

BEFORE THE PENNSYLVANIA STATE UNIVERSITY
RESEARCH INTEGRITY OFFICE

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C O N F I D E N T I A L
I N R E : V . C .

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INQUIRY INTERVIEW OF DR. RAMY E. ALI, Ph.D.,
Postdoctoral Researcher in Electrical Engineering,
University of Southern California,
Complainant

Thursday, September 2, 2021
3:00 p.m., via Zoom

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INQUIRY OFFICIAL PRESENT:

DR. SEAN HALLGREN, Ph.D., Professor of Computer Science
and Engineering, College of Engineering, Penn State

ALSO PRESENT:

DEBRA THURLEY, J.D., Assistant Vice President for
Research, Deputy Research Integrity Officer

DR. COURTNEY KARMELITA, D.Ed., Assistant Director of
Research Quality and Integrity, Office for Research
Protections

KIMBERLY PETROSKY, J.D., Research Integrity Analyst,
Office for Research Protections

SARAH MATTHEWS, Research Integrity Program Assistant,
Office for Research Protections

Transcription completed by:
Lisa J. Berkey, Court Reporter, (570) 336-8114

I N D E XINTRODUCTIONPAGE

By Dr. Karmelita

3

INTERVIEW

By Dr. Hallgren

7

ERRATA SHEET

37

REFERENCE TO PREMARKED EXHIBITS

Exhibit A

13

Exhibit B

17

1 DR. KARMELOITA: Hello.

2 DR. ALI: Good morning.

3 DR. KARMELOITA: Thank you for joining us.

4 DR. ALI: [Unintelligible].

5 DR. KARMELOITA: I just have a few slides that
6 I am going to go through for some housekeeping reasons.
7 So we'll get through that first. It will just take a
8 few minutes to give you some information, and then
9 we'll go ahead and we'll start with the questions.

10 So just as a reminder, we're all here today
11 to just get more information about the allegation
12 against Dr. Viveck Cadambe.

13 And to begin, before we get to the interview
14 questions, we wanted to just let you know that our
15 standard of practice is to record these interviews. We
16 then send the interview to a transcriptionist who
17 creates a transcript.

18 You will receive a copy of that transcript
19 and you'll have the opportunity to comment on it, to
20 clarify things. Sometimes information just doesn't
21 come through on the transcript and you might want to
22 give a little more context.

23 Once our final report is prepared, then we
24 would delete this recording. So are there any
25 objections to recording, or are you okay with that?

1 DR. ALI: Yeah, I'm fine with it.

2 DR. KARMELOITA: Thank you. So for the
3 recording we actually all need to introduce ourselves
4 so that the transcriptionist can orient our voices.

5 And Candy Yekel, who is our Research
6 Integrity Officer, is not able to attend today, but
7 Debra Thurley, who can introduce herself momentarily,
8 is able to join us. So, Debra, do you want to begin
9 with the introductions?

10 MS. THURLEY: Sure. Thank you. I'm Debra
11 Thurley. I'm an Assistant Vice President for Research,
12 and I'm also the Deputy Research Integrity Officer.
13 Thank you for being here today.

14 DR. KARMELOITA: And I'm Courtney Karmelita.
15 I'm the Assistant Director of Research Quality and
16 Integrity.

17 MS. PETROSKY: I'm Kim Petrosky. I'm the
18 Research Integrity Analyst.

19 MS. MATTHEWS: I'm Sarah Matthews. I'm the
20 Research Integrity Program Assistant.

21 DR. KARMELOITA: And then we also are joined
22 by our inquiry official. So if you wouldn't mind
23 introducing yourself, Dr. Hallgren.

24 DR. HALLGREN: I am Sean Hallgren. I'm in
25 Computer Science and I'm a professor there.

1 DR. KARMELOITA: And then also, if you
2 wouldn't mind introducing yourself, Ramy.

3 DR. ALI: Yeah. I am Ramy Ali. I am a
4 postdoctoral researcher at the University of Southern
5 California.

6 DR. KARMELOITA: Thank you. So this is just a
7 reminder that we are at the inquiry phase of our
8 research misconduct process, and so at inquiry the
9 purpose is not to determine if research misconduct
10 occurred, but rather, if an investigation is warranted,
11 by confirming that the allegation meets the definition
12 of research misconduct. So we're still very much in an
13 information gathering phase. We are not making any
14 determinations at this point.

15 And then also, just reiterating the
16 importance of confidentiality. We want to protect the
17 identities of everyone involved. We know that privacy
18 is of the utmost importance for both the Complainant
19 and the Respondent, so we just ask that the information
20 discussed here today remains confidential to the extent
21 possible.

22 Sorry. My son just got home from school.

23 (Pause)

24 The inquiry should normally be concluded
25 within 90 days. So just as far as where we are in

1 timeline, that would be October 1st. And all of the
2 information that we learn today, including the
3 transcripts and a summary of this interview, will be
4 included in the inquiry report.

5 And again, you will have the opportunity to
6 review the transcripts and comment, and those comments
7 would also be included within that report.

8 So just three more slides. First though,
9 regarding process, does anyone have any questions?

10 (No response)

11 DR. KARMELOITA: Okay. So now that we've
12 reviewed the process, we just need to review the
13 allegation. It actually does need to be read for the
14 record. So, Ramy, I was hoping that you could read it,
15 since you're most familiar with this work.

16 DR. ALI: All right. The Respondent,
17 Dr. Viveck Cadambe, allegedly plagiarized ideas and
18 work from Complainant, Dr. Ramy Ali, in the 2021 work
19 "CausalEC: A causally consistent data storage
20 algorithm based on cross-object erasure coding,"
21 authored by Respondent and Dr. -- actually, Shihang Lyu
22 wasn't a Ph.D. student, but that's fine -- by using the
23 same algorithm from the 2018 work "Erasure coding based
24 causally consistent distributed data storage," authored
25 by Respondent, Shihang Lyu, a Complainant, and Dr.

1 Bhuvan in the 2021 work, without providing appropriate
2 credit to the Complainant.

3 DR. KARMELOITA: So you're saying at the time
4 of the work Shihang was a doctoral student, but he has
5 since graduated with a Ph.D.?

6 DR. ALI: No, no. He graduated with a master
7 degree. He wasn't a Ph.D. student.

8 DR. KARMELOITA: Okay. We will correct that.
9 We didn't have that correct then for the assessment.
10 So now we're going to go ahead and turn it over to
11 Dr. Hallgren to ask his questions.

12 DR. HALLGREN: Thank you. Yeah. I had just
13 tried to outline some questions. They said nine. I
14 don't know what the number is.

15 But after looking through the documents some
16 more when I was preparing for this, I realized that
17 it's -- you know, we don't have enough information to
18 really understand what -- you know, to understand the
19 allegation.

20 And so I'm going to back up and go to
21 question zero, instead of question one, and I would
22 like to ask if you could please help us understand this
23 better. Like what -- you know, what is plagiarizing
24 and the ideas, and so on? Like what happened?

25 DR. ALI: Well, what happened is that we were

1 working on this work, as just the old paper, "Erasure
2 coding based causally consistent distributed data
3 storage" in 2018. We started on January, or something
4 like this.

5 And we submitted the version of this work at
6 the conference called DISC (phonetic) in May. So we
7 submitted an abstract and were planning to submit the
8 full version of the paper, but then Viveck Cadambe
9 asked us to withdraw the paper. He told us let's write
10 it more clearly, we don't have to hurry in this work.
11 So he has withdrawn the paper.

12 I was a coauthor of this. I was the second
13 author first, and then he moved me to be the third. So
14 we were four authors. Shihang was the first. In the
15 final version Viveck was the second, I was the third,
16 and Bhuvan, who is a professor at Computer Science
17 Department, was the fourth.

18 So Viveck then has withdrawn this work, and
19 he said that let's write it more clearly, and so on,
20 and improve it. So we had more discussions after we
21 have withdrawn the paper and we tried to improve
22 things, write things more clearly, and so on.

23 And then we -- all of us stopped working on
24 this for a while. And Shihang decided to write some
25 modified version of this paper as his master's

1 dissertation, thesis. So he wanted to graduate, so he
2 simplified this work in his dissertation and he
3 graduated.

4 And after that, we were having some
5 discussions until 2019, or so, and I was discussing
6 with Viveck that we would submit it again, and he told
7 me, yeah, we will do this, and so on.

8 And then in 2021 I have found the paper on
9 arXiv without my name, so I -- that was a surprise for
10 me. I don't know how this happened.

11 So I e-mailed him. I told him that I was a
12 coauthor of the earlier version, how come I was
13 removed. And also, I sent a text message to Shihang.
14 I provided this text message to the coordinators.

15 So I told him how come I removed, and he told
16 me this is probably by mistake from Viveck, and he
17 doesn't know why I was removed. And he doesn't -- he
18 wasn't aware of the whole thing, so he doesn't know how
19 this happened.

20 So I e-mailed Viveck. I told him that how
21 come I was removed. So he told me I will write an
22 acknowledgment for you. So he updated the paper on
23 arXiv with an acknowledgment.

24 The first version didn't have this
25 acknowledgment at all. The second version he has this

1 acknowledgment, but he wrote totally incorrect
2 information. He was saying that I helped in another
3 work other than this work itself. In a vague way, I
4 don't agree with this acknowledgment.

5 And he refused to add me as a coauthor. He
6 said that he worked on this after I left Penn State,
7 and that it has been a long time since I was involved
8 with any of the discussion, and I will not add you.

9 So I told him I will just report this issue
10 to Penn State and he can [unintelligible].

11 DR. HALLGREN: Okay. Thank you. So I'm
12 familiar -- so that helps refresh my memory. You know,
13 I've seen these documents and stuff, so that's good to
14 see.

15 Now, when you looked at the paper on the
16 arXiv, you know, what parts of that paper do you feel,
17 you know, were taken from the draft?

18 DR. ALI: It is actually -- it is the same.
19 It is the same protocol. So the protocol in the
20 original paper is called CausalEC. The protocol in the
21 new paper is called CausalEC, and also it has the
22 same -- it has the same elements. So he --

23 DR. HALLGREN: Like where would I look? I
24 have them both sitting here. One's 22 pages, one's 54
25 pages. Where do I look to see that these algorithms

1 are the same?

