

For your Wikipedia profile, we will use a criterion of having you identify the three most cited and unique findings from a researcher. This will be how you comment on their significant contributions to the field: what are at least three research findings or theories that they are most known for?

How do you identify papers that are highly cited? I often turn to google scholar – scholar.google.com and type in the person’s name. We will use my adviser, Tobias Egner, as an example for the guideline below. This is what his google scholar profile page looks like:

**Tobias Egner** FOLLOWING

Department of Psychology & Neuroscience, Center for Cognitive Neuroscience, [Duke University](#)  
 Verified email at duke.edu - [Homepage](#)  
 Cognitive and Affective Con... Selective Attention Predictive Coding

TITLE	CITED BY	YEAR
<a href="#">Emotional processing in anterior cingulate and medial prefrontal cortex</a> A Etkin, T Egner, R Kalisch Trends in cognitive sciences 15 (2), 85-93	1897	2011
<a href="#">Resolving emotional conflict: a role for the rostral anterior cingulate cortex in modulating activity in the amygdala</a> A Etkin, T Egner, DM Peraza, ER Kandel, J Hirsch Neuron 51 (6), 871-882	1207	2006
<a href="#">Cognitive control mechanisms resolve conflict through cortical amplification of task-relevant information</a> T Egner, J Hirsch Nature neuroscience 8 (12), 1784	933	2005
<a href="#">Expectation (and attention) in visual cognition</a> C Summerfield, T Egner Trends in cognitive sciences 13 (9), 403-409	654	2009
<a href="#">Neural repetition suppression reflects fulfilled perceptual expectations</a> C Summerfield, EH Trittschuh, JM Monti, MM Mesulam, T Egner Nature neuroscience 11 (9), 1004	498	2008
<a href="#">The effect of training distinct neurofeedback protocols on aspects of cognitive performance</a> D Vernon, T Egner, N Cooper, T Compton, C Neillands, A Sheri, ... International journal of psychophysiology 47 (1), 75-85	455	2003

Cited by VIEW ALL

	All	Since 2014
Citations	13599	8252
h-index	47	40
i10-index	84	81

What will make an article something he, specifically, is known for? Do you remember our discussion on authorship order in psychology? First author and last author are the articles that YOU are typically responsible for – first author, as the person who’s probably doing the most analysis, data collection, etc; last author, as the professor/senior most author who’s probably supplying advice, funding, or guidance on the research being done.

So, looking at his articles, the first two articles are things that he helped with, but he’s the second author, so it wasn’t his primary research focus.

His first article that would be relevant to cover? *Cognitive control mechanisms resolve conflict through cortical amplification of task-relevant information*. He’s first author here, and it’s a highly cited article.

His second article that would be relevant to cover? *Expectation (and attention) in visual cognition*. This is also highly cited. This is actually a review article, which you will see when you click the article, instead of empirical article, but that is OK! It doesn’t make a difference to me if you are covering a review or empirical article. Sometimes people are asked to write a review article, because they’re *known* for their work in that field (and in this case, you can see

that in the next most highly cited article – *Neural repetition suppression reflects fulfilled perceptual expectations*).

Note that here, we're not covering the neural repetition article as the 3<sup>rd</sup> article because it's in the same "field" or "area" of research as the *Expectation (and attention) in visual cognition* paper. We're looking to find 3 unique papers / topics to mention to our Wikipedia audience.

So, his third article that would be relevant to cover?

<a href="#">Congruency sequence effects and cognitive control</a> T Egner Cognitive, Affective, & Behavioral Neuroscience 7 (4), 380-390	435	2007
<a href="#">Dissociable neural systems resolve conflict from emotional versus nonemotional distracters</a> T Egner, A Etkin, S Gale, J Hirsch Cerebral cortex 18 (6), 1475-1484	421	2007
<a href="#">The neural correlates and functional integration of cognitive control in a Stroop task</a> T Egner, J Hirsch Neuroimage 24 (2), 539-547	393	2005
<a href="#">EEG biofeedback of low beta band components: frequency-specific effects on variables of attention and event-related brain potentials</a> T Egner, JH Gruzelier Clinical neurophysiology 115 (1), 131-139	378	2004
<a href="#">Ecological validity of neurofeedback: Modulation of slow wave EEG enhances musical performance</a> T Egner, JH Gruzelier Neuroreport 14 (9), 1221-1224	314	2003
<a href="#">Foundation and practice of neurofeedback for the treatment of epilepsy</a> MB Serman, T Egner Applied psychophysiology and biofeedback 31 (1), 21	310	2006
<a href="#">Learned self-regulation of EEG frequency components affects attention and event-related brain potentials in humans</a> T Egner, JH Gruzelier Neuroreport 12 (18), 4155-4159	298	2001
<a href="#">Multiple conflict-driven control mechanisms in the human brain</a> T Egner Trends in cognitive sciences 12 (10), 374-380	297	2008
<a href="#">Intentional false responding shares neural substrates with response conflict and cognitive control</a> JM Nunez, BJ Casey, T Egner, T Hare, J Hirsch Neuroimage 25 (1), 267-277	253	2005

Now, it might seem like *congruency sequence effects and cognitive control* would be the article, but this is actually similar to his first area of research. It's not obvious, and I am not going to hold you to that level of detail in determining what the field is. We're generally going here by title and authorship order in terms of determining the "unique" research areas.

