How to write a successful motivational letter

Most university courses, from undergraduate degrees onwards, expect a fair bit from applicants. Not only does each course have set academic requirements and forms to fill out; most applicants will also be asked to provide examples of their work, a CV, and even undertake special course-specific preparatory exams. Many masters courses – especially some very competitive ones, like the top MBAs – encourage applicants to obtain letters of recommendation from senior colleagues or academic supervisors. Atop this sheaf of papers sits the most intimidating prospect of all: the motivational letter.

A motivational letter, also known as a personal statement or a cover letter, is a short piece of writing all about you; your past, your ambitions, your personality, and your interests. While completing CVs and forms can be a little dry and boring, motivational letters can be hard to write. The combination of needing to produce such an intimate piece of writing, worded in such a way that it comes across as both authentic and professional, and then using it to sell yourself to a university, creates the perfect recipe for social awkwardness and writer's block.

Despite the difficulty of writing a decent motivational letter, it's a fundamental skill in today's jobs market – once you leave full-time education, you'll need to write motivational letters to potential employers. With this in mind, writing a motivational letter for a master's degree is an excellent practice. Below, we've prepared a couple of fail-safe techniques you can apply to write a motivational letter so that it won't either sound sterile or arrogant, and will help you stand out from the crowd.

Cover the basics: The central function of a motivational letter is to convince the admissions team at the university of your choice to offer you a place, or invite you to interview. Make sure that the letter is structured in such a way that it serves this purpose – it is usual to conclude a motivational letter by asking directly that you be admitted or invited for interview, depending upon what the next step of the admissions process is. Equally important is the calibre of your written language; if your motivational letter is riddled with grammatical errors or spelling mistakes, or doesn't make sense, the university will almost certainly refuse to admit you. A great starting point is to look at some templates for motivational letters in your chosen field, to see how they are structured, and what key points you need to cover.

Get personal: A standard for all cover letters – is that you must address your letter to a specific person. For your masters course, it could be the Head of Department, or the academic staff member responsible for your masters study programme. If you will be working closely with an academic supervisor – as with most research degrees – your cover-letter should be addressed to the academic you'd prefer to supervise you. Use the university's website to figure out who the right person is, and address the letter to them using their name and title.

Show, don't tell: This is true of CVs, and is true of motivational letters too. "I am a good leader" sounds a lot weaker than "I led a group of my fellow students on a week long climbing expedition, where we successfully…". Avoid any overly ambiguous statements, as these can diminish the confidence the admissions team may have in your motivations. Also, make sure not to show things twice – if you've discussed something extensively in your CV, don't dwell on it in your motivational letter.

Do your research: Academic institutions often have a lot to say about their values, priorities and vision. What's your target institution's motto? Do they prioritise sports, arts, or something else? Do they have a statement of values? How do you reflect these things? The most important question to think about in relation to these things – why is it that you want to go here? Weaving your knowledge of these things into your letter is a great way to assure admissions tutors that your choice to study at their institution is an informed one.

Be specific: One of the biggest problems at application is that candidates don't adequately explain why it is they want to study what they've applied for. Remember, you've got to explain your choice of subject, and your choice of institution. Not just "Why Biology?" but "Why Biology at this university?" If you don't yet have answers to this question, then it is well worth going through the University's website again, to work out what inspired you to take the next step, and apply for your chosen course.

Write a story: People love stories. They like to be taken on a journey, and brought to a satisfying conclusion. A list of superlatives or accomplishments is nowhere near as compelling as an epic story that weaves all that you've done into a coherent account, that supports the choice you've made to apply. Like all stories, make sure your motivational letter has a clear beginning, a middle, and an end. These should all follow logically on from one another, so that the reader is left feeling convinced of the suitability of your chosen course and institution, to your skills, experience, and goals.

Be interesting: This is without doubt the most important feature of a motivational letter – you absolutely must capture the reader's interest. If you come across as boring (or worse, bored) on paper, it's much less likely that you'll get a positive reply. But furthermore, the interest you express has got to be personal, and it must relate directly to your motives. It's absolutely no use whatever to produce some bland, boring page or two about hard work and how interested you are in your subject. This is exactly what every other candidate will write, and for the most competitive courses, you will want to stand out. But the best way to do this is not to try to be someone else; be yourself. Mention the fact that you like juggling. Talk about how you felt when your father was laid off work. Begin from your earliest memory. So long as what you say relates to what makes you the person you are, and then why that person has chosen to apply for this course, it deserves to be there.

What underscores all these points is a simple, and very ancient, piece of advice; know thyself. Nobody expects you to have everything figured out when you apply for a masters, but they will at least expect you to have a firm grasp of what you want out of the degree you've chosen to apply for. It's in nobody's interests for students to undertake courses for which they are ill-prepared, or that they haven't really thought through – all you need to do is show your chosen university that this doesn't apply to you.

Sections for SOP-

1. Brief yourself and your interest in this subject with a story
2. Describe your academic qualification
3. Describe your research and project
4. Extra qualifications (related to the subject)
5. State which research area of that University is related to your background and your motivation.
6. Why this University and your future intention.