2 DR. ALI: Many places. So if you look into
3 the summary of the contributions or the main idea of
4 the protocol, in the arXiv version you will see that
5 the main idea of the protocol something called
6 cross-object coding. This is the main idea of the
7 work. In the old version we were calling this
8 inter-object coding. So it is the same idea, but it is
9 explained in a better way, in a different way.

10 But I would like also to emphasize that the
11 draft that is 21 pages or so, we were already working
12 to improve this and writing things more and we were
13 having some discussions, and in the new version on
14 arXiv, he has motivating examples, he has more
15 clarifications.

16 We already discussed this, although they were
17 not written in the 21 pages paper. So I see this as
18 this, but the longer one is more well explained, but
19 the essence of the protocol is the same. This
20 cross-object coding is the same here and here.

21 DR. HALLGREN: Okay. So I hear what you're
22 saying, that the essence is the same. But, you know,
23 to people who have not worked on this paper in
24 particular, you know, it would help if you could
25 like -- you know, to help other people understand what

1 you're saying. Somehow you have to give, you know,
2 give a starting point even. Like where do we look?
3 How do we --

4 DR. ALI: I will tell you. Should I start
5 from the abstract or what --

6 DR. HALLGREN: Well, I don't know. I mean,
7 you know, this can be a tough thing to do, to try and
8 help other people understand --

9 DR. ALI: Yeah.

10 DR. HALLGREN: -- you know, what your feeling
11 is about this, but. So, you know, we can talk about
12 it, you can try some things, and then I can try and
13 steer you if it's not helpful, if it is helpful, but
14 somehow this has to --

15 DR. ALI: I will try to share my screen and
16 tell you what is it. So here he's saying that we are
17 developing for the first time an erasure coding based
18 algorithm called CausalEC. This protocol I was
19 involved with in developing in the original paper. So
20 this is the same protocol, even in --

21 DR. HALLGREN: Well, I understand that.
22 Partly, you said, CausalEC is the -- you think it's the
23 same, but the other paper's not a published paper,
24 first of all.

25 Second of all, you know, all we can do is

1 look at the other one for now. You can tell us also
2 what happened, but it's not a matter of like these two
3 sentences say the same thing. It's like, you know,
4 where does the actual problem occur.

5 DR. ALI: Yeah. Okay. I would like -- so
6 this is the aspects that I mentioned, that the main
7 idea of the algorithm is a cross-object erasure coding
8 and --

9 MS. PETROSKY: Okay. Sorry. I don't mean to
10 interrupt, but just so that we can be clear for the
11 transcript, we're looking at a copy of the 2021 arXiv
12 paper. It looks like it's Version 2, the second
13 version of the arXiv paper. So we'll call that
14 Exhibit A.

15 (Exhibit A identified)

16 DR. ALI: Okay.

17 DR. HALLGREN: But I guess what I'm getting
18 at is like this stuff is just abstract, it's intro.
19 Like people can write anything. Like even if they have
20 the same words, it doesn't mean that the papers are the
21 same like necessarily, right. It depends what happens
22 in the paper. So can you help with what's in the
23 paper?

24 DR. ALI: Yeah, I agree. I just wanted to
25 mention that this cross-object erasure coding is the

1 main idea of the report.

2 DR. HALLGREN: Well, I don't -- okay. I
3 don't know if it's an idea. But okay, go ahead.

4 DR. ALI: No. Actually, this is the main
5 technique in this work. This is the main --

6 DR. HALLGREN: Okay.

7 DR. ALI: -- novelty in this work.

8 DR. HALLGREN: Okay. So that's the main
9 technique. And was that technique in the previous
10 paper?

11 DR. ALI: Yeah, but it is called inter-object
12 erasure coding.

13 DR. HALLGREN: Okay. So you're saying that
14 one thing people could do is they could look at
15 cross-object erasure coding in the arXiv paper and
16 compare it to what? What was the other one called?

17 DR. ALI: Inter-object erasure.

18 DR. HALLGREN: Inter-object. Okay. So
19 you've given now an example. Cross-object erasure is
20 the main technique. It's called inter-object in the
21 previous one. Can you say more about that specific
22 example? Like how can we see those in the paper and
23 see that they're the same?

24 DR. ALI: Yeah. Okay. Okay. So first I
25 would like to mention that this cross-object or

1 inter-object, this work is the first work to look at
2 this. So this is the main technical aspect of this
3 work.

4 You can see this by, for an instance -- okay.
5 So if you look into this figure, for an instance, this
6 Figure 1, X1 is an object, X2 --

7 DR. HALLGREN: Sorry. Which paper are you in
8 right now, the arXiv --

9 DR. ALI: This is the same exhibit,
10 Exhibit A. This is the longer version.

11 DR. HALLGREN: Which paper is it, the arXiv
12 paper or --

13 DR. ALI: The arXiv.

14 DR. HALLGREN: The arXiv paper. Okay.

15 DR. ALI: Okay. So that the main technique
16 here is that here you have three objects, X1, X2 and
17 X3. And cross-object means that --

18 DR. HALLGREN: Sorry. First, can you just
19 tell me, for like -- you know, I don't want to get
20 saturated like not too quickly. So can you first tell
21 me where in each paper we would look? Just give us a
22 map, like if you look here, you'll see this, if you
23 look here, you'll see that.

24 DR. ALI: Yeah. Okay. So this is -- this
25 section is Motivating Example, Section 1.1 --

1 DR. HALLGREN: Yeah.

2 DR. ALI: -- in the arXiv version.

3 DR. HALLGREN: Uh-huh.

4 DR. ALI: Okay. This is just a simple
5 example to illustrate the main idea of this work, which
6 is a cross-object, and the cross-object means that
7 these circles here are servers.

8 DR. HALLGREN: No. Sorry. Can you point in
9 each paper where we would look? Like don't explain the
10 technique. Show me where to look in each paper first.

11 DR. ALI: Okay. So in the first draft, in
12 the arXiv version, you will look into the Motivating
13 Example, which is Section 1.1. Okay. In the old
14 one -- okay.

15 MS. PETROSKY: I can actually share a copy of
16 that, if that would be helpful.

17 DR. ALI: I have it printed. If you would
18 like to share it, you can share it [unintelligible].
19 Yeah. If you look into page 4 and page 5. Yeah,
20 mainly page 5. Yeah.

21 So the cross-object idea is explained here,
22 is explained in this -- using this example that -- and
23 this Section 4 also is explaining the same thing, so --

24 MS. PETROSKY: And then just to clarify for
25 the record, this is page 5, Section 4 of what we're

1 going to call Exhibit B, which is the 2018 article.

2 And then you were referencing, I believe, also

3 Section 1.1 of Exhibit A, the 2021 article.

4 (Exhibit B identified)

5 DR. ALI: Yeah, yeah. For the older version,

6 this idea of cross-object or inter-object is explained

7 both in Section 3 and Section 4.

8 DR. HALLGREN: How big -- so these, to me,

9 look like just small examples. Whatever you're doing,

10 this cross-object thing, does that scale? Or like

11 what's the --

12 DR. ALI: Yeah, yeah. It is at the scale.

13 Here we are just explaining it as just small numeric

14 examples, but in [unintelligible] these numbers here,

15 if we assume that we have just two object or three

16 object or so, the actual protocol is handling any

17 number of objects.

18 DR. HALLGREN: Okay. Can you show me where

19 it scales in each paper?

20 DR. ALI: Okay. Yeah, since we are here

21 already, the actual protocol for any number of objects

22 is at Section 4.2 in page 6. So this is the actual

23 protocol. It is not for a specific example as what I

24 was explaining earlier.

25 Here it deals with any number of objects. So

1 the objects are [unintelligible] to you and you deal
2 with any number of objects. If you look into the arXiv
3 one, the protocol is given in Section 4 also.
4 Section 4, it is page 10.

5 DR. HALLGREN: Okay. And then what should I
6 be looking at here to see that they're the same?

7 DR. ALI: So here, yeah, if you just fix the
8 screen like this, I will present the CausalEC algorithm
9 that is parametrized by this to store K objects. So
10 here K is generic. It is not --

11 DR. HALLGREN: Wait. First, no. Before we
12 talk about ideas and details, I just want to know just
13 at a high level. You know, like if I were to look at
14 these two, should I be able to see that these are the
15 same, or is it only you? Or, you know, how do you
16 communicate to another person that these are the same?

17 DR. ALI: It is the same because if you look
18 into the old version of the paper, the 21 pages, it is
19 saying that in general you have any number of objects,
20 K objects, and then you do some encoding.

21 In the new version of the paper on arXiv,
22 also it is the same. You have K objects and you encode
23 them using some erasure coding, using this cross-object
24 technique. So --

25 DR. HALLGREN: Well, that's a very vague

1 statement though. I mean, you know, lots of different
2 algorithms could do that. What makes these two
3 specifically the same?

4 DR. ALI: Well, so there are two ideas that
5 is maybe the main ideas of this protocol. The first
6 idea is the cross-object. You will find that it is
7 used here and here.

8 And the second idea is that each server is
9 storing some history, and you will see that here and
10 here. And this work is the first to do this, so either
11 the old one or the new one.

12 DR. HALLGREN: Okay. Sorry. So let's go
13 slowly. I'm supposed to look for something that's
14 called cross-object and I'm supposed to look for
15 something state history, is that right -- or stored --
16 no, that you store the history, right?

17 DR. ALI: Yeah.

18 DR. HALLGREN: Okay. So where do I see that
19 on these two pages?

20 DR. ALI: Okay. Actually, cross-object is
21 mentioned everywhere in the arXiv version. So should I
22 point out to a specific place? It is --

23 DR. HALLGREN: Well, it's not enough just to
24 use the same word, right? I mean, you have to show me
25 that these are -- you have to explain that the steps

1 are the same, the ideas are the same. I mean, even to
2 know if cross-object is the same, we'd have to look up
3 definitions and stuff. So I don't want to get
4 sidetracked by that so much yet.

5 I'm just trying to get a map of like, you
6 know, here's where you would look to see that blah,
7 blah, blah, but with more detail. Like which -- like I
8 don't see -- like where is the store history idea and
9 the cross-object idea appearing in these two
10 algorithms?

11 DR. ALI: Okay. So the main -- here, I don't
12 know if this answer your question or no. "The main
13 technical novelty of our paper lies in handling
14 algorithmic challenges associated with developing
15 consistent data storage system that uses cross-object
16 erasure coding."

