.810

Samantha Peters: other illustrators who could potentially take that on but yeah, if if you're submitting a grant you know.

260

00:44:34.350 --> 00:44:35.360

Samantha Peters: reach out.

261

00:44:37.330 --> 00:44:42.930

Amanda Carr (she/her): And then it looks like we've got a quest a hand up, so we'll go ahead and let

262

00:44:43.260 --> 00:44:54.519

Xunlei Kang: So yeah, can I question so because I saw you have you several figures right aim. 1, 2 obvious, or it is in the specific aim page.

263

00:44:54.550 --> 00:44:57.680

Xunlei Kang: So my question is, when you do that

264

00:44:57.760 --> 00:45:07.169

Xunlei Kang: do you? So your suggestion is, use more words. writing on the aim, 1, 2, 3,

265

00:45:07.480 --> 00:45:13.189

Xunlei Kang: or just. Just a shoe. Aim, 1, 2, 3, or use just a short short

266

00:45:13.610 --> 00:45:19.650

Xunlei Kang: several days not sentenced to indication what he will do in the M. 1, 2, 3.

267

00:45:21.360 --> 00:45:22.900

Samantha Peters: I think that

268

00:45:24.390 --> 00:45:34.650

Samantha Peters: it's it's going to depend on several factors. because you remember that these figures?

269

00:45:35.890 --> 00:45:52.790

Samantha Peters: It's it's not like you're putting up a poster in the middle of a wall and walking away like there's context around it within the space of your aims, page or your narrative. So they're Re. Your. Your audience for Grants

270

00:45:52.860 --> 00:45:58.899

Samantha Peters: would be reading that figure at the same time that they're reading the rest of the text. So

271

00:45:59.760 --> 00:46:01.240

Samantha Peters: if you

272

00:46:01.500 --> 00:46:10.680

Samantha Peters: but say you were taking that same information and making like giving a Powerpoint presentation, then in that case I might want more text

273

00:46:10.840 --> 00:46:27.330

Samantha Peters: with the figure actually describing what is happening in aim one, a 2, 8, 3. But within the context of the Grant proposal. If that information is also in the text, right next to the figure, you might not need it. So my answer is, it depends.

274

00:46:27.560 --> 00:46:46.509

Xunlei Kang: yeah. So I ask. This is sometimes I just confuse. Usually I just use a few words. For example, I use just a one for MI will say phenotype M. 2, I will say, Okay, signaling or mechanism. Is that enough? I just wonder, or or just a more worse.

275

00:46:46.670 --> 00:46:56.750

Samantha Peters: I think you know, within the context of your writing and what you're doing. I think that makes complete sense. Just having a very short title. That kind of

276

00:46:56.780 --> 00:46:58.970

Samantha Peters: encapsulates. What's

277

00:47:00.060 --> 00:47:06.549

Samantha Peters: you know very briefly, what's happening with each

one? I think that totally works. Yeah.

278

00:47:07.710 --> 00:47:09.830

Xunlei Kang: okay, thank you. You're welcome.

279

00:47:17.670 --> 00:47:31.480

Amanda Carr (she/her): That is all the questions that I see, although, a lot of praise in the chat for a great presentation, and people even would love to see you do more like one for the graduate school. So I think your services are in high demand.

280

00:47:32.340 --> 00:47:40.249

Samantha Peters: Yeah, I'd be. I'd be happy to just reach out and we can. We can work on that. Get it scheduled so

281

00:47:41.990 --> 00:47:42.740

great.

282

00:47:43.110 --> 00:47:58.410

Amanda Carr (she/her): Well, thank you so much, Samantha and as Samantha mentioned, and as I posted in the chat, please feel free to reach out through feed and their request form. If you would like to meet with Samantha about proposal illustration.

283

00:47:58.530 --> 00:48:06.680

Amanda Carr (she/her): And again, she'll be on campus in November for our research week, if you want to meet her in person. So thank you so much, Samantha.

284

00:48:08.300 --> 00:48:10.620

Samantha Peters: Thanks everyone. Thanks for coming.