So, for my adviser, the next article is "*Dissociable neural systems resolve conflict from emotional versus nonemotional distracters*." So, the very first papers, it turns out he does have some of his own that are first author papers! And this is consistent with what I wrote above: usually, if an author is invited to write a review (which is what that *Trends in Cognitive Sciences* paper is, the most cited one), it's usually because they have some expertise in the field.

Great, so I've now identified the three research areas that the researcher is most famous for. What next?

Remember that when you're writing about research on a Wikipedia profile, you're not writing about research to be eye-catching; you're trying to explain the research to a general public, using some of the terms that the researchers would (but also defining or linking to other Wikipedia definitions of those terms). So, you will be using your SciComm principles, but even the style of writing on Wikipedia is different from the Science News articles. You can get a sense of this by looking at a few of the Wikipedia pages linked on the assignment page.

You will use the 3 papers you identified as your references for when you're describing the research that the researcher is most famous for. Your research component would look something like this:

[General description of research from the researcher's website, with reference to website]

[Researcher is also most known for these 3 areas]

**Area 1:**

-description

**Area 2:**

-description

**Area 3:**

-description

For area headlines, you can use the keywords from the title or the keywords the researcher identifies in the paper itself. So here, mine would be:

**Conflict adaptation** (taken directly from headers in the paper)

Dr. Egner is known for his work on ....

**How expectations shape visual cognition and perception** (taken directly from the titles)

Dr. Egner is known for his work on ...

**Affective cognitive control** (changed 'emotional' and 'nonemotional' to broad field descriptor, keywords in the paper include 'emotions, conflict resolution' 'cognitive control' 'conflict monitoring').

Dr. Egner is known for his work on...

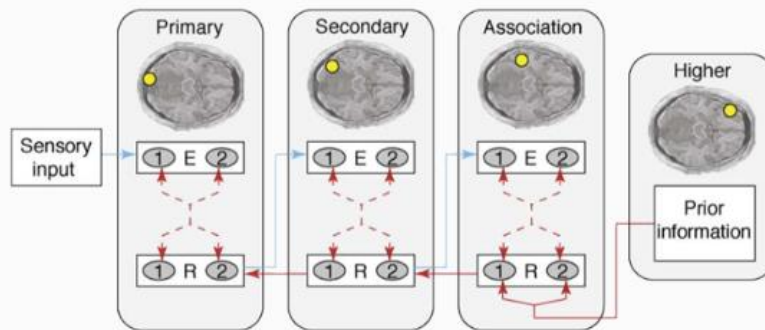
For the purpose of the outline of the research (8 points):

- Please identify the three research articles/fields that you will be covering for the researcher.
- Please write out what the corresponding headlines/area fields are.
- Please write out a description from the researcher's website about the research the lab generally does. Make sure not to use the exact words that the researcher uses (i.e., it is your own writing), but to stay close to the general meaning of what the researcher said.

Know that I am here to help – if you can't work out what the papers/fields are, I'm more than happy to work through that with you.

As for the final Wikipedia profile (86 points), I expect a paragraph per section, say 3-4 sentences, on what the general field is (a description of the effect) and an example of what has been found in that field (something you can take directly from the researcher's article that you have identified) by the researcher. You might even note if the researcher is still working on this topic (cross-reference between their own description on their website and your description of this field). For example, on [my lab's website](#), my adviser no longer includes a description of affective cognitive control, because he has moved on from that research area. The final profile also includes any edits that you had to make to the researcher's biography as well.

### Adaptive Visual Cognition



The core ingredient for adaptive behavior is **memory**: we understand the world around us by relating the flow of incoming sensory information to previous experience, thus inextricably linking memory and **perception**. By retrieving past episodes that resemble our present situation, we can predict what is likely to happen next. One of our research programs, therefore, aims to understand the neuro-computational mechanisms of **predictive coding**, the use of context-sensitive expectations to facilitate visual cognition.

For example, we have shown distinct neural signatures in visual cortex when processing expected compared to unexpected stimuli [1,2], and we are investigating how these effects of **expectation** may interact with **attention** [3,4].

### Cognitive Control

While we think of memory as the fundamental building block of cognition, humans are capable of producing adaptive behavior that runs counter to our learning history, using contextual information (e.g., "I'm in London") to override habitual responses (driving on the right side of the road) in favor of more goal-conducive actions. This capacity is referred to as **cognitive control** and it requires