17 And then you would like to show how this
18 cross-object is working. You are saying I shouldn't
19 explain on this example, right?

20 DR. HALLGREN: No. An example's not enough.
21 You know, small things might work, but when you scale
22 it, it might not. So we have to see that the scaling
23 thing actually works in both papers, like, you know.

24 DR. ALI: Yeah. I would like -- I just would
25 like to find the specific base [unintelligible]

1 algorithm. Just one second.

2 (Pause)

3 DR. HALLGREN: Who's sharing the screen? Is
4 that you, Ramy, or somebody else?

5 DR. ALI: Yeah, yeah. I'm sharing my screen.

6 DR. HALLGREN: Okay.

7 DR. ALI: So in both of the protocols you are
8 given this K object, okay, and you are using some code,
9 C, which takes this object and code occurs then.

10 DR. HALLGREN: No. Sorry. Again, you're
11 like getting into details about stuff. I want like a
12 map of where I see it in the paper. I need to be able
13 to verify what you're saying, and I can't think real
14 time and understand the algorithm on the spot so --

15 DR. ALI: Okay.

16 DR. HALLGREN: -- you have to give me a map
17 that says like here is where that idea appears, it's in
18 these four lines of the code, or whatever, and, you
19 know, here's with the other thing.

20 So the high level stuff doesn't help because
21 -- you know, just to give you an example, I'm writing a
22 paper right now where I think I know what's true and
23 then I write it down and then everything falls apart
24 and breaks and, you know, it's not true, so I have to
25 keep changing what it says.

1 But so I really need to see in the -- you
2 know, somewhere in the -- you have to show me where the
3 details are, without explaining the details,
4 necessarily.

5 DR. ALI: This idea of cross-object actually
6 is mentioned in all -- everywhere.

7 DR. HALLGREN: It's just a word though. You
8 have to show me where it actually is implemented, where
9 it happens, right.

10 DR. ALI: Okay.

11 DR. HALLGREN: Where it's -- I mean, are
12 there proofs, do you prove things work? Like how do
13 you -- like is it a theory paper? Do you prove things,
14 or how does that work?

15 DR. ALI: Yeah.

16 DR. HALLGREN: Okay. So then do you have to
17 prove that the cross-object part works?

18 DR. ALI: Yeah.

19 DR. HALLGREN: Okay. So, you know, so where
20 is the cross-object part in each paper and where are
21 the proofs in each paper? Are the proofs the same?

22 DR. ALI: They have the same ideas, but they
23 may not be identical.

24 DR. HALLGREN: Okay. Well, that's what we
25 should try and establish. Like what's equal, what's,

1 you know, maybe not identical, what's using the same
2 idea? You have to tease that apart for everybody else
3 because other people won't be able to understand that,
4 won't be able to determine that.

5 DR. ALI: Yeah. It will take some time to
6 point out things. Wait one second.

7 DR. HALLGREN: Do you see the -- so I had
8 asked them to send you questions like this a couple of
9 times. Did you understand that this was what I was
10 asking for before?

11 DR. ALI: No, I --

12 DR. HALLGREN: Okay. That's what I -- I kind
13 of guessed that by your response, that --

14 DR. KARMELOTA: So we could also always
15 have -- when we work on the comparison, to point out
16 specific components within the paper to demonstrate the
17 similarity, and you could always send that to us after
18 the fact so that you're not necessarily put on the spot
19 or trying to go through it.

20 But before we agree to do that, do you feel
21 you have a good understanding of specifically what
22 Dr. Hallgren's looking for? Dr. Hallgren, do you want
23 to add to what you're asking, or what I just expressed?

24 DR. HALLGREN: Well, I think we should pin
25 down one example now so that we -- you know, so we have

1 an example, and then you can do it like throughout the
2 paper, or whatever.

3 But we at least need to find one part where I
4 can look at it and say, okay, now I see, if I spend all
5 my time looking at this part, I will be able to see
6 what you're saying. But we're not to that --

7 DR. ALI: And you are saying that example is
8 not sufficient to do this?

9 DR. HALLGREN: No, because the claim is that
10 something scales, and so that is -- you know, simple
11 examples can always work, but the scaling might not
12 work.

13 DR. ALI: Okay.

14 DR. HALLGREN: So I need to see the scaling
15 part together with the proof of the scaling part to see
16 if the ideas are the same.

17 DR. ALI: Okay. I need more time to do this,
18 but I am trying to do it now.

19 DR. HALLGREN: Well, okay. There's no rush.
20 But if you can try and just find something now. I can
21 just keep saying no to everything you put up, and then
22 whatever's left you use that afterwards.

23 (Pause)

24 DR. ALI: Yeah, it is hard to do it in this
25 [unintelligible]. I see the ideas written in the

1 protocol in many places, but I don't know how to
2 explain it.

3 DR. HALLGREN: Okay. Do you think you can
4 try it if you have time off line to like think through
5 it?

6 DR. ALI: Yeah, I think so, but just can you
7 say again what specific thing you are looking for, just
8 to be clear?

9 DR. HALLGREN: Well, okay. It's hard to
10 explain, you know, but there are like different levels.
11 Like the text could be equal, okay, text isn't equal.
12 There could be an idea that's the same in both papers.

13 DR. ALI: That's the cross-object that I am
14 saying.

15 DR. HALLGREN: Okay. Hold on. But let me
16 just bleh, bleh, bleh. That idea might be in every
17 paper you look at, right, or it might be a new idea.

18 DR. ALI: No, that's --

19 DR. HALLGREN: No. I'm not talking about
20 this one. I'm just saying. I'm giving you like
21 different levels of things to look at, what you have to
22 help us understand.

23 You have to help us understand. You also
24 have to say this stuff is standard, everyone does it,
25 but this part is new. Like it's not enough just to say

1 these parts look the same. You know what I mean? You
2 have to say like this part's standard, this part's not,
3 this is the new part, here's where you look.

4 So in particular, if you're saying that these
5 two techniques are new and that they were in the
6 original paper and they scaled and there's proofs in
7 both papers, I would think that that would be possible
8 to point out.

9 Like here's where they're used, here's why
10 they're -- you know, explain why they're the same,
11 explain which parts are -- you know. I mean, somehow
12 we have to establish, you know, did the ideas come from
13 you through those earlier meetings, or was it just
14 taken from the -- you see what I'm saying? Like we
15 have nothing to go on right now.

16 DR. ALI: Okay. I have mentioned this
17 before, but this cross-object or inter-object is not
18 standard, it is the first -- this proposed for the
19 first time.

20 DR. HALLGREN: I understand, but that's a
21 word. You have to show us where that -- okay. So
22 first of all, I don't know the definition. So if
23 you're saying there's a definition in the paper, then
24 say here's the definition, it's in both papers. Okay?

25 DR. ALI: Is that cross-object meaning that

1 you have some objects and it encodes them. Okay. This
2 is explained here and this is explained here. The
3 standard approach is taking one object and encoding it.

4 DR. HALLGREN: No. But you have to show us
5 in the paper where this is explained so that we can see
6 that the concept is the same.

7 DR. ALI: So should I highlight both of the
8 papers supports that explains the cross-object coding?

9 DR. HALLGREN: Sure. Yeah, yeah. I mean,
10 you show us where it's defined in each paper, then you
11 show us where it's used in each paper. So we can say,
12 okay, we see the definition is the same, now there's an
13 algorithm, I guess. Is that right, there's an
14 algorithm? Is there one algorithm or many algorithms?
15 I don't even know.

16 DR. ALI: It is one algorithm, but it has
17 many smaller components, but it is one.

18 DR. HALLGREN: Oh, so there's one like all
19 these different smaller pieces get put together?

20 DR. ALI: Yeah.

21 DR. HALLGREN: Okay. So there's like what's
22 the high level claim about that whole thing when you
23 put it together? Show me, you know, where in each
24 paper is that claim made so we can say, okay, that same
25 claim is made in both papers.

1 DR. ALI: Okay.

2 DR. HALLGREN: And then, you know, how is
3 that claim established in both papers. If it's like
4 boxes one, four and five in one, and six, seven and
5 eight in the other, or whatever. Like how do you put
6 it together? And then where's the proof of -- is it
7 proof of correctness or running time, or what?

8 DR. ALI: Yeah, yeah, correctness and
9 liveness.

10 DR. HALLGREN: And what?

11 DR. ALI: Liveness.

12 DR. HALLGREN: What's live --

13 DR. ALI: Liveness means that the protocol is
14 progressing, it is not halting algorithm.

15 DR. HALLGREN: Oh, it's not halting. Okay.
16 So then you show where the proofs are, so we -- you
17 know, you have to be able to say here's where it is in
18 this paper, here's where it is in this paper. Even
19 though if they don't look the same, if you read these
20 two proofs, you will see it's the exact same technique.
21 You know what I mean?

22 DR. ALI: Yeah. For me the cross-object and
23 the inter-object is the technique here, is the
24 technique here, and it is introduced for the first time
25 so that this is the key --

1 DR. HALLGREN: I don't doubt for a minute
2 that you understand it a hundred percent, but you have
3 to communicate it. That's the hard part. You have to
4 now communicate what you know to people, you know, who
5 are not you, basically.

6 Because like, you know, one thing like when
7 you're a, you know, a grad student, you spend like a
8 year working on a problem, you know, you sort of know
9 everything inside and out, and you totally lose track
10 that when -- until you talk to people, you don't
11 realize how little everyone else knows about whatever
12 you're doing. You know what I mean?

13 And then you slowly have to shape your story
14 to make it easier and less, you know -- so that's kind
15 of your job here. You take something that you
16 obviously understand very well, but you have to pull it
17 out into something that, you know, kind of anyone can
18 understand.

19 DR. ALI: Okay. So I --

20 DR. HALLGREN: I mean, if you have a roommate
21 who's never seen this before, your roommate should be
22 able to read what you wrote and be like, okay, at least
23 I see like how I would piece this together if I wanted
24 to spend time on it.

25 DR. ALI: Okay. So just to make sure I

1 understand, you would like the two drafts and I
2 highlight the similarities between them, like this, or
3 is that --

4 DR. HALLGREN: This is not super helpful.
5 You're making a claim about an algorithm, so I want to
6 go straight to the algorithm. I don't like -- you
7 know, I don't want to -- I can write whatever I want in
8 an abstract. It might be true, it might be false,
9 right. I mean, that's not evidence. Evidence would be
10 here's the algorithm, here are the ideas.

