Thinking about where to apply to graduate school and how to get ready

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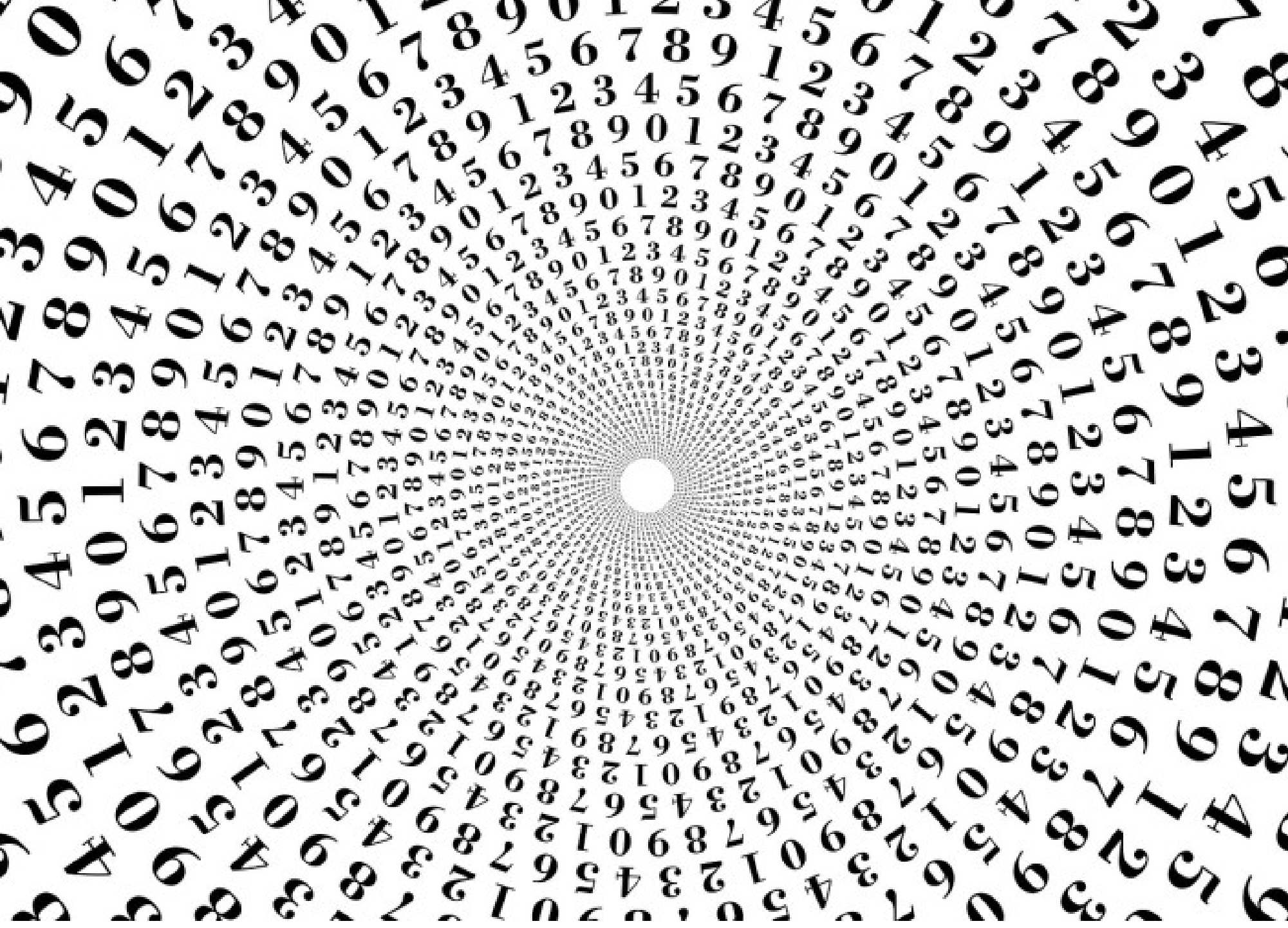


WELCOME!

Here I will go over:

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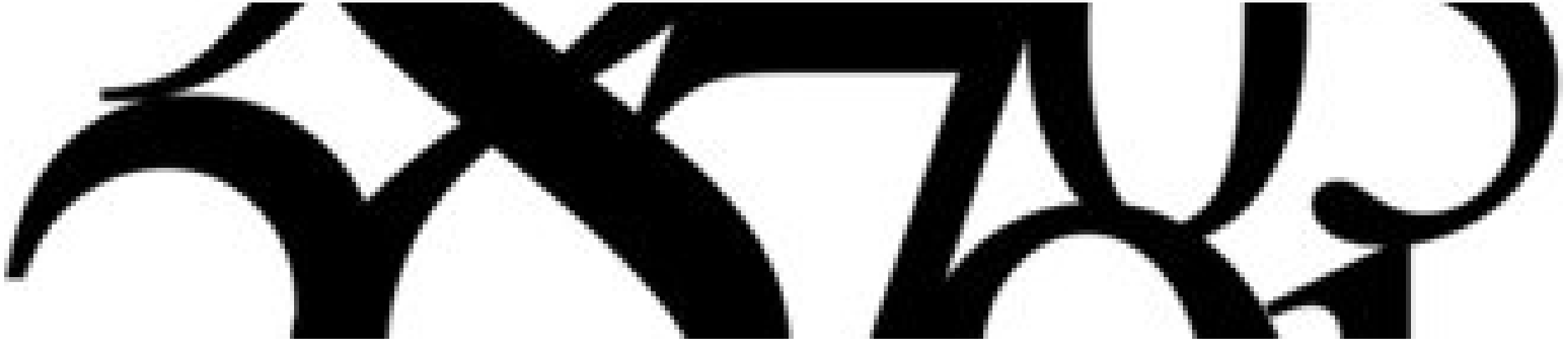
- different types of graduate programs; and
- what to think about to be a strong candidate.

Where should you apply for graduate school?



You could change the question and instead ask:

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- Where do I want to spend the next 5 years?

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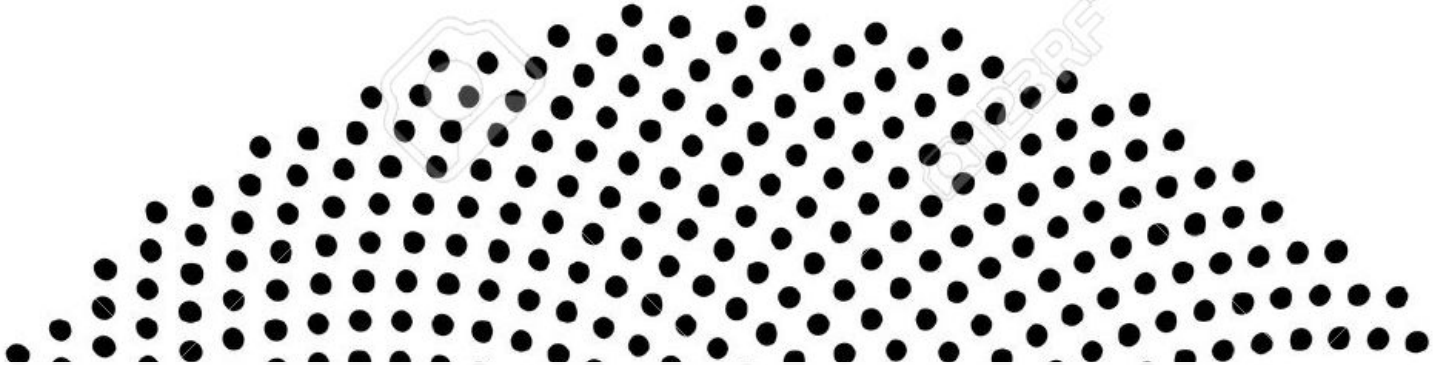
or

You could change the question and instead ask:

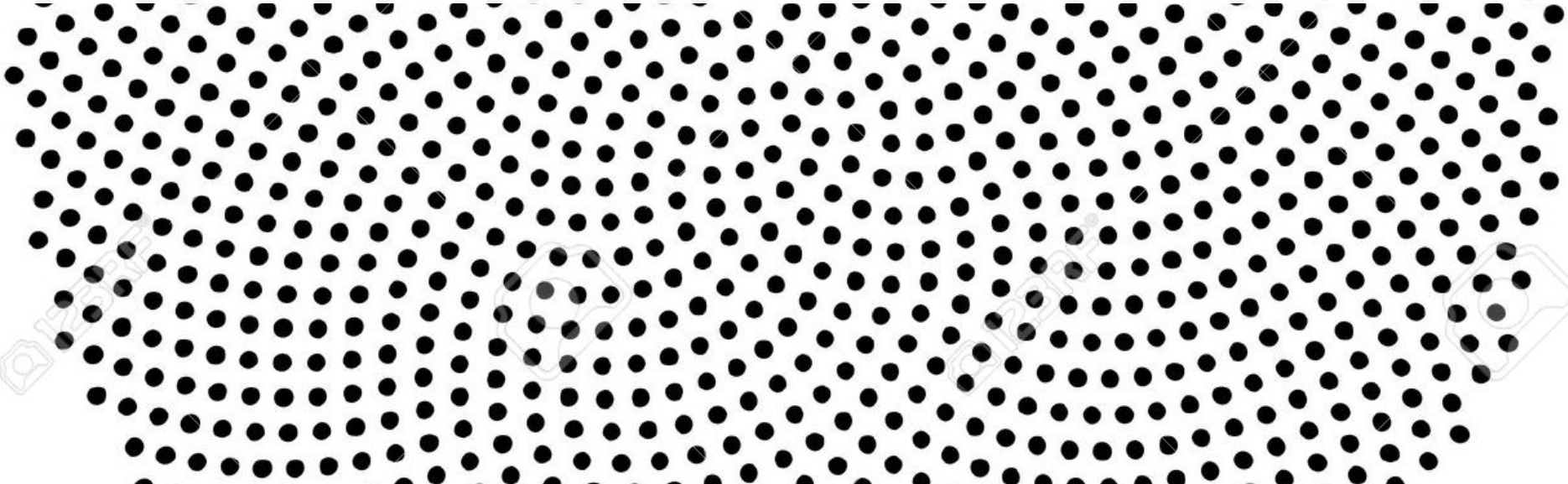
- Where do I want to spend the next 5 years?

or

- Where do I want to spend the rest of my life?



Optimize for success



- In what area do I plan to focus?
- Do I prefer personal attention from faculty or learning on my own or in study groups?

- In what kind of environment will I thrive?
  - small town? big city? good weather?
    - what makes a difference to me?

Not settled on an area of focus? Consider programs:

Not settled on an area of focus? Consider programs:

- with area diversity;
- that don’t require immediate specialization;
- that routinely offer a lot of classes and **seminars**.

Set on an area of focus? Consider programs:

Set on an area of focus? Consider programs:

- with at least two researchers in that area;
- with researchers in related areas;
- with current graduate students in that area.

Go to seminar talks? Why?

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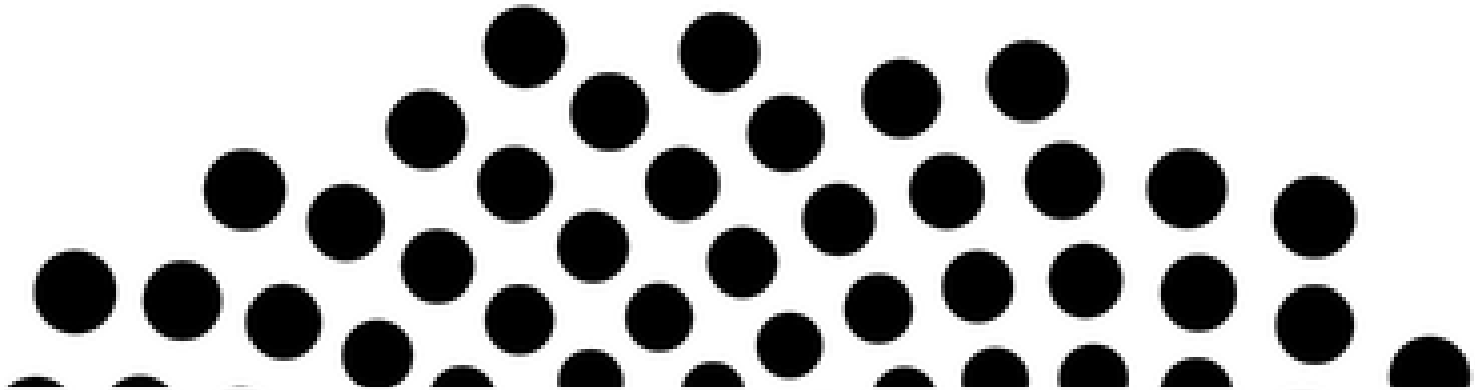
- they help you learn about open problems and local math culture;
- they help you meet researchers;
- they help you feel part of a community.

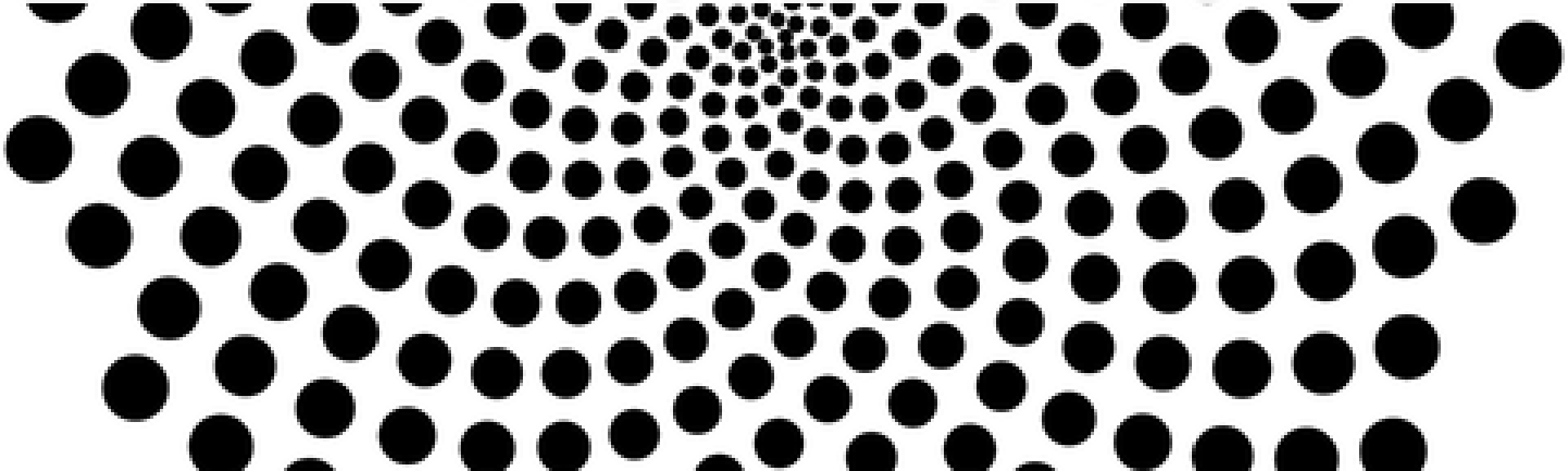
Look at the seminar calendar at different departments:

Look at the seminar calendar at different departments:

- are there lots of talks?
- are there graduate student seminars?
- are there a number of “outside” speakers?.



Big department or small department? Does it matter?



