

Uri Alon

人物介绍



汇报人：常惠丹



简介



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研究成果

Citation indices

	All	Since 2008
Citations	25743	16866
h-index	60	50
i10-index	109	98

Uri Alon

Citation indices

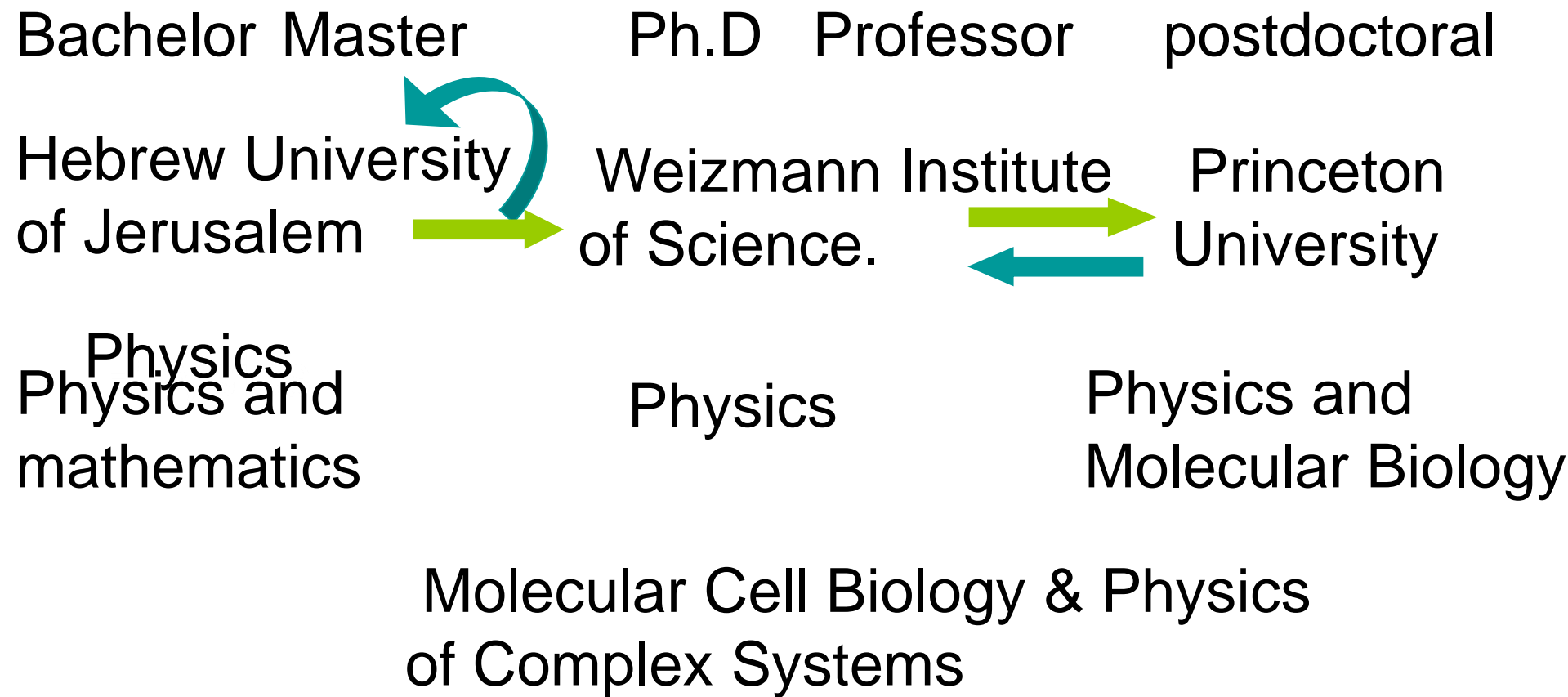
	All	Since 2008
Citations	25743	16866
h-index	60	50
i10-index	109	98