11 Like I have lots of ideas that don't work, so
12 I could write a paper that says I have this great idea.
13 I think, you know, if you put these two things together
14 and color it red and then tape it on the other side,
15 it's going to, you know, do my homework for me, or
16 something. You know, it doesn't mean it works. It
17 doesn't mean anything, right. So you just have to
18 establish that through concrete parts of the paper.

19 DR. ALI: So what is the response -- what is
20 the format of the response that you would like from me?

21 DR. HALLGREN: Page numbers and line numbers,
22 for example, would be one thing.

23 DR. ALI: Okay.

24 DR. HALLGREN: I mean, in particular, the
25 definition, the algorithm statement, the algorithm,

1 where it is, the algorithm proof. Just that part, you
2 know. And then you say where those ideas appear so we
3 can see it if we look, you know.

4 DR. ALI: Okay.

5 DR. HALLGREN: I mean, I think the fact that
6 you're having a hard time is also an indication, right?
7 It's not easy. I mean, this is like hard stuff to get
8 through.

9 DR. ALI: Yeah. I thought explaining that
10 both of them use this cross-object and it is used for
11 the first time is sufficient, but I can try to do more.

12 DR. HALLGREN: Well, cross-object is just a
13 word.

14 DR. ALI: But it is here for the first time,
15 and in the old version for the first time.

16 DR. HALLGREN: No. But you have to convince
17 us.

18 DR. ALI: Okay. Yeah.

19 DR. KARMELOITA: So, Dr. Hallgren -- oh,
20 sorry. Go ahead.

21 DR. ALI: So just to be clear, the
22 cross-object or the inter-object is the main technique,
23 and the main guarantee is that the system is causally
24 consistent and this is proved both in the old version
25 and the new version. So that's what I will point out.

1 DR. HALLGREN: Okay. Well, you can start
2 with two sentences that say those two things, but then
3 say what -- give page numbers and line numbers where
4 the definitions of each of those things are.

5 DR. ALI: Okay. There is no line numbers,
6 but I will try.

7 DR. KARMELOITA: Did you want to -- do you
8 feel that you have a clear understanding of what's
9 being asked? And then we can -- if so, we can go ahead
10 and just move on to possibly the authorship questions,
11 Dr. Hallgren.

12 DR. ALI: Okay.

13 DR. HALLGREN: I don't know if we need those
14 yet --

15 DR. KARMELOITA: Okay.

16 DR. HALLGREN: -- because it's going to
17 depend on what the papers look like.

18 DR. KARMELOITA: Okay.

19 DR. ALI: Yeah, I believe we will take -- it
20 is not [unintelligible], so I will send you something,
21 you will say it is not clear. I don't know if it is
22 from the first time I will be able to do this.

23 DR. HALLGREN: That's fine.

24 DR. KARMELOITA: And our team will work with
25 you. So Sarah, Kim or myself, we will send you a

1 follow-up e-mail. We've taken notes on specifically
2 what's being asked. And then you can respond to us and
3 we'll share that with Dr. Hallgren.

4 DR. ALI: Yeah.

5 DR. KARMELOITA: So we'll be the in-between.

6 DR. ALI: Yeah, sure.

7 DR. HALLGREN: I hope I don't come across
8 wrong when I say, you know, you have to convince us.
9 It's like a friendly challenge. Like you have this
10 work, so it's a friendly challenge to try and -- you
11 know.

12 DR. ALI: Yeah. I know it is hard to show
13 this, but for me I see the technique is the same, the
14 claim is the same. I was coauthor of the old one. I
15 was removed. So it is very clear for me, but I need to
16 convince you.

17 DR. HALLGREN: Yeah. Show us how to see it
18 also.

19 DR. ALI: Okay. I will --

20 DR. HALLGREN: From the papers.

21 DR. ALI: Yeah. Sure. Is there a date I
22 should respond by? Because I have a deadline
23 [unintelligible].

24 DR. KARMELOITA: Well, the deadline for the
25 inquiry is October 1st, so I would say you need to give

1 enough time for us to review it before then, ideally,
2 and to write the report. So does a week seem
3 reasonable to you?

4 DR. ALI: I actually have the deadline
5 September 8.

6 DR. KARMELOITA: Perfect.

7 DR. ALI: No. That's my deadline, so I would
8 like to be able to --

9 DR. KARMELOITA: Oh, sorry. I was like, yes,
10 get that to us on September 8th, too.

11 DR. ALI: I would like mid September. Does
12 that work?

13 DR. KARMELOITA: Yes.

14 MS. THURLEY: Yeah, I think that would be
15 fine. So you're thinking September 10th or 13th,
16 around that time frame?

17 DR. ALI: [Unintelligible]. I would like
18 15th, something like this, but I'll [unintelligible]
19 earlier, but I would like to set this date. I will
20 probably send it earlier.

21 MS. THURLEY: Okay.

22 DR. KARMELOITA: So at this time do we have
23 any other questions?

24 (No response)

25 DR. KARMELOITA: Okay then. Well, thank you

1 everyone for taking your time out of your day for this.
2 We will be in touch with a follow-up e-mail that you
3 can respond to that, and we will go from there.

4 DR. ALI: Okay. Thank you very much.

5 DR. HALLGREN: Thank you.

6 DR. KARMELOITA: Bye.

7 MS. THURLEY: Bye-bye.

8 MS. MATTHEWS: Bye everyone.

9 (Interview concluded)

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CERTIFICATE

I hereby certify that the recorded interview in
this matter was transcribed by me to the best of my
ability.

Lisa J. Berkey,
Court Reporter
September 16, 2021
(570) 336-8114

ERRATA SHEET
INTERVIEW OF DR. RAMY E. ALI, 9/2/2021

PAGE	LINE
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I have inspected and read my interview transcript and have listed all changes, corrections and/or additions.