A small department like Penn can have advantages:

A small department like Penn can have advantages:

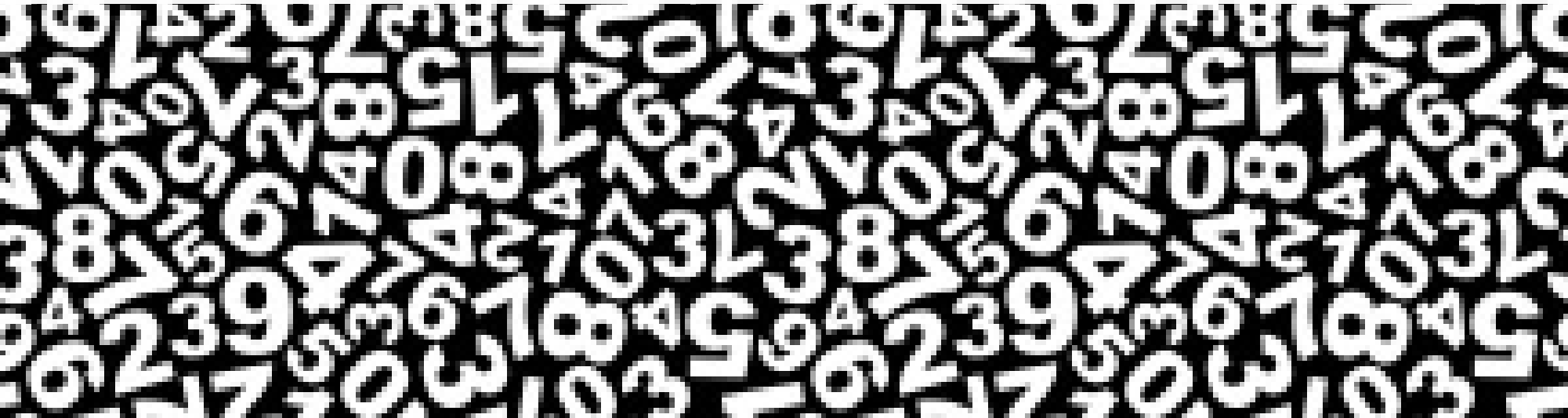
- more individual attention;
- a feeling of community;
- small countries can have better governance.

A large department like Rutgers can have advantages:

A large department like Rutgers can have advantages:

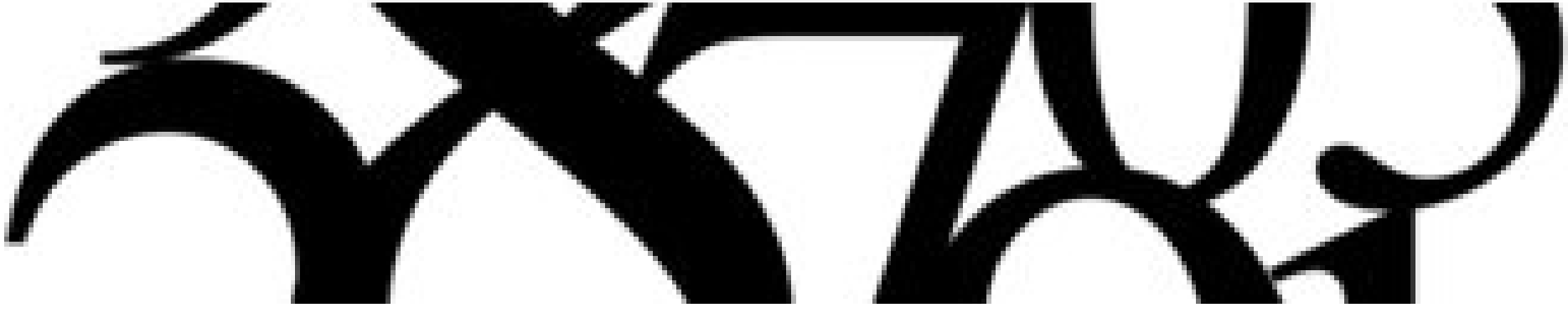
- a number of people in any given area;
- a chance to ”shop around” for a both a topic and a thesis advisor within that topic;
- more graduate students both to study with and to help you feel part of a community.

To get a feeling for faculty at other departments, and the math community, follow some blogs and look at websites:

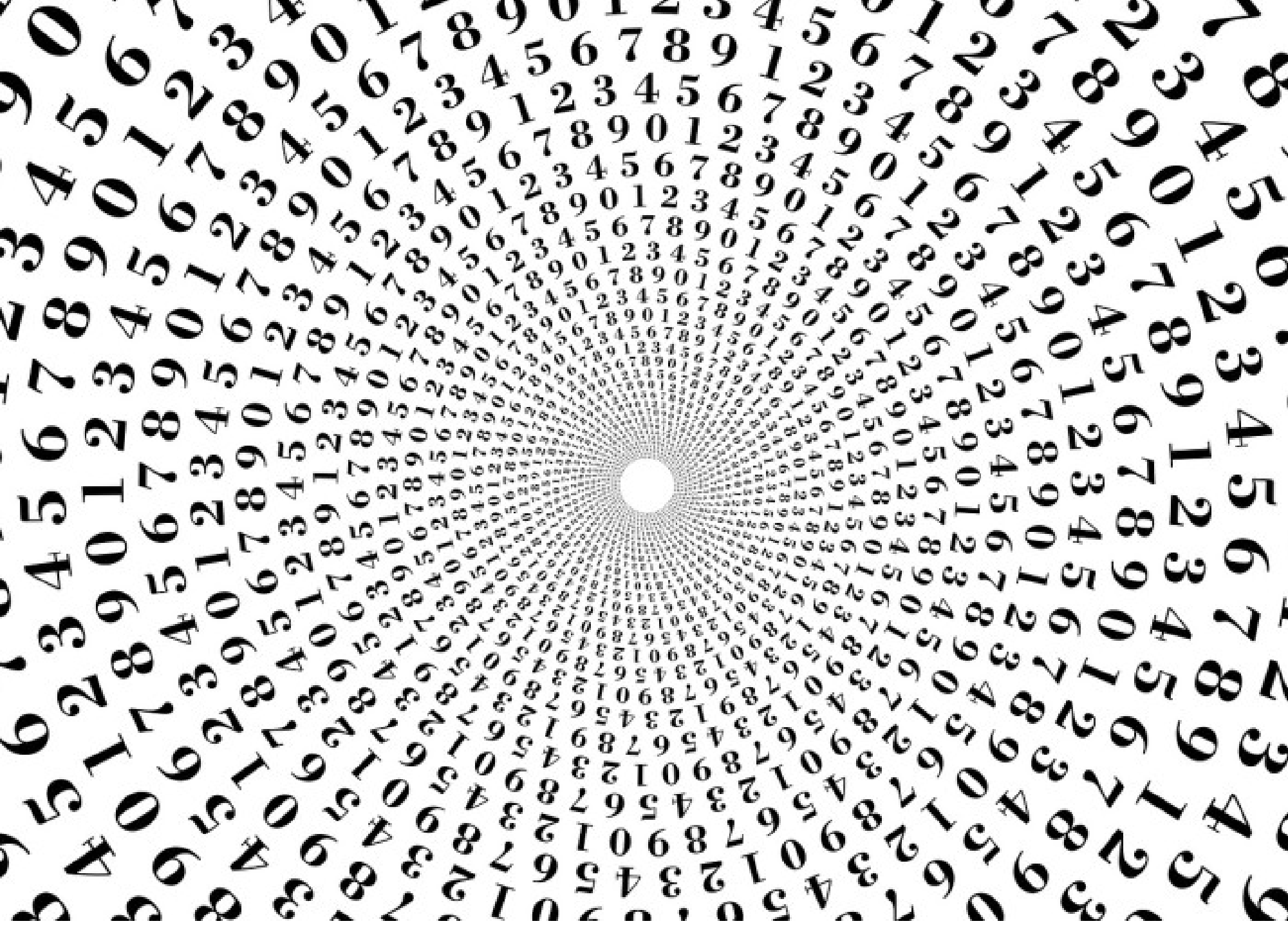


- Michigan: Karen Smith and Dave Speyer https://sites.lsa.umich.edu/math-graduates/author/kesmith/; http://sbseminar.wordpress.com;
- Wisconsin: Jordan Ellenberg https://quomodocumque.wordpress.com;
- UCLA: Burt Totaro and Terry Tau http://burttotaro.wordpress.com, https://terrytao.wordpress.com.

