POMÈS LAB

Computational Biophysics: Biomacromolecular Structure, Function, and Dynamics

Zhuyi Xue

Education:
09/2010 – 12/2012 (Expected) MSc, Department of Biochemistry, University of Toronto, Toronto, Ontario, Canada (Concentration: Computational Biophysics)

09/2007 – 07/2010 BSc, Life Science, Honors Program, China Agricultural University, Beijing, China (Concentration: Biochemistry and Molecular Biology)

Bio:
I did my undergrad in China in Biochemistry and Molecular Biology, but later I discovered that I was also highly interested in how computer and internet works, so I started looking for a career path that could integrate both. From there I started exploring the field of computational biology.

My graduate research project is concerned with the structure-function model of elastin, a protein widely distributed in our tissues like blood vessels, lung parenchyma, skin and tendon. Elastin provides these tissues with elasticity, which is a crucial property to the tissues' proper function. Elasticity is the physical property of a material to return to its original shape after its deformation caused by an external force. If such description is not intuitive enough, think about stretching your skin, it goes back after being released, right? Why? Because of the existence of elastin. How? That's what I am working on.

I use [molecular dyanmics](#) simulation as the main technique in my project. I program in Python and Bash most of the time for work, but also have experience with Ruby, C, PHP, Perl, SQL. I like programming, and I am striving to improve my programming skills all the time. Combined with my biological background, I believe then I can do much better along with the research trend towards big data.
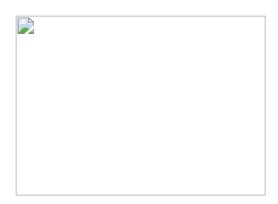
When I am not working, I enjoy playing soccer (Huh.. I mean I really love it!). I am not a die-hard fan of

any national team, but I do prefer the Spainish style. España! I also like cycling, running and swimming. I love sports.

I do some web development as well. I built the lab computer resources usage tracking application on usage.pomeslab.com. Also, I am helping co-manage the website lscds.org for Life Sciences Career Development Society (LSCDS) at UofT, which is a student initiative run dedicated to introduce graduate students in life sciences with all possible career paths. Generally speaking, I get thrilled with new and interesting information technologies.

I also do some arts viewing. I have practiced Chinese calligraphy for 6 six years when I was in the primary school. Now, I do more viewing than practicing. I really appreciate the kind of power, creativity and robustness in good art.

Contact me if you have any questions at [zhuyi.xue[at]mail.utoronto.ca](zhuyi.xue[at]mail.utoronto.ca)

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- Ana Nikolic - Researcher
- Ching-Hsing Yu - Researcher
- Chris Madill - PhD
- Chris Neale - PhD
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- Elisa Fadda - Postdoctoral Fellow
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- Nick Wang - Researcher
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- Nisha Patel - Researcher
- Rachel Ko - Researcher
- Rowan Henry - MSc
- Sarah Rauscher - PhD
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Funding

- Canadian Institutes of Health Research
- Natural Science and Engineering Research Council
- National Institutes of Health
- Canadian Foundation for Innovation

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