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1	A			
1 ^[1] - 15:6 1.1 ^[3] - 15:25, 16:13, 17:3 10 ^[1] - 18:4 10th ^[1] - 34:15 13 ^[1] - 2:11 13th ^[1] - 34:15 15th ^[1] - 34:18 16 ^[1] - 36:8 17 ^[1] - 2:12 1st ^[2] - 6:1, 33:25	ability ^[1] - 36:5 able ^[11] - 4:6, 4:8, 18:14, 21:12, 23:3, 23:4, 24:5, 28:17, 29:22, 32:22, 34:8 abstract ^[4] - 8:7, 12:5, 13:18, 30:8 acknowledgment ^[5] - 9:22, 9:23, 9:25, 10:1, 10:4 actual ^[4] - 13:4, 17:16, 17:21, 17:22 add ^[3] - 10:5, 10:8, 23:23 additions ^[1] - 37:23 afterwards ^[1] - 24:22 agree ^[3] - 10:4, 13:24, 23:20 ahead ^[5] - 3:9, 7:10, 14:3, 31:20, 32:9 algorithm ^[18] - 6:20, 6:23, 12:18, 13:7, 18:8, 21:1, 21:14, 27:13, 27:14, 27:16, 28:14, 30:5, 30:6, 30:10, 30:25, 31:1 algorithmic ^[1] - 20:14 algorithms ^[4] - 10:25, 19:2, 20:10, 27:14 ALI ^[89] - 1:6, 3:2, 3:4, 4:1, 5:3, 6:16, 7:6, 7:25, 10:18, 11:2, 12:4, 12:9, 12:15, 13:5, 13:16, 13:24, 14:4, 14:7, 14:11, 14:17, 14:24, 15:9, 15:13, 15:15, 15:24, 16:2, 16:4, 16:11, 16:17, 17:5, 17:12, 17:20, 18:7, 18:17, 19:4, 19:17, 19:20, 20:11, 20:24, 21:5, 21:7, 21:15, 22:5, 22:10, 22:15, 22:18, 22:22, 23:5, 23:11, 24:7, 24:13, 24:17, 24:24, 25:6, 25:13, 25:18, 26:16, 26:25, 27:7, 27:16, 27:20, 28:1, 28:8, 28:11, 28:13, 28:22, 29:19, 29:25, 30:19, 30:23, 31:4, 31:9, 31:14, 31:18, 31:21, 32:5, 32:12, 32:19, 33:4, 33:6, 33:12, 33:19, 33:21, 34:4, 34:7, 34:11, 34:17, 35:4,	37:1 Ali ^[2] - 5:3, 6:18 allegation ^[4] - 3:11, 5:11, 6:13, 7:19 allegedly ^[1] - 6:17 ALSO ^[1] - 1:15 Analyst ^[2] - 1:20, 4:18 answer ^[1] - 20:12 apart ^[2] - 21:23, 23:2 appear ^[1] - 31:2 appearing ^[1] - 20:9 approach ^[1] - 27:3 appropriate ^[1] - 7:1 article ^[2] - 17:1, 17:3 arXiv ^[17] - 9:9, 9:23, 10:16, 11:4, 11:14, 13:11, 13:13, 14:15, 15:8, 15:11, 15:13, 15:14, 16:2, 16:12, 18:2, 18:21, 19:21 aspect ^[1] - 15:2 aspects ^[1] - 13:6 assessment ^[1] - 7:9 Assistant ^[6] - 1:16, 1:18, 1:21, 4:11, 4:15, 4:20 associated ^[1] - 20:14 assume ^[1] - 17:15 attend ^[1] - 4:6 author ^[1] - 8:13 authored ^[2] - 6:21, 6:24 authors ^[1] - 8:14 authorship ^[1] - 32:10 aware ^[1] - 9:18	Candy ^[1] - 4:5 CausalEC ^[6] - 6:19, 10:20, 10:21, 12:18, 12:22, 18:8 causally ^[4] - 6:19, 6:24, 8:2, 31:23 CERTIFICATE ^[1] - 36:1 certify ^[1] - 36:3 challenge ^[2] - 33:9, 33:10 challenges ^[1] - 20:14 changes ^[1] - 37:23 changing ^[1] - 21:25 circles ^[1] - 16:7 claim ^[7] - 24:9, 27:22, 27:24, 27:25, 28:3, 30:5, 33:14 clarifications ^[1] - 11:15 clarify ^[2] - 3:20, 16:24 clear ^[6] - 13:10, 25:8, 31:21, 32:8, 32:21, 33:15 clearly ^[3] - 8:10, 8:19, 8:22 coauthor ^[4] - 8:12, 9:12, 10:5, 33:14 code ^[3] - 21:8, 21:9, 21:18 coding ^[14] - 6:20, 6:23, 8:2, 11:6, 11:8, 11:20, 12:17, 13:7, 13:25, 14:12, 14:15, 18:23, 20:16, 27:8 College ^[1] - 1:14 color ^[1] - 30:14 comment ^[2] - 3:19, 6:6 comments ^[1] - 6:6 communicate ^[3] - 18:16, 29:3, 29:4 compare ^[1] - 14:16 comparison ^[1] - 23:15 Complainant ^[5] - 1:8, 5:18, 6:18, 6:25, 7:2 completed ^[1] - 1:24 components ^[2] - 23:16, 27:17 Computer ^[3] - 1:13, 4:25, 8:16 concept ^[1] - 27:6 concluded ^[2] - 5:24, 35:9 concrete ^[1] - 30:18 conference ^[1] - 8:6 confidential ^[1] - 5:20 confidentiality ^[1] - 5:16 confirming ^[1] - 5:11 consistent ^[5] - 6:19, 6:24, 8:2, 20:15, 31:24 context ^[1] - 3:22 contributions ^[1] - 11:3	convince ^[3] - 31:16, 33:8, 33:16 coordinators ^[1] - 9:14 copy ^[3] - 3:18, 13:11, 16:15 correct ^[2] - 7:8, 7:9 corrections ^[1] - 37:23 correctness ^[2] - 28:7, 28:8 couple ^[1] - 23:8 Court ^[2] - 1:25, 36:7 Courtney ^[1] - 4:14 COURTNEY ^[1] - 1:18 creates ^[1] - 3:17 credit ^[1] - 7:2 cross ^[33] - 6:20, 11:6, 11:20, 13:7, 13:25, 14:15, 14:19, 14:25, 15:17, 16:6, 16:21, 17:6, 17:10, 18:23, 19:6, 19:14, 19:20, 20:2, 20:9, 20:15, 20:18, 22:5, 22:17, 22:20, 25:13, 26:17, 26:25, 27:8, 28:22, 31:10, 31:12, 31:22 cross-object ^[33] - 6:20, 11:6, 11:20, 13:7, 13:25, 14:15, 14:19, 14:25, 15:17, 16:6, 16:21, 17:6, 17:10, 18:23, 19:6, 19:14, 19:20, 20:2, 20:9, 20:15, 20:18, 22:5, 22:17, 22:20, 25:13, 26:17, 26:25, 27:8, 28:22, 31:10, 31:12, 31:22
2		B		D
2 ^[2] - 1:9, 13:12 2018 ^[3] - 6:23, 8:3, 17:1 2019 ^[1] - 9:5 2021 ^[7] - 1:9, 6:18, 7:1, 9:8, 13:11, 17:3, 36:8 21 ^[3] - 11:11, 11:17, 18:18 22 ^[1] - 10:24		base ^[1] - 20:25 based ^[4] - 6:20, 6:23, 8:2, 12:17 BEFORE ^[1] - 1:1 begin ^[2] - 3:13, 4:8 Berkey ^[2] - 1:25, 36:7 best ^[1] - 36:4 better ^[2] - 7:23, 11:9 between ^[2] - 30:2, 33:5 Bhuvan ^[2] - 7:1, 8:16 big ^[1] - 17:8 blah ^[3] - 20:6, 20:7 bleh ^[3] - 25:16 boxes ^[1] - 28:4 breaks ^[1] - 21:24 bye ^[4] - 35:6, 35:7, 35:8 bye-bye ^[1] - 35:7	base ^[1] - 20:25 based ^[4] - 6:20, 6:23, 8:2, 12:17 BEFORE ^[1] - 1:1 begin ^[2] - 3:13, 4:8 Berkey ^[2] - 1:25, 36:7 best ^[1] - 36:4 better ^[2] - 7:23, 11:9 between ^[2] - 30:2, 33:5 Bhuvan ^[2] - 7:1, 8:16 big ^[1] - 17:8 blah ^[3] - 20:6, 20:7 bleh ^[3] - 25:16 boxes ^[1] - 28:4 breaks ^[1] - 21:24 bye ^[4] - 35:6, 35:7, 35:8 bye-bye ^[1] - 35:7	D.Ed ^[1] - 1:18 data ^[4] - 6:19, 6:24, 8:2, 20:15 date ^[2] - 33:21, 34:19 Date ^[1] - 37:24 days ^[1] - 5:25 deadline ^[4] - 33:22, 33:24, 34:4, 34:7 deal ^[1] - 18:1 deals ^[1] - 17:25 Debra ^[3] - 4:7, 4:8, 4:10 DEBRA ^[1] - 1:16 decided ^[1] - 8:24 defined ^[1] - 27:10 definition ^[6] - 5:11, 26:22, 26:23, 26:24, 27:12, 30:25 definitions ^[2] - 20:3, 32:4
3		C		
3 ^[2] - 2:3, 17:7 336-8114 ^[2] - 1:25, 36:8 37 ^[1] - 2:8 3:00 ^[1] - 1:9		Cadambe ^[3] - 3:12, 6:17, 8:8 California ^[2] - 1:7, 5:5		
4				
4 ^[6] - 16:19, 16:23, 16:25, 17:7, 18:3, 18:4 4.2 ^[1] - 17:22				
5				
5 ^[3] - 16:19, 16:20, 16:25 54 ^[1] - 10:24 570 ^[2] - 1:25, 36:8				
6				
6 ^[1] - 17:22				
7				
7 ^[1] - 2:6				
8				
8 ^[1] - 34:5 8th ^[1] - 34:10				
9				
9/2/2021 ^[1] - 37:1 90 ^[1] - 5:25				