Michael Levitt

Citation indices

	All	Since 2008
Citations	26564	8150
h-index	78	48
i10-index	151	125

求学经历





研究方向

Network Motifs

Design principles of bio networks

Evolution

Mammalian systems

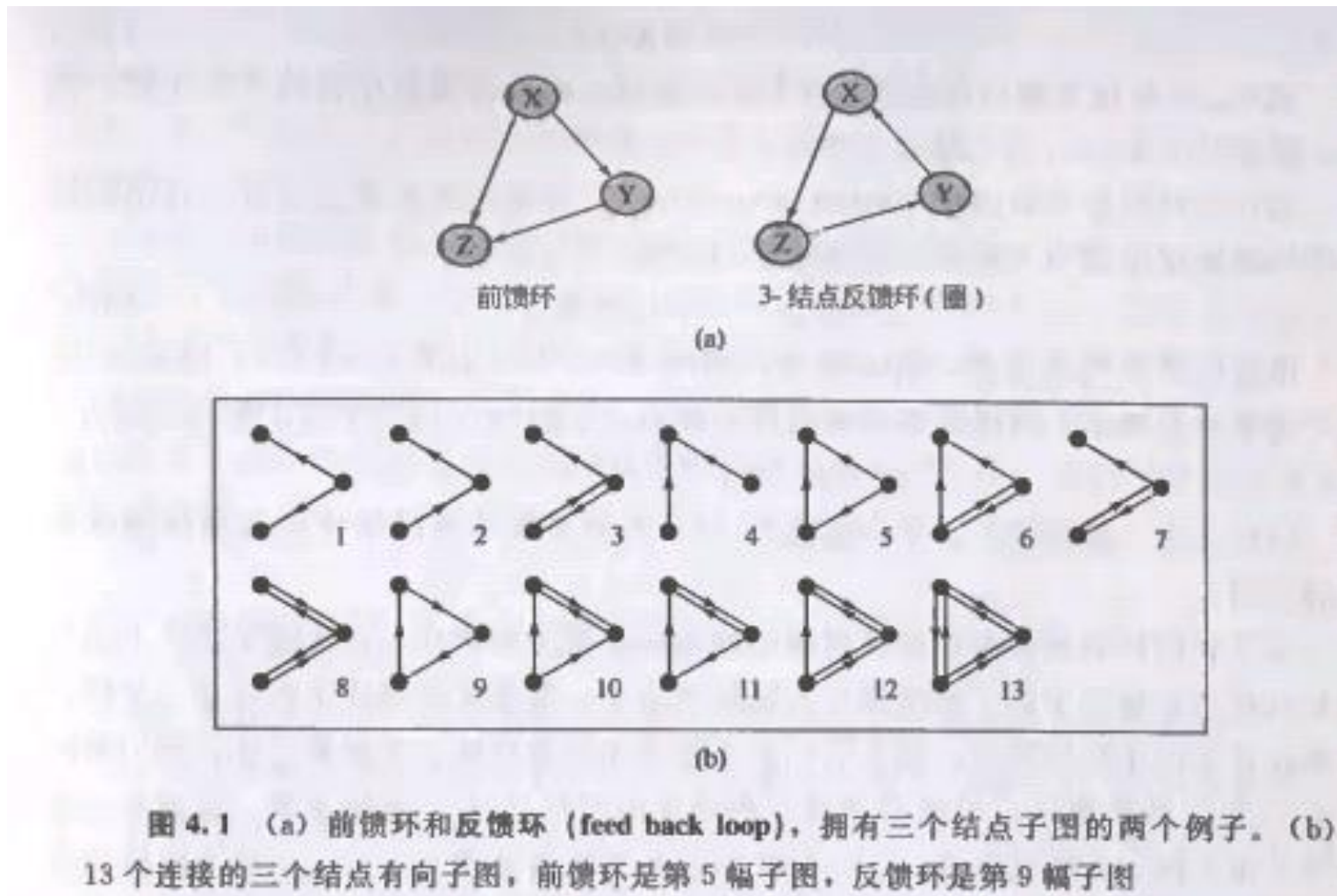
Education



Network Motif (网络模体)