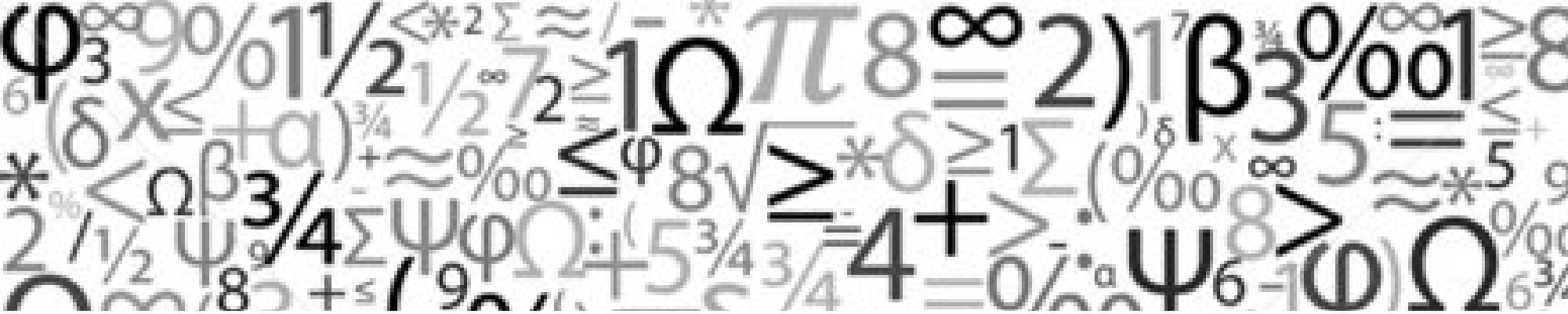
To optimize for a permanent job, one has to take into account how departments and researchers view each other



Apply to a range of schools, starting with two or three stretch schools.




RANKINGS?



Here is the US News and World Report ranking:

http://bit.ly/2m7Jl2rrank

- R1, R2, R3 (what does this mean?);
- there are rankings among fields that you don’t see in the usual lists;
- the teaching experience offered/required can be very different.

Consider different areas of the country than your undergrad institution

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- faculty websites can guage activity;
- make contacts throughout the country.

$$\underline{A} + \frac{1}{2\omega} I^2 + J g^2 (\cos\rho - 1) + \varepsilon f(a)(\cos\dot{\rho} - 1) + \varepsilon' \dots$$

time elapsed

$$\Delta \underline{\alpha} + \omega t \quad 704.28^2 \left(+ \left(\left(\Delta \cdot \Pi \alpha \varepsilon + 5^2 \right) \right. \right.$$

$$\cdot\, b, b' > 0 \quad \left(b = 2, b' = \frac{1}{2} - \delta\Delta \right)^{2\frac{1}{2}}$$