<p>degree ^[1] - 7:7</p> <p>delete ^[1] - 3:24</p> <p>demonstrate ^[1] - 23:16</p> <p>Department ^[1] - 8:17</p> <p>Deputy ^[2] - 1:17, 4:12</p> <p>detail ^[1] - 20:7</p> <p>details ^[4] - 18:12, 21:11, 22:3</p> <p>determinations ^[1] - 5:14</p> <p>determine ^[2] - 5:9, 23:4</p> <p>developing ^[3] - 12:17, 12:19, 20:14</p> <p>different ^[5] - 11:9, 19:1, 25:10, 25:21, 27:19</p> <p>Director ^[2] - 1:18, 4:15</p> <p>DISC ^[1] - 8:6</p> <p>discussed ^[2] - 5:20, 11:16</p> <p>discussing ^[1] - 9:5</p> <p>discussion ^[1] - 10:8</p> <p>discussions ^[3] - 8:20, 9:5, 11:13</p> <p>dissertation ^[2] - 9:1, 9:2</p> <p>distributed ^[2] - 6:24, 8:2</p> <p>doctoral ^[1] - 7:4</p> <p>documents ^[2] - 7:15, 10:13</p> <p>doubt ^[1] - 29:1</p> <p>down ^[2] - 21:23, 23:25</p> <p>DR ^[190] - 1:6, 1:13, 1:18, 3:1, 3:2, 3:3, 3:4, 3:5, 4:1, 4:2, 4:14, 4:21, 4:24, 5:1, 5:3, 5:6, 6:11, 6:16, 7:3, 7:6, 7:8, 7:12, 7:25, 10:11, 10:18, 10:23, 11:2, 11:21, 12:4, 12:6, 12:9, 12:10, 12:15, 12:21, 13:5, 13:16, 13:17, 13:24, 14:2, 14:4, 14:6, 14:7, 14:8, 14:11, 14:13, 14:17, 14:18, 14:24, 15:7, 15:9, 15:11, 15:13, 15:14, 15:15, 15:18, 15:24, 16:1, 16:2, 16:3, 16:4, 16:8, 16:11, 16:17, 17:5, 17:8, 17:12, 17:18, 17:20, 18:5, 18:7, 18:11, 18:17, 18:25, 19:4, 19:12, 19:17, 19:18, 19:20, 19:23, 20:11, 20:20, 20:24, 21:3, 21:5, 21:6, 21:7, 21:10, 21:15, 21:16, 22:5, 22:7, 22:10,</p>	<p>22:11, 22:15, 22:16, 22:18, 22:19, 22:22, 22:24, 23:5, 23:7, 23:11, 23:12, 23:14, 23:24, 24:7, 24:9, 24:13, 24:14, 24:17, 24:19, 24:24, 25:3, 25:6, 25:9, 25:13, 25:15, 25:18, 25:19, 26:16, 26:20, 26:25, 27:4, 27:7, 27:9, 27:16, 27:18, 27:20, 27:21, 28:1, 28:2, 28:8, 28:10, 28:11, 28:12, 28:13, 28:15, 28:22, 29:1, 29:19, 29:20, 29:25, 30:4, 30:19, 30:21, 30:23, 30:24, 31:4, 31:5, 31:9, 31:12, 31:14, 31:16, 31:18, 31:19, 31:21, 32:1, 32:5, 32:7, 32:12, 32:13, 32:15, 32:16, 32:18, 32:19, 32:23, 32:24, 33:4, 33:5, 33:6, 33:7, 33:12, 33:17, 33:19, 33:20, 33:21, 33:24, 34:4, 34:6, 34:7, 34:9, 34:11, 34:13, 34:17, 34:22, 34:25, 35:4, 35:5, 35:6, 37:1</p> <p>Dr ^[14] - 2:3, 2:6, 3:12, 4:23, 6:17, 6:18, 6:21, 6:25, 7:11, 23:22, 31:19, 32:11, 33:3</p> <p>draft ^[3] - 10:17, 11:11, 16:11</p> <p>drafts ^[1] - 30:1</p>	<p>14:12, 14:15, 14:17, 14:19, 18:23, 20:16</p> <p>Erasure ^[2] - 6:23, 8:1</p> <p>ERRATA ^[2] - 2:8, 37:1</p> <p>essence ^[2] - 11:19, 11:22</p> <p>establish ^[3] - 22:25, 26:12, 30:18</p> <p>established ^[1] - 28:3</p> <p>everywhere ^[2] - 19:21, 22:6</p> <p>evidence ^[2] - 30:9</p> <p>exact ^[1] - 28:20</p> <p>example ^[11] - 14:19, 14:22, 16:5, 16:22, 17:23, 20:19, 21:21, 23:25, 24:1, 24:7, 30:22</p> <p>Example ^[2] - 15:25, 16:13</p> <p>example's ^[1] - 20:20</p> <p>examples ^[4] - 11:14, 17:9, 17:14, 24:11</p> <p>Exhibit ^[8] - 2:11, 2:12, 13:14, 13:15, 15:10, 17:1, 17:3, 17:4</p> <p>exhibit ^[1] - 15:9</p> <p>EXHIBITS ^[1] - 2:10</p> <p>explain ^[7] - 16:9, 19:25, 20:19, 25:2, 25:10, 26:10, 26:11</p> <p>explained ^[8] - 11:9, 11:18, 16:21, 16:22, 17:6, 27:2, 27:5</p> <p>explaining ^[5] - 16:23, 17:13, 17:24, 22:3, 31:9</p> <p>explains ^[1] - 27:8</p> <p>expressed ^[1] - 23:23</p> <p>extent ^[1] - 5:20</p>	<p>26:22, 28:24, 31:11, 31:14, 31:15, 32:22</p> <p>five ^[1] - 28:4</p> <p>fix ^[1] - 18:7</p> <p>follow ^[2] - 33:1, 35:2</p> <p>follow-up ^[2] - 33:1, 35:2</p> <p>format ^[1] - 30:20</p> <p>four ^[3] - 8:14, 21:18, 28:4</p> <p>fourth ^[1] - 8:17</p> <p>frame ^[1] - 34:16</p> <p>friendly ^[2] - 33:9, 33:10</p> <p>full ^[1] - 8:8</p>	<p>35:5</p> <p>Hallgren's ^[1] - 23:22</p> <p>halting ^[2] - 28:14, 28:15</p> <p>handling ^[2] - 17:16, 20:13</p> <p>hard ^[6] - 24:24, 25:9, 29:3, 31:6, 31:7, 33:12</p> <p>hear ^[1] - 11:21</p> <p>hello ^[1] - 3:1</p> <p>help ^[8] - 7:22, 11:24, 11:25, 12:8, 13:22, 21:20, 25:22, 25:23</p> <p>helped ^[1] - 10:2</p> <p>helpful ^[4] - 12:13, 16:16, 30:4</p> <p>helps ^[1] - 10:12</p> <p>hereby ^[1] - 36:3</p> <p>herself ^[1] - 4:7</p> <p>high ^[3] - 18:13, 21:20, 27:22</p> <p>highlight ^[2] - 27:7, 30:2</p> <p>history ^[4] - 19:9, 19:15, 19:16, 20:8</p> <p>hold ^[1] - 25:15</p> <p>home ^[1] - 5:22</p> <p>homework ^[1] - 30:15</p> <p>hope ^[1] - 33:7</p> <p>hoping ^[1] - 6:14</p> <p>housekeeping ^[1] - 3:6</p> <p>hundred ^[1] - 29:2</p> <p>hurry ^[1] - 8:10</p>
				<p>G</p>
				<p>gathering ^[1] - 5:13</p> <p>general ^[1] - 18:19</p> <p>generic ^[1] - 18:10</p> <p>given ^[3] - 14:19, 18:3, 21:8</p> <p>grad ^[1] - 29:7</p> <p>graduate ^[1] - 9:1</p> <p>graduated ^[3] - 7:5, 7:6, 9:3</p> <p>great ^[1] - 30:12</p> <p>guarantee ^[1] - 31:23</p> <p>guess ^[2] - 13:17, 27:13</p> <p>guessed ^[1] - 23:13</p>
				<p>H</p>
				<p>Hallgren ^[8] - 2:6, 4:23, 4:24, 7:11, 23:22, 31:19, 32:11, 33:3</p> <p>HALLGREN ^[75] - 1:13, 4:24, 7:12, 10:11, 10:23, 11:21, 12:6, 12:10, 12:21, 13:17, 14:2, 14:6, 14:8, 14:13, 14:18, 15:7, 15:11, 15:14, 15:18, 16:1, 16:3, 16:8, 17:8, 17:18, 18:5, 18:11, 18:25, 19:12, 19:18, 19:23, 20:20, 21:3, 21:6, 21:10, 21:16, 22:7, 22:11, 22:16, 22:19, 22:24, 23:7, 23:12, 23:24, 24:9, 24:14, 24:19, 25:3, 25:9, 25:15, 25:19, 26:20, 27:4, 27:9, 27:18, 27:21, 28:2, 28:10, 28:12, 28:15, 29:1, 29:20, 30:4, 30:21, 30:24, 31:5, 31:12, 31:16, 32:1, 32:13, 32:16, 32:23, 33:7, 33:17, 33:20,</p>
				<p>I</p>
				<p>idea ^[21] - 11:3, 11:5, 11:6, 11:8, 13:7, 14:1, 14:3, 16:5, 16:21, 17:6, 19:6, 19:8, 20:8, 20:9, 21:17, 22:5, 23:2, 25:12, 25:16, 25:17, 30:12</p> <p>ideally ^[1] - 34:1</p> <p>ideas ^[13] - 6:17, 7:24, 18:12, 19:4, 19:5, 20:1, 22:22, 24:16, 24:25, 26:12, 30:10, 30:11, 31:2</p> <p>identical ^[2] - 22:23, 23:1</p> <p>identified ^[2] - 13:15, 17:4</p> <p>identities ^[1] - 5:17</p> <p>illustrate ^[1] - 16:5</p> <p>implemented ^[1] - 22:8</p> <p>importance ^[2] - 5:16, 5:18</p> <p>improve ^[3] - 8:20, 8:21, 11:12</p> <p>IN ^[1] - 1:4</p>
	<p>E</p>			
	<p>e-mail ^[2] - 33:1, 35:2</p> <p>e-mailed ^[2] - 9:11, 9:20</p> <p>easier ^[1] - 29:14</p> <p>easy ^[1] - 31:7</p> <p>eight ^[1] - 28:5</p> <p>either ^[1] - 19:10</p> <p>Electrical ^[1] - 1:7</p> <p>elements ^[1] - 10:22</p> <p>emphasize ^[1] - 11:10</p> <p>encode ^[1] - 18:22</p> <p>encodes ^[1] - 27:1</p> <p>encoding ^[2] - 18:20, 27:3</p> <p>Engineering ^[3] - 1:7, 1:14</p> <p>equal ^[3] - 22:25, 25:11</p> <p>erasure ^[10] - 6:20, 12:17, 13:7, 13:25,</p>		<p>F</p>	
				<p>fact ^[2] - 23:18, 31:5</p> <p>falls ^[1] - 21:23</p> <p>false ^[1] - 30:8</p> <p>familiar ^[2] - 6:15, 10:12</p> <p>far ^[1] - 5:25</p> <p>few ^[2] - 3:5, 3:8</p> <p>figure ^[1] - 15:5</p> <p>Figure ^[1] - 15:6</p> <p>final ^[2] - 3:23, 8:15</p> <p>fine ^[4] - 4:1, 6:22, 32:23, 34:15</p> <p>first ^[24] - 3:7, 6:8, 8:13, 8:14, 9:24, 12:17, 12:24, 14:24, 15:1, 15:18, 15:20, 16:10, 16:11, 18:11, 19:5, 19:10, 26:18, 26:19,</p>