研究转录网络的方法是在统计显著性的基础上寻找有意义的模式。为了定义统计显著性，将转录网络与一个随机网络的总体进行对比。**那些在真实网络中比在随机网络中出现的显著得多的模式被称作网络模体。**

Network Motif





Network Motif

表 4.1 前馈环和三结点反馈环在大肠杆菌的转录网络（作为本书的一个例子）及随机网络中的数目

网 络	前馈环(FFL)	三结点反馈环
大肠杆菌	42	0
ER 随机网络	$1.7 \pm 1.3 (Z=31)$	0.6 ± 0.8
度保留随机网络	$7 \pm 5 (Z=7)$	0.2 ± 0.6

注：参数 Z 表示真实网络超过随机化网络的标准偏差。有一个称为 Mfinder 的算法可以生成随机化网络，计算子图的数目并探测网络模体，详见 www.weizmann.ac.il/MCB/UriAlon。

Network Motif

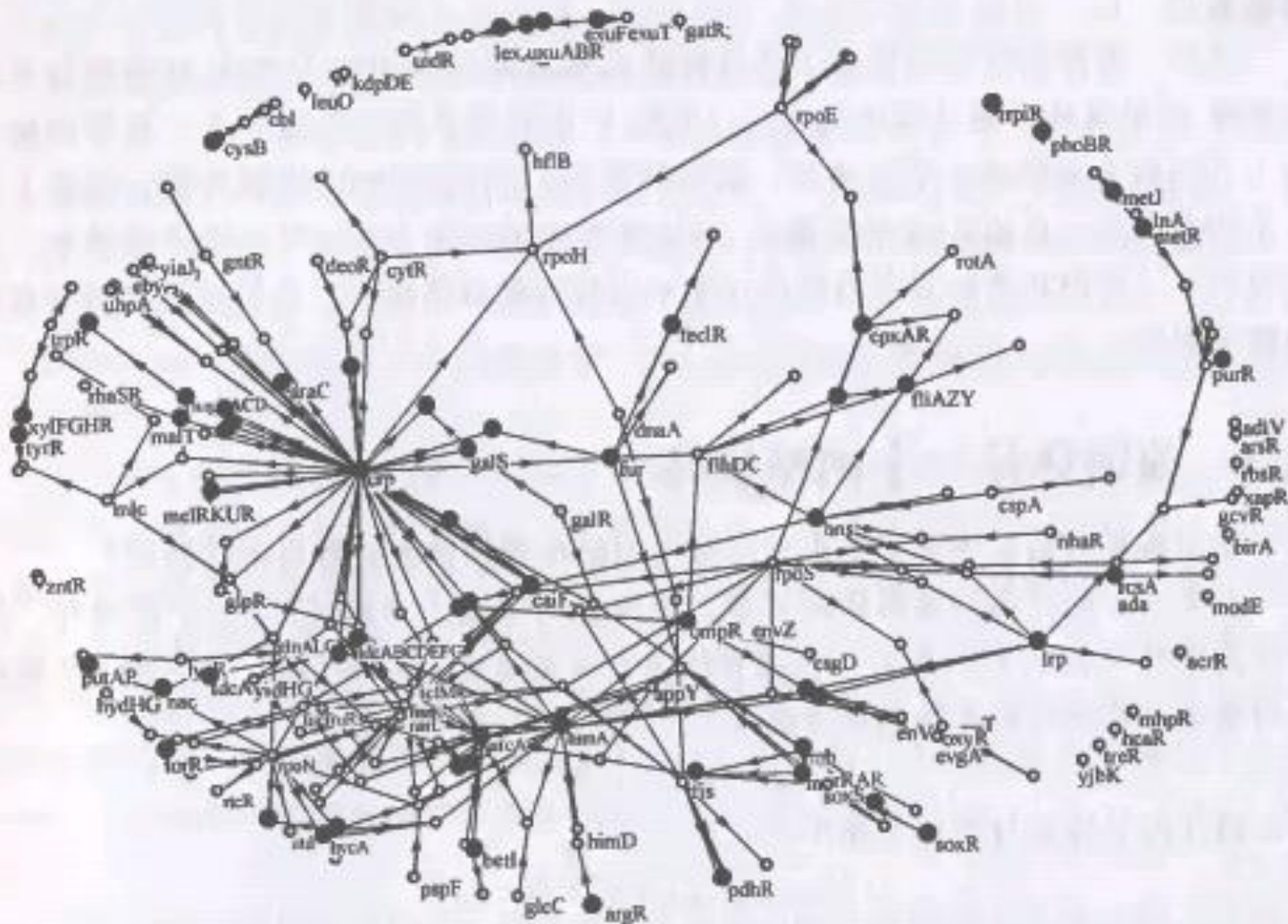


图 4.2 大肠杆菌转录网络中的前馈环。黑色的结点参与 FFL

How To Choose a Good Topic

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DOI 10.1016/j.molcel.2009.09.013

Choosing good problems is essential for being smart enough to figure it out on their own. Explicit discussion leaves a vacuum that you fill with results that merit publication in valued journals.

The premise of this essay is that a fully subjective and emotional aspects can help you choose one? The subject is not usually discussed. A good choice means that you can competently discover new knowledge that you find fascinating and that allows self-expression.

We will discuss simple principles of choosing scientific problems that have helped me, my students, and many fellow scientists. These principles might form a basis for teaching this subject generally to scientists.

Starting Point: Choosing a Problem Is an Act of Nurturing

What is the goal of starting a lab? Sometimes easy to pick up a common value, common in current culture: "The goal of my lab is to publish the maximum number of papers of the highest quality."

However, in this essay, we set the goal differently: "A lab is an environment that aims to maximize the potential of students as scientists and human beings."

Choices such as these are not values—given if they are not stated—how all of the decisions in the lab, big and small: how when students can take decisions we will now discuss how to choose. Within this aim to choose a problem (and for ourselves) growth and self-motivation.

The Two Dimensions of Choice

To choose a problem to begin with a simple

Forum

How to Build a Motivated Research Group

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DOI 10.1016/j.molcel.2010.01.011