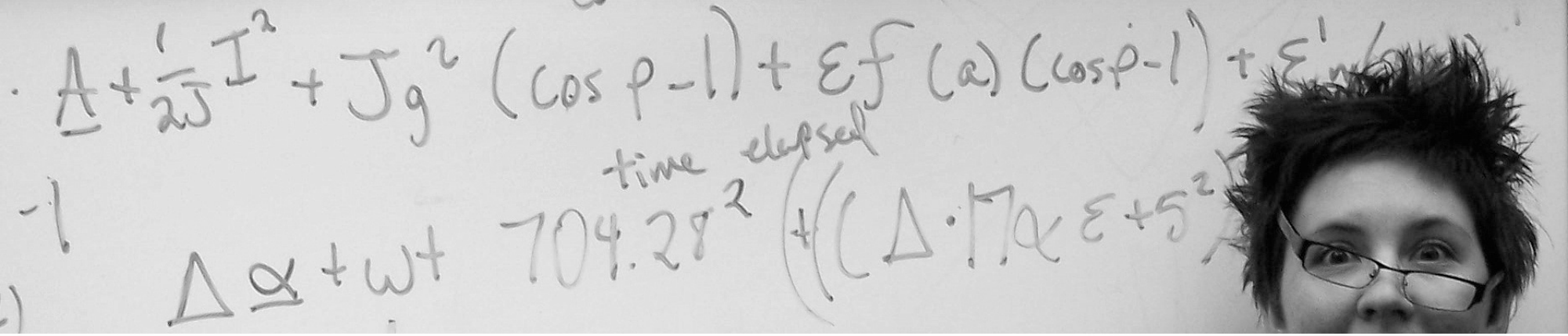
ε wher

$$\left(\sqrt{\dot{A} \cdot A} \right)$$

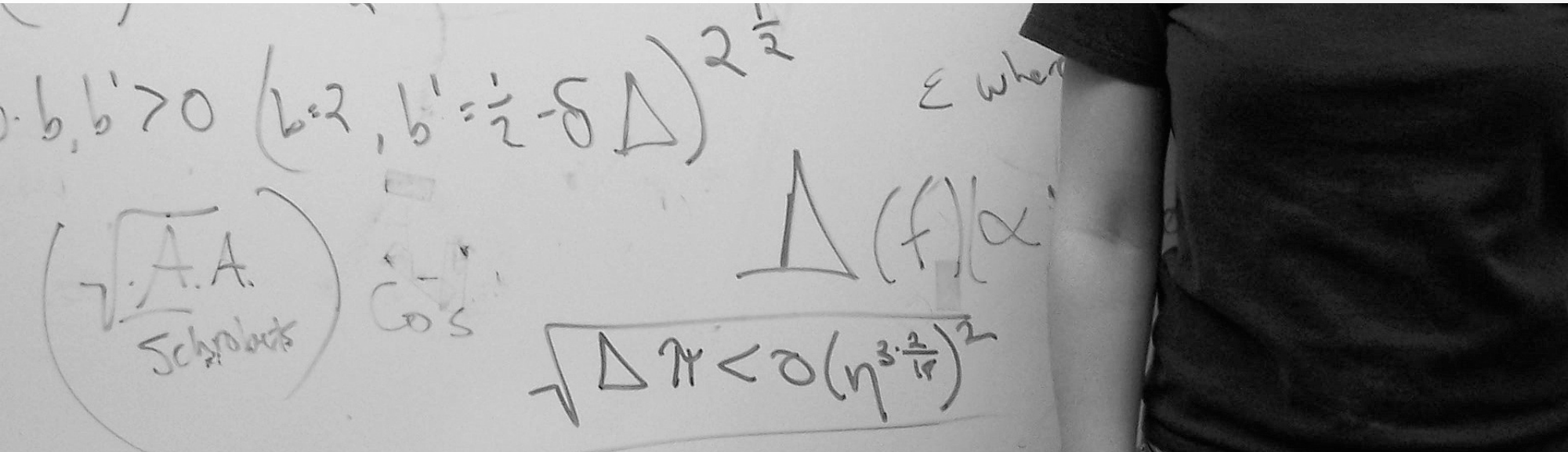
Schrödinger's

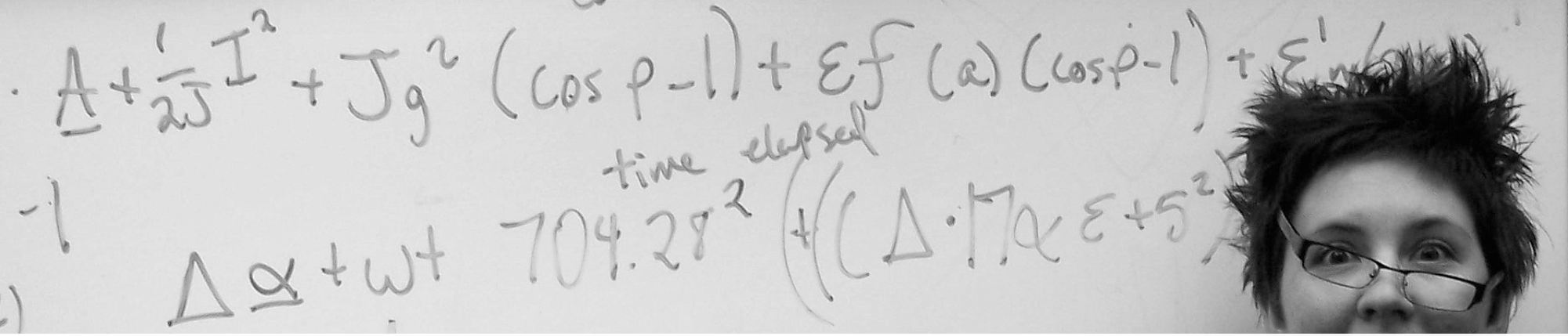
$$\Delta(f)(\alpha$$

$$\sqrt{\Delta \pi < 0 (\eta^{3 \cdot \frac{2}{14}})^2}$$

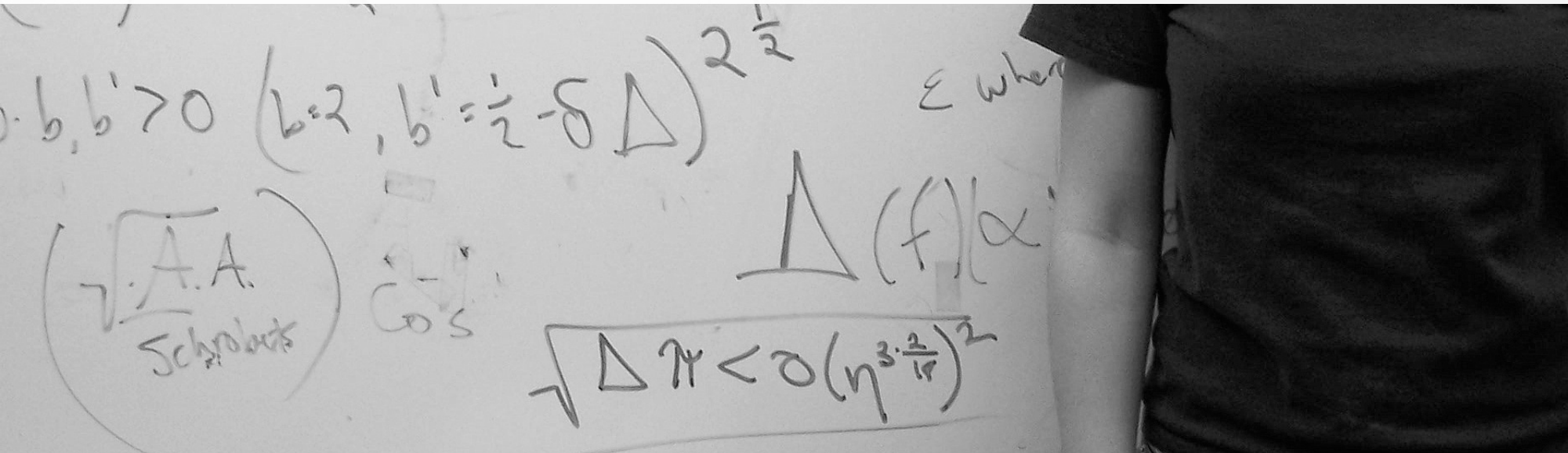


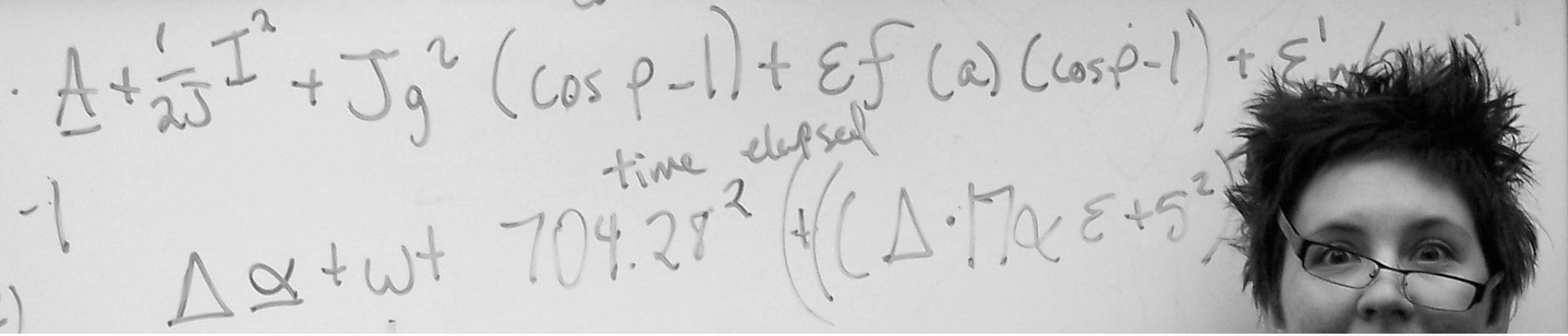
What can you do now?



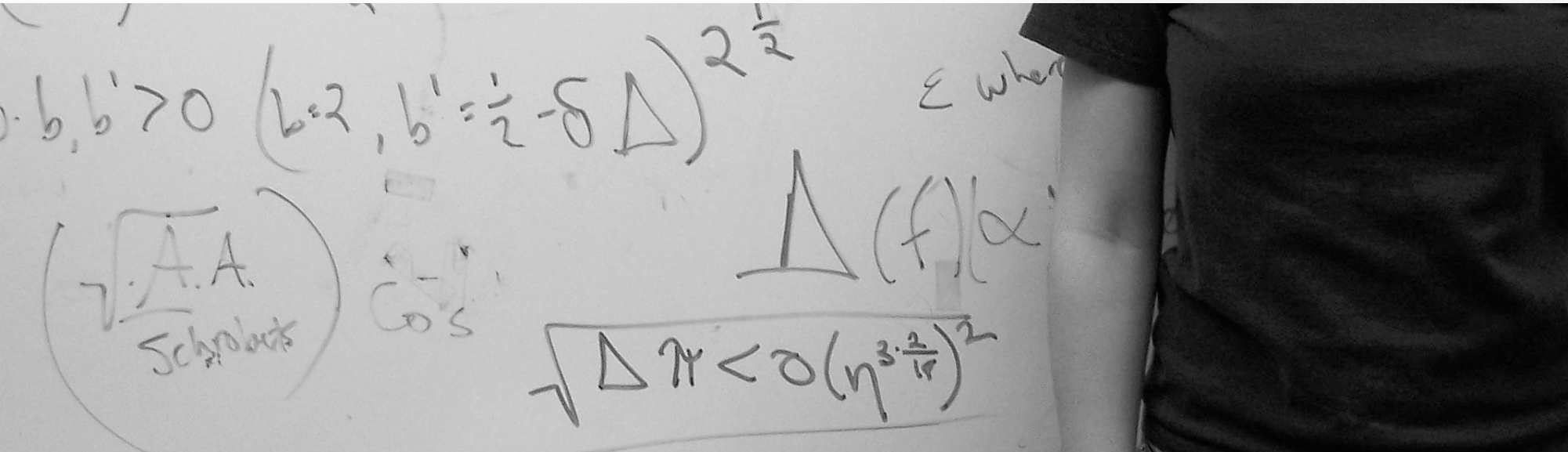


What can you do now? if you have a year?





What can you do now? if you have a year? two years?



Make sure faculty get to know you, and know about your career plans. Participate more in class, visit office hours, talk to your teachers after class.