in-between ^[1] - 33:5 included ^[2] - 6:4, 6:7 including ^[1] - 6:2 incorrect ^[1] - 10:1 indication ^[1] - 31:6 information ^[8] - 3:8, 3:11, 3:20, 5:13, 5:19, 6:2, 7:17, 10:2 inquiry ^[6] - 4:22, 5:7, 5:8, 5:24, 6:4, 33:25 INQUIRY ^[2] - 1:6, 1:12 inside ^[1] - 29:9 inspected ^[1] - 37:22 instance ^[2] - 15:4, 15:5 instead ^[1] - 7:21 INTEGRITY ^[1] - 1:1 Integrity ^[9] - 1:17, 1:18, 1:20, 1:21, 4:6, 4:12, 4:16, 4:18, 4:20 inter ^[10] - 11:8, 14:11, 14:17, 14:18, 14:20, 15:1, 17:6, 26:17, 28:23, 31:22 inter-object ^[10] - 11:8, 14:11, 14:17, 14:18, 14:20, 15:1, 17:6, 26:17, 28:23, 31:22 interrupt ^[1] - 13:10 INTERVIEW ^[3] - 1:6, 2:5, 37:1 interview ^[5] - 3:13, 3:16, 6:3, 36:3, 37:22 Interview ^[1] - 35:9 interviews ^[1] - 3:15 intro ^[1] - 13:18 introduce ^[2] - 4:3, 4:7 introduced ^[1] - 28:24 introducing ^[2] - 4:23, 5:2 INTRODUCTION ^[1] - 2:2 introductions ^[1] - 4:9 investigation ^[1] - 5:10 involved ^[3] - 5:17, 10:7, 12:19 issue ^[1] - 10:9 itself ^[1] - 10:3	3:1, 3:3, 3:5, 4:2, 4:14, 4:21, 5:1, 5:6, 6:11, 7:3, 7:8, 23:14, 31:19, 32:7, 32:15, 32:18, 32:24, 33:5, 33:24, 34:6, 34:9, 34:13, 34:22, 34:25, 35:6 Karmelita ^[2] - 2:3, 4:14 keep ^[2] - 21:25, 24:21 key ^[1] - 28:25 Kim ^[2] - 4:17, 32:25 KIMBERLY ^[1] - 1:20 kind ^[3] - 23:12, 29:14, 29:17 knows ^[1] - 29:11	15:2, 15:15, 16:5, 19:5, 20:11, 20:12, 31:22, 31:23 map ^[4] - 15:22, 20:5, 21:12, 21:16 master ^[1] - 7:6 master's ^[1] - 8:25 matter ^[2] - 13:2, 36:4 Matthews ^[1] - 4:19 MATTHEWS ^[3] - 1:21, 4:19, 35:8 mean ^[19] - 12:6, 13:9, 13:20, 19:1, 19:24, 20:1, 22:11, 26:1, 26:11, 27:9, 28:21, 29:12, 29:20, 30:9, 30:16, 30:17, 30:24, 31:5, 31:7 meaning ^[1] - 26:25 means ^[3] - 15:17, 16:6, 28:13 meetings ^[1] - 26:13 meets ^[1] - 5:11 memory ^[1] - 10:12 mention ^[2] - 13:25, 14:25 mentioned ^[4] - 13:6, 19:21, 22:6, 26:16 message ^[2] - 9:13, 9:14 mid ^[1] - 34:11 might ^[8] - 3:21, 20:21, 20:22, 24:11, 25:16, 25:17, 30:8 mind ^[2] - 4:22, 5:2 minute ^[1] - 29:1 minutes ^[1] - 3:8 misconduct ^[3] - 5:8, 5:9, 5:12 mistake ^[1] - 9:16 modified ^[1] - 8:25 momentarily ^[1] - 4:7 morning ^[1] - 3:2 most ^[1] - 6:15 motivating ^[1] - 11:14 Motivating ^[2] - 15:25, 16:12 move ^[1] - 32:10 moved ^[1] - 8:13 MS ^[10] - 4:10, 4:17, 4:19, 13:9, 16:15, 16:24, 34:14, 34:21, 35:7, 35:8	24:3, 24:14, 24:17, 32:13, 33:15, 33:25 never ^[1] - 29:21 new ^[9] - 10:21, 11:13, 18:21, 19:11, 25:17, 25:25, 26:3, 26:5, 31:25 nine ^[1] - 7:13 normally ^[1] - 5:24 notes ^[1] - 33:1 nothing ^[1] - 26:15 novelty ^[2] - 14:7, 20:13 number ^[6] - 7:14, 17:17, 17:21, 17:25, 18:2, 18:19 numbers ^[6] - 17:14, 30:21, 32:3, 32:5 numeric ^[1] - 17:13	once ^[1] - 3:23 one ^[25] - 7:21, 11:18, 13:1, 14:14, 14:16, 14:21, 16:14, 18:3, 19:11, 21:1, 23:6, 23:25, 24:3, 25:20, 27:3, 27:14, 27:16, 27:17, 27:18, 28:4, 29:6, 30:22, 33:14 one's ^[2] - 10:24 opportunity ^[2] - 3:19, 6:5 orient ^[1] - 4:4 original ^[3] - 10:20, 12:19, 26:6 ourselves ^[1] - 4:3 outline ^[1] - 7:13
	L		O	P
	learn ^[1] - 6:2 least ^[2] - 24:3, 29:22 left ^[2] - 10:6, 24:22 less ^[1] - 29:14 level ^[3] - 18:13, 21:20, 27:22 levels ^[2] - 25:10, 25:21 lies ^[1] - 20:13 LINE ^[1] - 37:2 line ^[4] - 25:4, 30:21, 32:3, 32:5 lines ^[1] - 21:18 Lisa ^[2] - 1:25, 36:7 listed ^[1] - 37:23 live ^[1] - 28:12 liveness ^[3] - 28:9, 28:11, 28:13 look ^[31] - 10:23, 10:25, 11:2, 12:2, 13:1, 14:14, 15:1, 15:5, 15:21, 15:22, 15:23, 16:9, 16:10, 16:12, 16:19, 17:9, 18:2, 18:13, 18:17, 19:13, 19:14, 20:2, 20:6, 24:4, 25:17, 25:21, 26:1, 26:3, 28:19, 31:3, 32:17 looked ^[1] - 10:15 looking ^[6] - 7:15, 13:11, 18:6, 23:22, 24:5, 25:7 looks ^[1] - 13:12 lose ^[1] - 29:9 Lyu ^[2] - 6:21, 6:25		object ^[49] - 6:20, 11:6, 11:8, 11:20, 13:7, 13:25, 14:11, 14:15, 14:17, 14:18, 14:19, 14:20, 14:25, 15:1, 15:6, 15:17, 16:6, 16:21, 17:6, 17:10, 17:15, 17:16, 18:23, 19:6, 19:14, 19:20, 20:2, 20:9, 20:15, 20:18, 21:8, 21:9, 22:5, 22:17, 22:20, 25:13, 26:17, 26:25, 27:3, 27:8, 28:22, 28:23, 31:10, 31:12, 31:22 objections ^[1] - 3:25 objects ^[11] - 15:16, 17:17, 17:21, 17:25, 18:1, 18:2, 18:9, 18:19, 18:20, 18:22, 27:1 obviously ^[1] - 29:16 occur ^[1] - 13:4 occurred ^[1] - 5:10 occurs ^[1] - 21:9 October ^[2] - 6:1, 33:25 OF ^[2] - 1:6, 37:1 OFFICE ^[1] - 1:1 Office ^[3] - 1:18, 1:20, 1:22 Officer ^[3] - 1:17, 4:6, 4:12 official ^[1] - 4:22 OFFICIAL ^[1] - 1:12 old ^[8] - 8:1, 11:7, 16:13, 18:18, 19:11, 31:15, 31:24, 33:14 older ^[1] - 17:5	p.m ^[1] - 1:9 page ^[8] - 16:19, 16:20, 16:25, 17:22, 18:4, 30:21, 32:3 PAGE ^[2] - 2:2, 37:2 pages ^[6] - 10:24, 10:25, 11:11, 11:17, 18:18, 19:19 paper ^[52] - 8:1, 8:8, 8:9, 8:11, 8:21, 8:25, 9:8, 9:22, 10:15, 10:16, 10:20, 10:21, 11:17, 11:23, 12:19, 12:23, 13:12, 13:13, 13:22, 13:23, 14:10, 14:15, 14:22, 15:7, 15:11, 15:12, 15:14, 15:21, 16:9, 16:10, 17:19, 18:18, 18:21, 20:13, 21:12, 21:22, 22:13, 22:20, 22:21, 23:16, 24:2, 25:17, 26:6, 26:23, 27:5, 27:10, 27:11, 27:24, 28:18, 30:12, 30:18 paper's ^[1] - 12:23 papers ^[10] - 13:20, 20:23, 25:12, 26:7, 26:24, 27:8, 27:25, 28:3, 32:17, 33:20 parametrized ^[1] - 18:9 part ^[10] - 22:17, 22:20, 24:3, 24:5, 24:15, 25:25, 26:3, 29:3, 31:1 part's ^[2] - 26:2 particular ^[3] - 11:24, 26:4, 30:24 partly ^[1] - 12:22 parts ^[4] - 10:16, 26:1, 26:11, 30:18
J			N	
J.D ^[2] - 1:16, 1:20 January ^[1] - 8:3 job ^[1] - 29:15 join ^[1] - 4:8 joined ^[1] - 4:21 joining ^[1] - 3:3		name ^[1] - 9:9 necessarily ^[3] - 13:21, 22:4, 23:18 need ^[11] - 4:3, 6:12, 6:13, 21:12, 22:1,		
K	mail ^[2] - 33:1, 35:2 mailed ^[2] - 9:11, 9:20 main ^[17] - 11:3, 11:5, 11:6, 13:6, 14:1, 14:4, 14:5, 14:8, 14:20,			
KARMELITA ^[26] - 1:18,				