Motivated group members experience a full sense of high performance, is enjoyable, and enhances innovative research group.

Most students begin graduate school or a postdoc full of passion for science. They are given the resources to devote themselves to solving fascinating puzzles. Why is it, then, that in some groups students thrive, can't wait to come to the lab in the morning, can't stop thinking about their projects, and feel a sense of personal and intellectual growth, whereas in the lab next door, students after two years are depressed, unmotivated, and, by the end, are loath to even look at their own papers?

We all want to work with motivated students and keep ourselves motivated. But how? We are never taught about motivation or about most other essential topics related to the emotional and subjective aspects of being a scientist. A common implicit assumption is that motivation is the sole responsibility of the student: either you have it or you do not. This can lead researchers to blame group members for their lack of motivation. However, research in psychology has offered useful concepts for scientists: our goal is to provide people with the factors that enhance their natural, valued behavior. Here, I discuss principles that are useful for a highly motivated research group.

The psychologists Deci and Ryan, since the 1970s, studied principles that enable self-determined behavior that is experienced as a sense of choice, of doing without coercion or control. This behavior shows high enjoyment, and enhances many experiments, for example: People are more likely to give a dollar for a puzzle; Group B is not. After 30

researchers put the B keeps time. The other appears. What Do for ten ne ce

Molecular Cell Forum

How To Give a Good Talk

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DOI 10.1016/j.molcel.2009.10.007

We depend on talks to communicate our work, and we spend much of our time as audience members in talks. However, few scientists are taught the well-established principles of giving good talks. Here, I describe how to prepare, present, and answer questions in a scientific talk. We will see how a talk prepared with a single premise and delivered with good eye contact is clear and enjoyable.