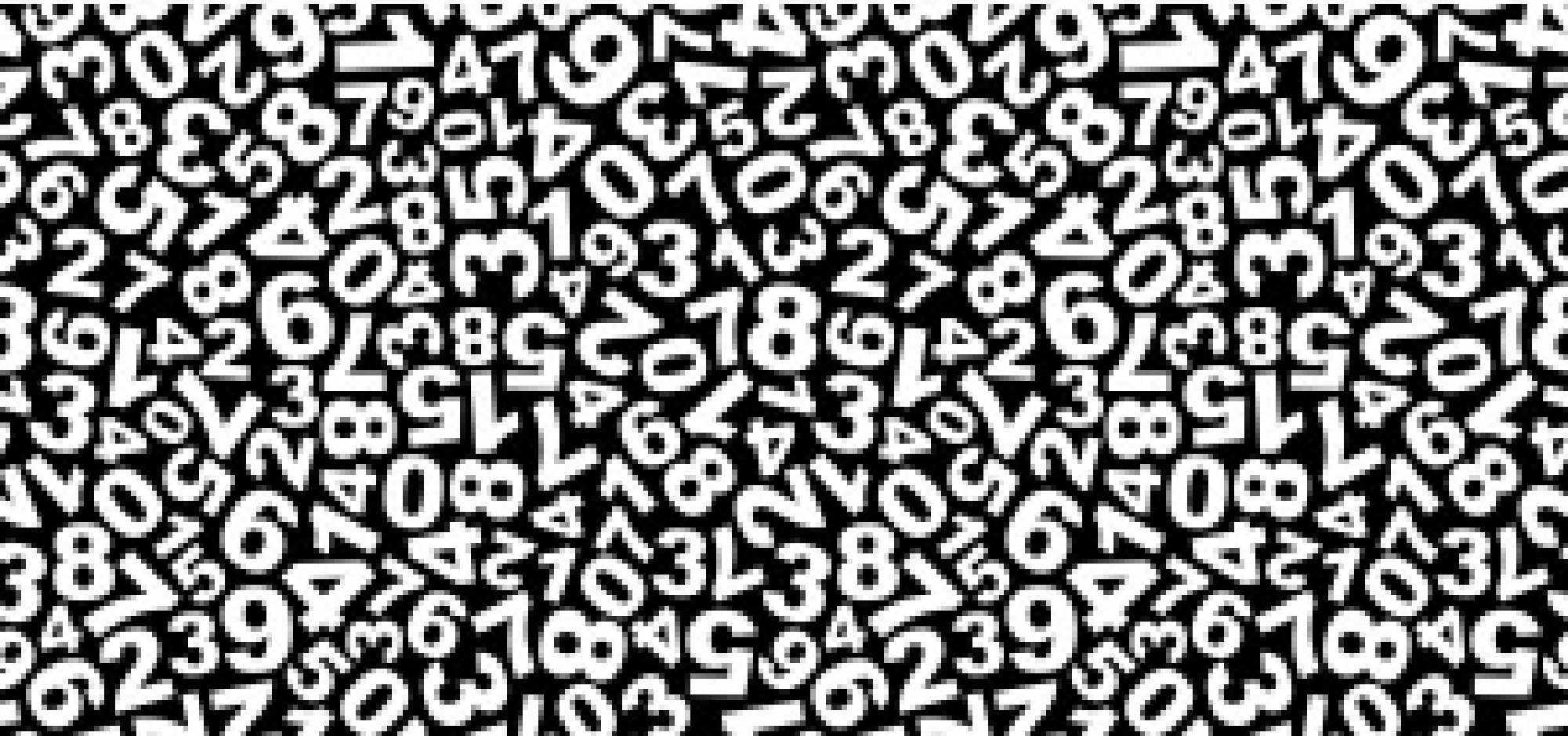
Take the “right” classes:

Take the “right” classes:

- most advanced courses available; second semesters of real analysis and algebra;
- honors classes;
- topics classes;
- reading projects.

Try to raise your GPA.

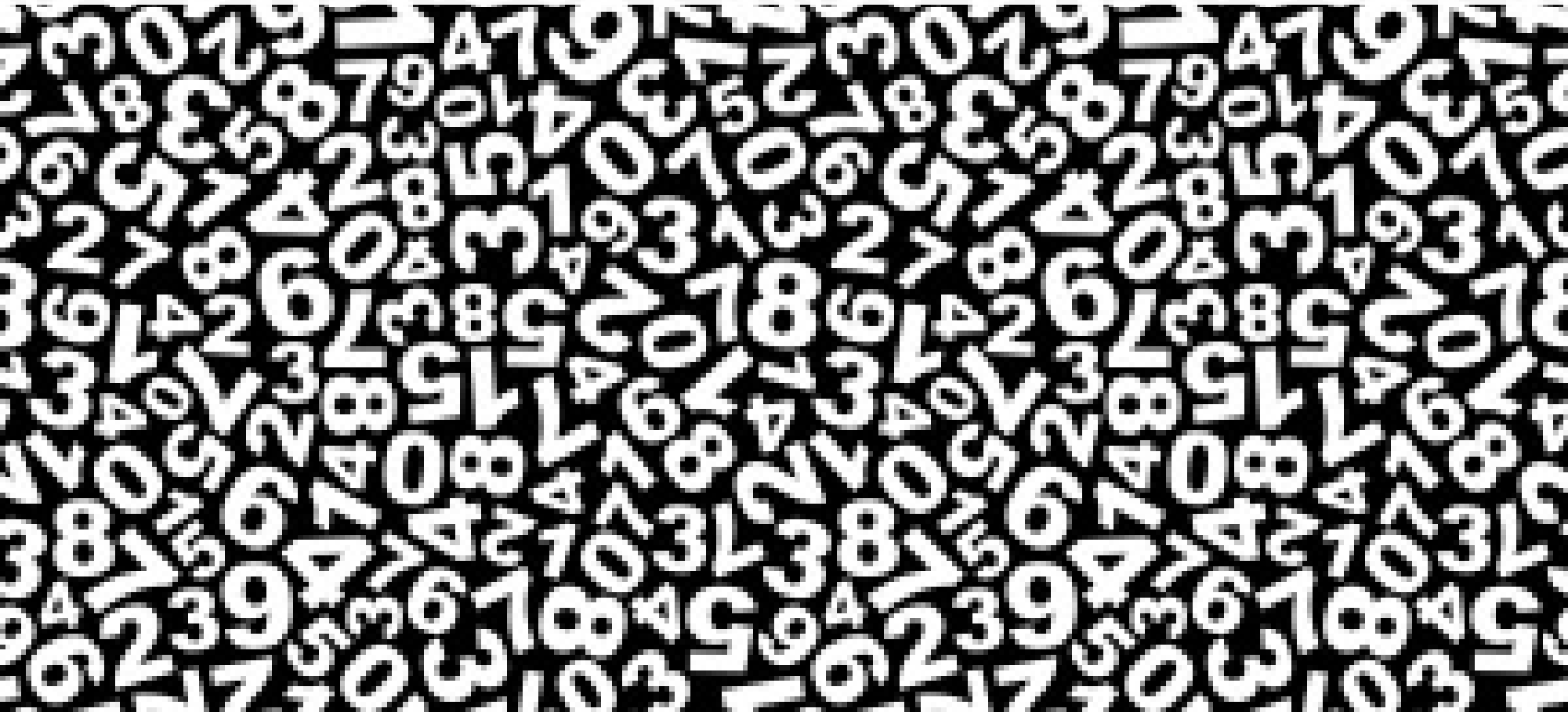
Get some ”research” experience:



Get some ”research” experience:

- official REU;
- REU that you design;
- Budapest Semesters;
- Senior project.

Be active in the community:



Be active in the community:

- join the math club and awm;
- math competitions like Putnam (practice);
- give a talk.