<p>Pause ^[1] - 5:23</p> <p>pause ^[2] - 21:2, 24:23</p> <p>Penn ^[3] - 1:14, 10:6, 10:10</p> <p>PENNSYLVANIA ^[1] - 1:1</p> <p>people ^[8] - 11:23, 11:25, 12:8, 13:19, 14:14, 23:3, 29:4, 29:10</p> <p>percent ^[1] - 29:2</p> <p>perfect ^[1] - 34:6</p> <p>person ^[1] - 18:16</p> <p>Petrosky ^[1] - 4:17</p> <p>PETROSKY ^[5] - 1:20, 4:17, 13:9, 16:15, 16:24</p> <p>Ph.D ^[5] - 1:6, 1:13, 6:22, 7:5, 7:7</p> <p>phase ^[2] - 5:7, 5:13</p> <p>phonetic ^[1] - 8:6</p> <p>piece ^[1] - 29:23</p> <p>pieces ^[1] - 27:19</p> <p>pin ^[1] - 23:24</p> <p>place ^[1] - 19:22</p> <p>places ^[2] - 11:2, 25:1</p> <p>plagiarized ^[1] - 6:17</p> <p>plagiarizing ^[1] - 7:23</p> <p>planning ^[1] - 8:7</p> <p>point ^[8] - 5:14, 12:2, 16:8, 19:22, 23:6, 23:15, 26:8, 31:25</p> <p>possible ^[2] - 5:21, 26:7</p> <p>possibly ^[1] - 32:10</p> <p>postdoctoral ^[1] - 5:4</p> <p>Postdoctoral ^[1] - 1:7</p> <p>practice ^[1] - 3:15</p> <p>PREMARKED ^[1] - 2:10</p> <p>prepared ^[1] - 3:23</p> <p>preparing ^[1] - 7:16</p> <p>present ^[1] - 18:8</p> <p>PRESENT ^[2] - 1:12, 1:15</p> <p>President ^[2] - 1:16, 4:11</p> <p>previous ^[2] - 14:9, 14:21</p> <p>printed ^[1] - 16:17</p> <p>privacy ^[1] - 5:17</p> <p>problem ^[2] - 13:4, 29:8</p> <p>process ^[3] - 5:8, 6:9, 6:12</p> <p>Professor ^[1] - 1:13</p> <p>professor ^[2] - 4:25, 8:16</p> <p>Program ^[2] - 1:21, 4:20</p> <p>progressing ^[1] - 28:14</p> <p>proof ^[4] - 24:15, 28:6, 28:7, 31:1</p>	<p>proofs ^[6] - 22:12, 22:21, 26:6, 28:16, 28:20</p> <p>proposed ^[1] - 26:18</p> <p>protect ^[1] - 5:16</p> <p>Protections ^[3] - 1:19, 1:20, 1:22</p> <p>protocol ^[15] - 10:19, 10:20, 11:4, 11:5, 11:19, 12:18, 12:20, 17:16, 17:21, 17:23, 18:3, 19:5, 25:1, 28:13</p> <p>protocols ^[1] - 21:7</p> <p>prove ^[3] - 22:12, 22:13, 22:17</p> <p>proved ^[1] - 31:24</p> <p>provided ^[1] - 9:14</p> <p>providing ^[1] - 7:1</p> <p>published ^[1] - 12:23</p> <p>pull ^[1] - 29:16</p> <p>purpose ^[1] - 5:9</p> <p>put ^[6] - 23:18, 24:21, 27:19, 27:23, 28:5, 30:13</p>	<p>reiterating ^[1] - 5:15</p> <p>remains ^[1] - 5:20</p> <p>reminder ^[2] - 3:10, 5:7</p> <p>removed ^[5] - 9:13, 9:15, 9:17, 9:21, 33:15</p> <p>report ^[6] - 3:23, 6:4, 6:7, 10:9, 14:1, 34:2</p> <p>Reporter ^[2] - 1:25, 36:7</p> <p>RESEARCH ^[1] - 1:1</p> <p>research ^[3] - 5:8, 5:9, 5:12</p> <p>Research ^[14] - 1:17, 1:18, 1:20, 1:20, 1:21, 1:22, 4:5, 4:11, 4:12, 4:15, 4:18, 4:20</p> <p>researcher ^[1] - 5:4</p> <p>Researcher ^[1] - 1:7</p> <p>respond ^[3] - 33:2, 33:22, 35:3</p> <p>Respondent ^[4] - 5:19, 6:16, 6:21, 6:25</p> <p>response ^[5] - 6:10, 23:13, 30:19, 30:20, 34:24</p> <p>review ^[3] - 6:6, 6:12, 34:1</p> <p>reviewed ^[1] - 6:12</p> <p>roommate ^[2] - 29:20, 29:21</p> <p>running ^[1] - 28:7</p> <p>rush ^[1] - 24:19</p>	<p>14:23, 15:4, 15:22, 15:23, 18:6, 18:14, 19:9, 19:18, 20:6, 20:8, 20:22, 21:12, 22:1, 23:7, 24:4, 24:5, 24:14, 24:15, 24:25, 26:14, 27:5, 27:12, 28:20, 29:23, 31:3, 33:13, 33:17</p> <p>seem ^[1] - 34:2</p> <p>send ^[6] - 3:16, 23:8, 23:17, 32:20, 32:25, 34:20</p> <p>sent ^[1] - 9:13</p> <p>sentences ^[2] - 13:3, 32:2</p> <p>September ^[6] - 1:9, 34:5, 34:10, 34:11, 34:15, 36:8</p> <p>server ^[1] - 19:8</p> <p>servers ^[1] - 16:7</p> <p>set ^[1] - 34:19</p> <p>seven ^[1] - 28:4</p> <p>shape ^[1] - 29:13</p> <p>share ^[5] - 12:15, 16:15, 16:18, 33:3</p> <p>sharing ^[2] - 21:3, 21:5</p> <p>SHEET ^[2] - 2:8, 37:1</p> <p>Shihang ^[6] - 6:21, 6:25, 7:4, 8:14, 8:24, 9:13</p> <p>show ^[14] - 16:10, 17:18, 19:24, 20:17, 22:2, 22:8, 26:21, 27:4, 27:10, 27:11, 27:23, 28:16, 33:12, 33:17</p> <p>side ^[1] - 30:14</p> <p>sidetracked ^[1] - 20:4</p> <p>Signature ^[1] - 37:25</p> <p>similarities ^[1] - 30:2</p> <p>similarity ^[1] - 23:17</p> <p>simple ^[2] - 16:4, 24:10</p> <p>simplified ^[1] - 9:2</p> <p>sitting ^[1] - 10:24</p> <p>six ^[1] - 28:4</p> <p>slides ^[2] - 3:5, 6:8</p> <p>slowly ^[2] - 19:13, 29:13</p> <p>small ^[3] - 17:9, 17:13, 20:21</p> <p>smaller ^[2] - 27:17, 27:19</p> <p>sometimes ^[1] - 3:20</p> <p>somewhere ^[1] - 22:2</p> <p>son ^[1] - 5:22</p> <p>sorry ^[9] - 5:22, 13:9, 15:7, 15:18, 16:8, 19:12, 21:10, 31:20, 34:9</p> <p>sort ^[1] - 29:8</p> <p>Southern ^[2] - 1:7, 5:4</p> <p>specific ^[6] - 14:21,</p>	<p>17:23, 19:22, 20:25, 23:16, 25:7</p> <p>specifically ^[3] - 19:3, 23:21, 33:1</p> <p>spend ^[3] - 24:4, 29:7, 29:24</p> <p>spot ^[2] - 21:14, 23:18</p> <p>standard ^[5] - 3:15, 25:24, 26:2, 26:18, 27:3</p> <p>start ^[3] - 3:9, 12:4, 32:1</p> <p>started ^[1] - 8:3</p> <p>starting ^[1] - 12:2</p> <p>STATE ^[1] - 1:1</p> <p>state ^[1] - 19:15</p> <p>State ^[3] - 1:14, 10:6, 10:10</p> <p>statement ^[2] - 19:1, 30:25</p> <p>steer ^[1] - 12:13</p> <p>steps ^[1] - 19:25</p> <p>still ^[1] - 5:12</p> <p>stopped ^[1] - 8:23</p> <p>storage ^[4] - 6:19, 6:24, 8:3, 20:15</p> <p>store ^[3] - 18:9, 19:16, 20:8</p> <p>stored ^[1] - 19:15</p> <p>storing ^[1] - 19:9</p> <p>story ^[1] - 29:13</p> <p>straight ^[1] - 30:6</p> <p>student ^[4] - 6:22, 7:4, 7:7, 29:7</p> <p>stuff ^[7] - 10:13, 13:18, 20:3, 21:11, 21:20, 25:24, 31:7</p> <p>submit ^[2] - 8:7, 9:6</p> <p>submitted ^[2] - 8:5, 8:7</p> <p>sufficient ^[2] - 24:8, 31:11</p> <p>summary ^[2] - 6:3, 11:3</p> <p>super ^[1] - 30:4</p> <p>supports ^[1] - 27:8</p> <p>supposed ^[2] - 19:13, 19:14</p> <p>surprise ^[1] - 9:9</p> <p>system ^[2] - 20:15, 31:23</p>
				T
				<p>tape ^[1] - 30:14</p> <p>team ^[1] - 32:24</p> <p>tease ^[1] - 23:2</p> <p>technical ^[2] - 15:2, 20:13</p> <p>technique ^[12] - 14:5, 14:9, 14:20, 15:15, 16:10, 18:24, 28:20, 28:23, 28:24, 31:22,</p>

33:13 techniques ^[1] - 26:5 text ^[4] - 9:13, 9:14, 25:11 THE ^[1] - 1:1 theory ^[1] - 22:13 thesis ^[1] - 9:1 thinking ^[1] - 34:15 third ^[2] - 8:13, 8:15 three ^[3] - 6:8, 15:16, 17:15 throughout ^[1] - 24:1 THURLEY ^[5] - 1:16, 4:10, 34:14, 34:21, 35:7 Thurley ^[2] - 4:7, 4:11 Thursday ^[1] - 1:9 timeline ^[1] - 6:1 TO ^[1] - 2:10 today ^[5] - 3:10, 4:6, 4:13, 5:20, 6:2 together ^[6] - 24:15, 27:19, 27:23, 28:6, 29:23, 30:13 totally ^[2] - 10:1, 29:9 touch ^[1] - 35:2 tough ^[1] - 12:7 track ^[1] - 29:9 transcribed ^[1] - 36:4 transcript ^[5] - 3:17, 3:18, 3:21, 13:11, 37:22 Transcription ^[1] - 1:24 transcriptionist ^[2] - 3:16, 4:4 transcripts ^[2] - 6:3, 6:6 tried ^[2] - 7:13, 8:21 true ^[3] - 21:22, 21:24, 30:8 try ^[10] - 12:7, 12:12, 12:15, 22:25, 24:20, 25:4, 31:11, 32:6, 33:10 trying ^[3] - 20:5, 23:19, 24:18 turn ^[1] - 7:10 two ^[13] - 13:2, 17:15, 18:14, 19:2, 19:4, 19:19, 20:9, 26:5, 28:20, 30:1, 30:13, 32:2	UNIVERSITY ^[1] - 1:1 University ^[1] - 5:4 university ^[1] - 1:7 up ^[5] - 7:20, 20:2, 24:21, 33:1, 35:2 updated ^[1] - 9:22 uses ^[1] - 20:15 utmost ^[1] - 5:18	Y
	V	year ^[1] - 29:8 Yekel ^[1] - 4:5 yourself ^[2] - 4:23, 5:2
	V.C ^[1] - 1:4 vague ^[2] - 10:3, 18:25 verify ^[1] - 21:13 version ^[21] - 8:5, 8:8, 8:15, 8:25, 9:12, 9:24, 9:25, 11:4, 11:7, 11:13, 13:13, 15:10, 16:2, 16:12, 17:5, 18:18, 18:21, 19:21, 31:15, 31:24, 31:25 Version ^[1] - 13:12 via ^[1] - 1:9 Vice ^[2] - 1:16, 4:11 Viveck ^[8] - 3:12, 6:17, 8:8, 8:15, 8:18, 9:6, 9:16, 9:20 voices ^[1] - 4:4	Z
	W	zero ^[1] - 7:21 Zoom ^[1] - 1:9
U	wait ^[2] - 18:11, 23:6 warranted ^[1] - 5:10 week ^[1] - 34:2 whatever's ^[1] - 24:22 whole ^[2] - 9:18, 27:22 withdraw ^[1] - 8:9 withdrawn ^[3] - 8:11, 8:18, 8:21 word ^[4] - 19:24, 22:7, 26:21, 31:13 words ^[1] - 13:20 works ^[3] - 20:23, 22:17, 30:16 write ^[10] - 8:9, 8:19, 8:22, 8:24, 9:21, 13:19, 21:23, 30:7, 30:12, 34:2 writing ^[2] - 11:12, 21:21 written ^[2] - 11:17, 24:25 wrote ^[2] - 10:1, 29:22	
	X	
unintelligible ^[5] - 17:14, 18:1, 20:25, 32:20, 34:18 unintelligible ^[6] - 3:4, 10:10, 16:18, 24:25, 33:23, 34:17	X1 ^[2] - 15:6, 15:16 X2 ^[2] - 15:6, 15:16 X3 ^[1] - 15:17	