Anyone can give a good talk. Everyone can improve their talks. I am writing this essay with a vision in mind of a science lecturer that teaches researchers about good lecturing skills (and many other subjects related to the human aspects of being a scientist). All scientists should be trained in the basics of giving talks, to the benefit of both their research programs and the people in their audience. This essay is based on knowledge from Aristotle (from Aristotle to modern improvisation theater) and principles from public speaking (marketing)—putting an external gloss on a product. The goal is letting your inner glow and insights shine out.

The three principles of a good talk are as follows (Figure 1):
Preparation: Take each slide with a full sentence: the premise of the slide.
Presentation: Make eye contact with the audience, rather than with your own slides.
Questions: Listen to the question, repeat to see if you got it, and answer its content but not its tone.

Preparation

Preparing a good talk is an exercise in finding the main idea that you want to get across—the premise. This must be done before you start making the slides. Describe the premise of the entire talk to yourself in only a single sentence with a subject, object, and verb. For example, a premise can be: Cells charge their shoes by regulating their cytoskeleton. The following is not a premise: Cells are not a full sentence. The cytoskeleton is a compass for what to include. The talk should contain only material that is relevant to the premise. Leave out cool, interesting stuff if unrelated to premise.

Now that you have the premise of the entire talk, make it into a continuous story made of slides. Each slide should have its own premise. Now, here comes the main point:
Title Each Slide with Its Own Premise

In each slide, the title should therefore be a full sentence that describes the object, and verb (Figure 2). The title of the slide will help the audience grasp the idea at a glance. Avoid questions like, "What happens to the number of cells?" or fragments like, "An assay of cell number." Instead, use a full sentence like, "The number of cells increases with time," which conveys the ideas you want to get across.

It is not easy to find the premise of your talk and the premise of each slide. This effort should be considered an integral part of your research; it can focus you on what is important and essential—and

help you to see if steps in your argument are missing. The premise will also help you keep your slides simple. Each slide should contain only what is essential for the premise. If a slide has two premises—usually be used lightly; otherwise, the premise of the talk becomes, "I will express you with the fact that I did a lot of work."

As you prepare, learn the first two to three sentences by heart. Chew the rest of the lecture: practice it until you know it in your mouth. Finish ahead of time—and never go over time! Ideally, plan to use two-thirds of the time that you've been given for the talk. For a 60 min talk, plan 40 min, or about 20–30 slides. Focus on a nice introduction. Remember how much the audience doesn't know—and how pleasant it is to hear about known and clear issues. Preparing a clear talk, with clear slide premises, is an act



Figure 1. You Can Make a Good Talk with Three Principles: Preparation, Eye Contact, and Listening and Repeating Questions. Address the questions in the next version of your talk, creating an upward cycle of improvement.



即兴演讲

YouTube

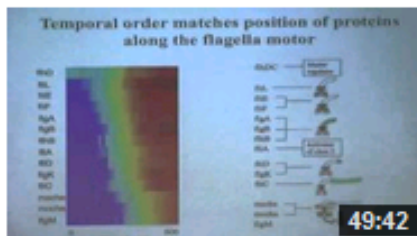


We have to change the culture of science to do better research: Uri Alon at TEDxLausanne

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<http://www.tedxlausanne.org>. Uri Alon is a unique scientist. After contributing game-changing ideas to the fields of network ...

HD



Uri Alon: The Networks of Life

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"What is Life"-lecture at Karolinska Institutet, May 21, 2013 Uri Alon, Weizmann Institute: The Networks of Life.

HD



Systems Biology Lecture 1

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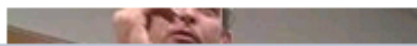
Living cells are a special form of condensed matter, matter that has been optimized by evolution to perform functions. Are there ...



Uri Alon's Song - Sunday at the Lab

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Theory Lunch 20080516 Rest of Talk to Follow.



Uri Alon -- How to give a good talk? - May 20th 2008 - Part 1



即兴演讲 Sunday at the lab



Thank you!