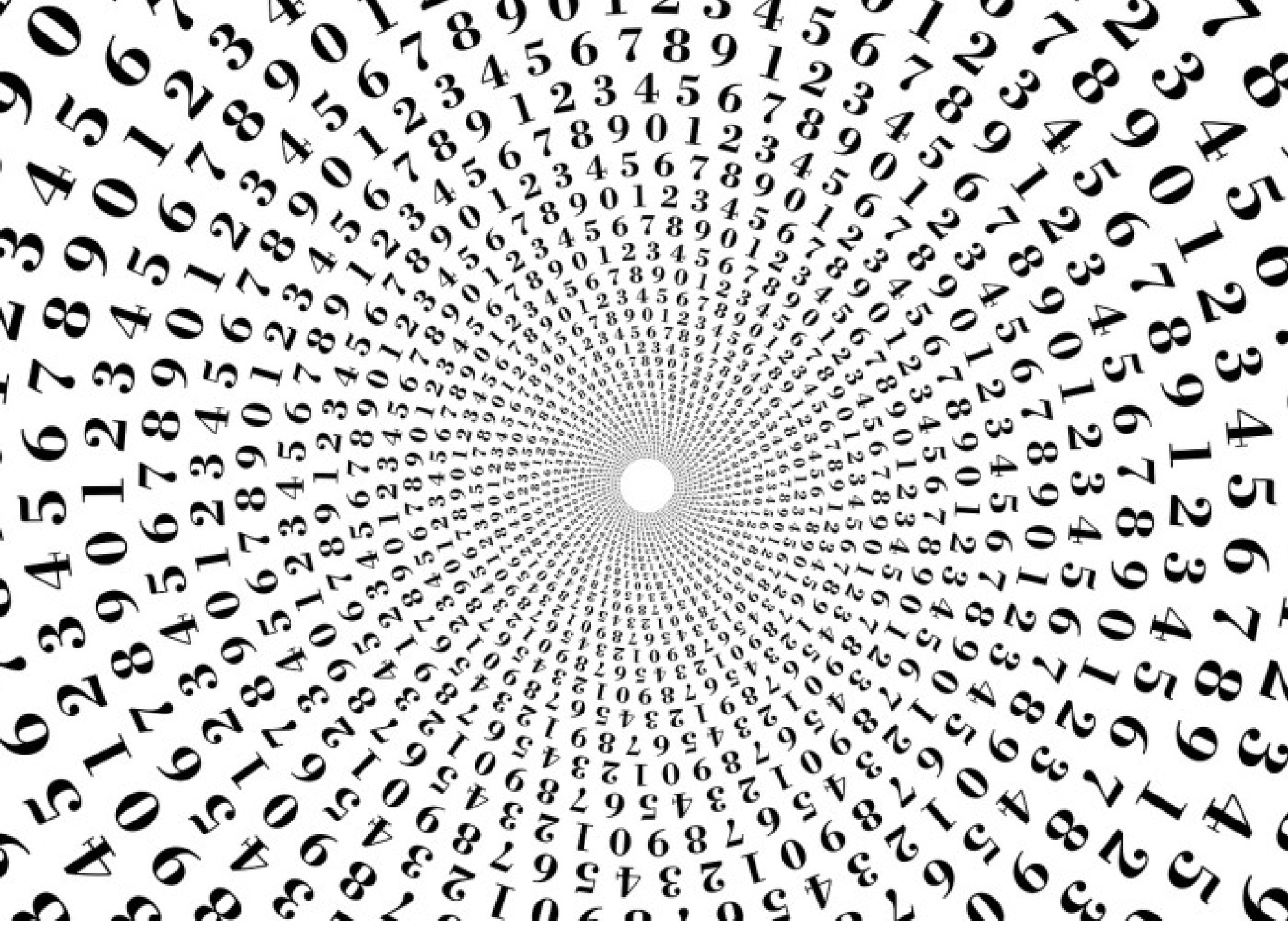
The GRE

- you need to prepare: come up with a time plan, a study plan, organize practice tests;
- if possible, take the GRE in your junior year so you can retake it.

Letters of recommendation:

- ask early, meet with, bring documents;
- send reminder 3 weeks prior to due date, remind again one week before due
- explain where and why
- ask for advice about where else.

Apply for outside grants: NSF (National Science Foundation), NDSEG (National Defense Science and Engineering Graduate Fellowships).




CONSIDER A PROFESSIONAL WEBSITE.

Generally speaking, you want people to get an overall impression, and know where to click once to get whatever other information they need.

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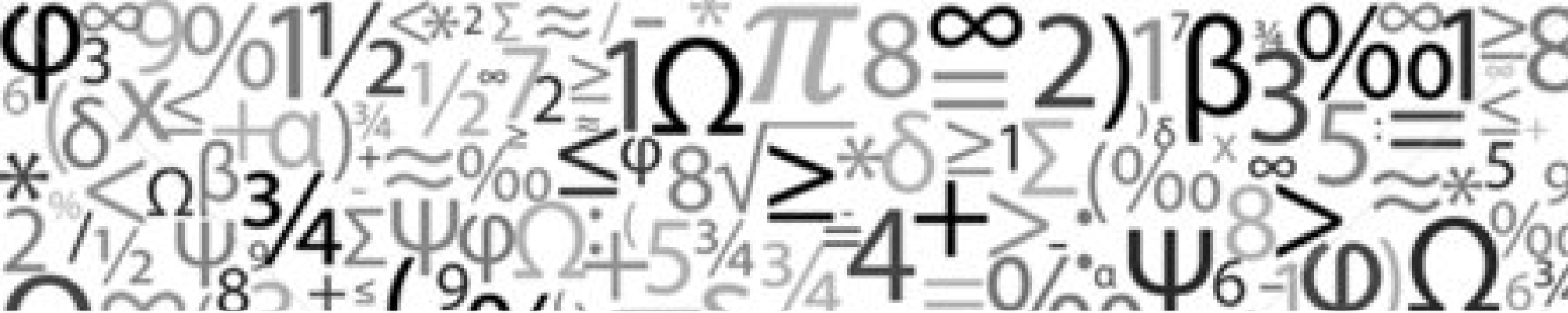

You may have a great website, but if there is too much to read, then it might get missed.

- Think bullet points, rather than paragraphs;
- Organization matters.

Good website design can help characterize you as technically competent, and as professional. With free tools available, this is very simple to achieve.

There are a number of free ways to make a website, for example using:

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Google Sites

WordPress

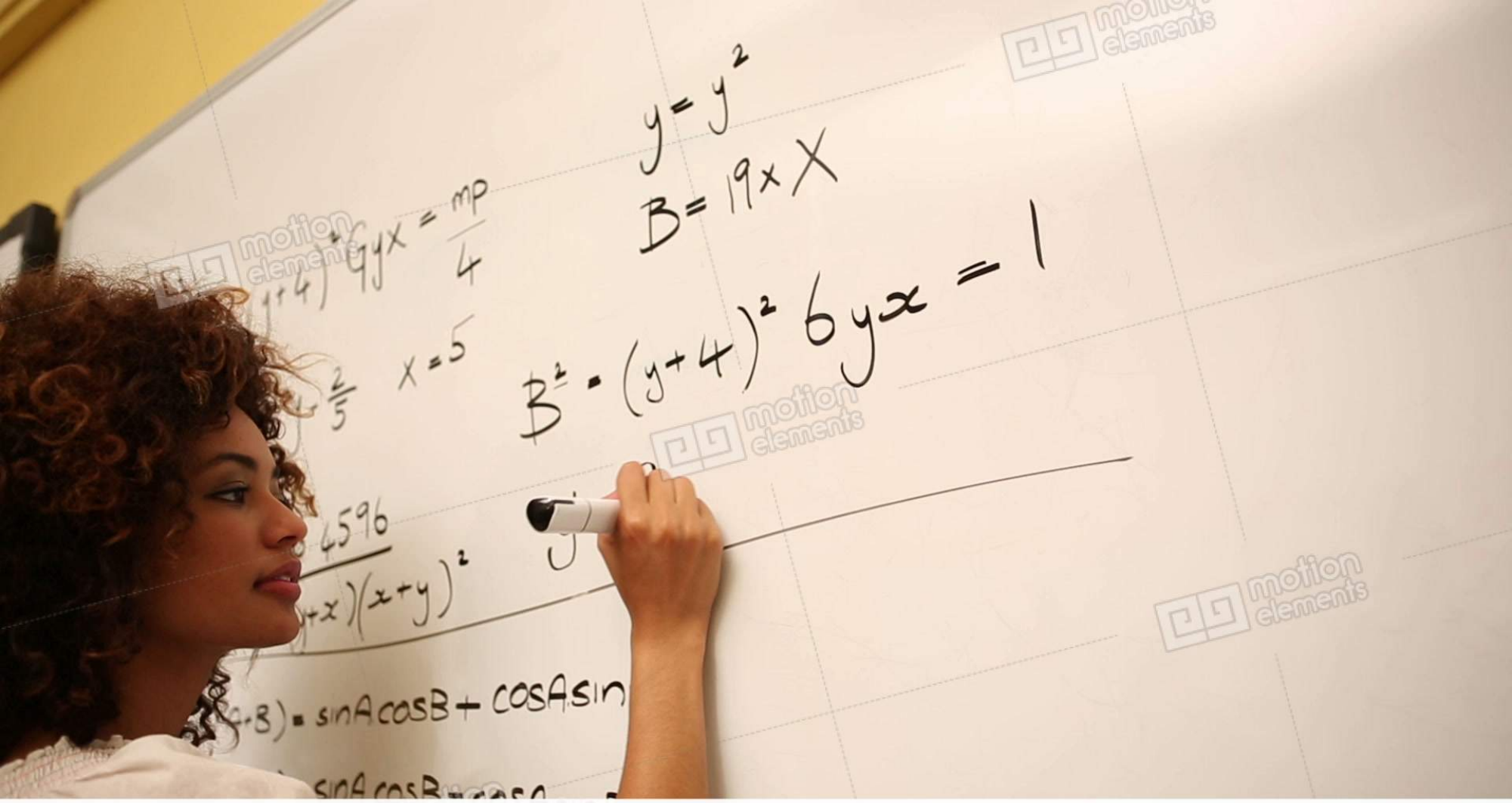
Squarespace

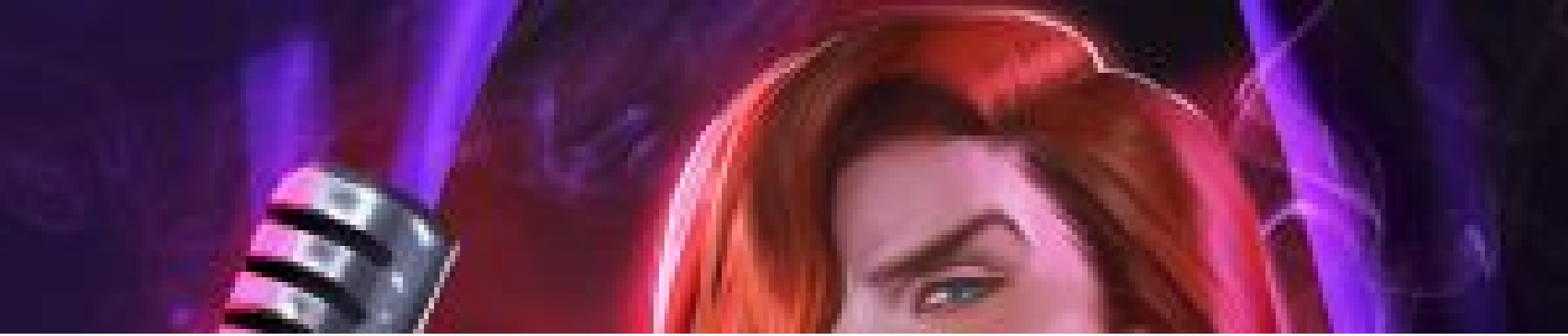
Weebly

You can download your own WordPress package from WordPress.org and use a site called Hostmonster to have your own domain name. WordPress.com hosts websites as well.

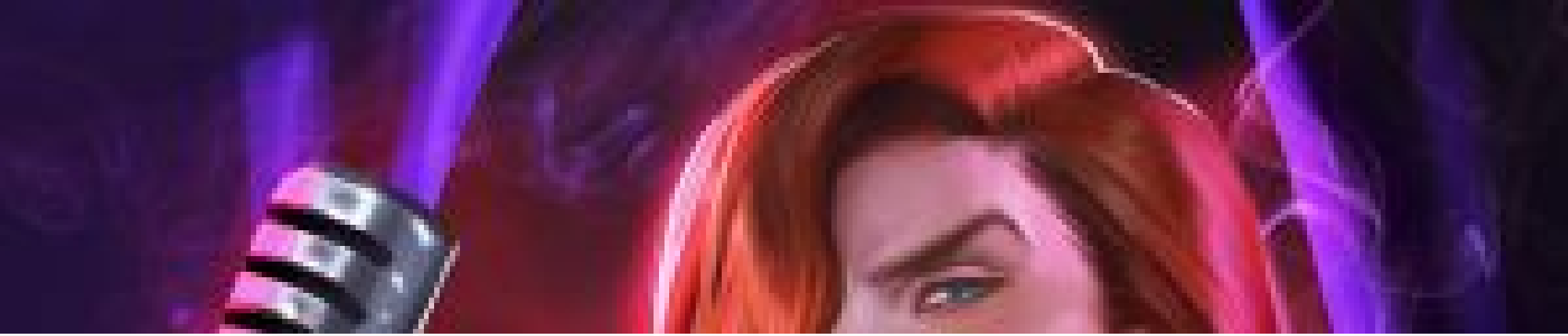

You need to have your CV on your website.


A PHOTO?

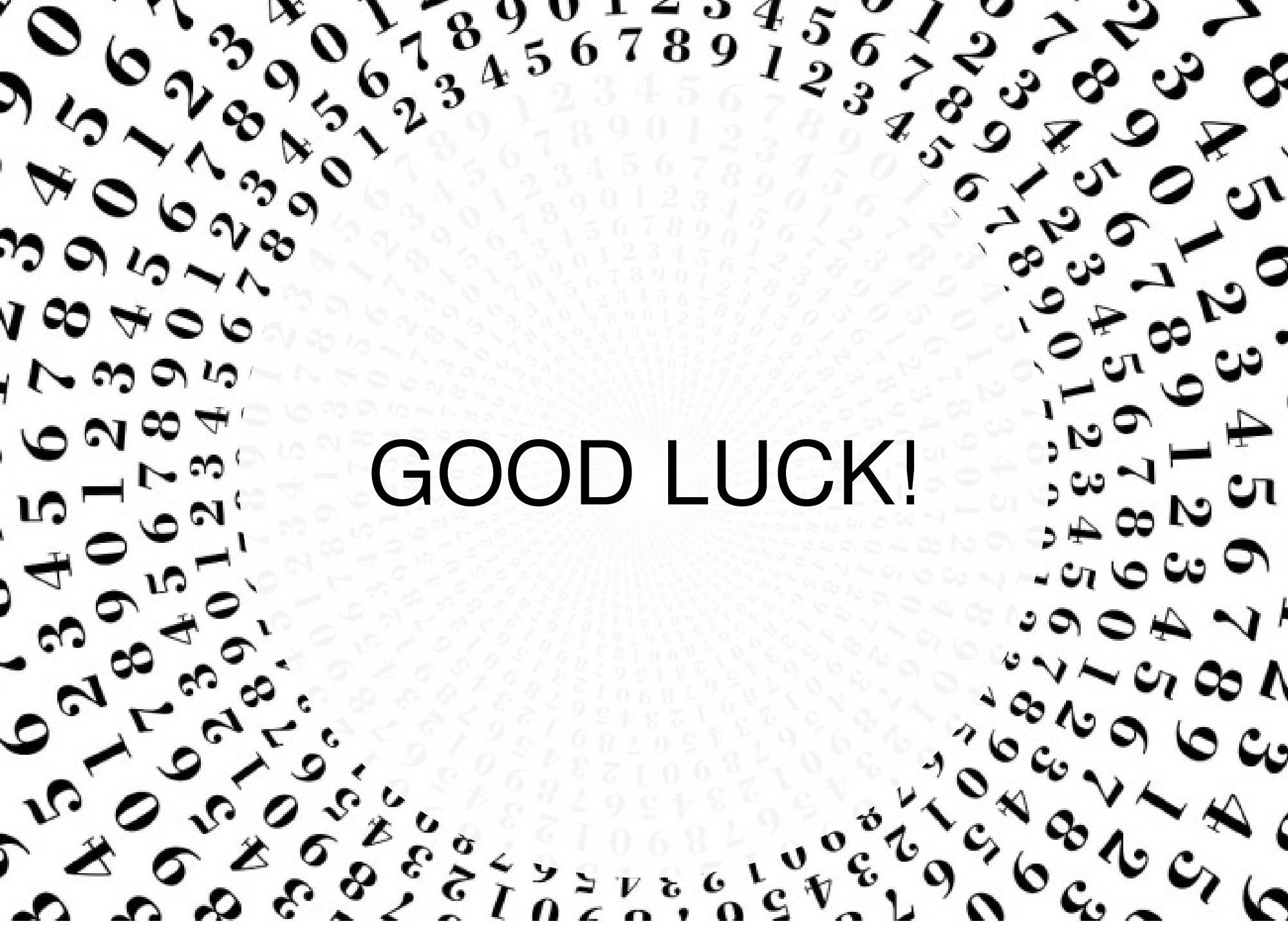




And obviously:



And obviously: No inappropriate web photos!!


GOOD LUCK!