Statement of Purpose writing Guidelines:

A written statement of purpose is a standard requirement for graduate school admission. It is a tool for the faculty on graduate school admissions committees to assess the knowledge, experience, motivation, intellectual maturity and readiness of applicants to pursue graduate education at their institution. The statement of purpose is a crucial component of the graduate school admissions process. It can determine whether an applicant is accepted or rejected, irrespective of their other qualifications. This document outlines the 5 stages that a graduate school applicant should go through in order to write an impressive and successful statement of purpose.

Stage I: Do your Homework

1. Browse through the websites of the schools/departments/programs of interest to you. Obtain

brochures and booklets and read through them carefully. Highlight the aspects of the

programs that appeal to you.

2. Read up on the research interests and projects of the faculty in the

schools/departments/programs. Read publications from a faculty of interest.

3. Browse through recent articles from the research field of interest and try to get a general understanding of how the field developed and what are its current problems and challenges.

Stage II: Reflect and Brainstorm (on paper)

1. Reflect on your intellectual development.

• What and when were the major moments in your life that have led you to your current research interest(s) and school/department/program?

• What or who influenced your decision or interest (i.e. role models)? What quality about them appealed to you?

2. Why did you choose your research topic(s)/field/school?

3. Why did you choose your undergraduate major?

4. What are your career goals?

• Where do you see yourself in 10 years?

• What do you hope to accomplish?

• What drives you? What motivates you?

Stage III: Outline your Statement of Purpose

1. From the results of Stage II, determine a central theme/topic that stands out or dominates your reflections and brainstorm.

2. Using bullet points and brief comments/statements, organize your reflections and brainstorm ideas that strengthen the central theme/topic of your statement of purpose.

• Concentrate on your life experiences and give specific examples.

• Put down only those things that excite you.

• Do not make things up!

3. Your outline should cover these areas and, preferably, in this order:

• What aspects of the school/department/program appeals to you?

• What are your research interest(s)?

• How did you become interested in your current research topic/area?

• How did you prepare or are preparing to address the issues in this research area/topic (i.e. research experiences, courses, etc.)?

• What are your future goals for graduate school (i.e. Ph.D.)?

• What are your career goals (i.e. professorship)?

• What characteristics of the school/department/program can help you accomplish your goals?

• What positive aspects do you bring to the school/department/program?

Stage IV: Write Draft of Statement of Purpose

When writing your statement of purpose:

• Always use positive language when referring to yourself.

• Give detailed, but concise examples.

• Use transition words, sentences and paragraphs. Your statement must read smoothly.

• Skip a line after each paragraph.

• Refrain from starting neighboring paragraphs the same way.

• Avoid using vocabulary that you do not know.

• Refrain from repeating yourself.

• Have a strong opening and closing paragraph.

• Stay within the 2 – 3 page limit!

• Thank the admissions committee for their time at the end of your statement of purpose.

Stage V: Ask for Critique, Revise and Edit

1. When you are finished with your draft statement of purpose, read it out loud to yourself and make corrections.

2. Ask friends, colleagues, and professors to read your edited draft. Taking their comments into consideration, revise and edit your draft.

3. Install Grammarly for Word to correcting spelling mistakes.

And let's face it; a masters degree is a fantastic opportunity, that will allow you to gain an expert understanding of a field about which you are passionate, and will build a bridge to a career that excites you – what could be easier to write about than that? But if you prefer to get some guidance, have a look at some motivational letter templates below. Don't copy any of the sentence from templates, just take idea.

Example 1: Motivation Letter for a Masters of Science Degree (MSc)

Dear sir /Madam,

My name is [name] and most recently I have been working as a [job title] at [company name]. I hold a B.Sc degree in [subject] from [university name].

The undergraduate curriculum in [subject], [university name], introduced me to a wide variety of subjects in the field of [subject]. Various courses like [course 1], [course 2], [course 3] (name all relevant courses) provided me with a strong footing in [subject of the masters degree].

While offering both depth and breadth across this field, these courses put into perspective the importance and relevance of [subject] and the application of its fundamentals to the problems faced by the real world.

I am much eager to adopt and know new technologies. I am really enthusiastic to attend a Master of [subject] at [university name] in order to understand different [subject] concepts and its applications to more complex real life situations. The good reputation of high-quality education standards, an extremely distinguished faculty members, and research facilities are the factors which have motivated me to apply for my masters studies at [university name].

Moreover, I feel I am responsible for making a big move in this field and this scholarship will give me a big chance to be one day someone who is remembered for his innovations. I think it is our duty as people sharing life in this world to make our future better because the future is not only ours. The next

generation should be proud of us one day when they look back and find how hard we worked to make the world a better place. I believe my qualification and your needs would be an excellent fit. I will be happy to provide any further information or documents if required. I look forward to your positive response. Thank you for your time and consideration.

Kind regards,

Name

Example 2: Motivation Letter for a Masters of Art Degree (M.A.)

Dear Prof. [name],

I am writing to inform you of my interest in the Masters of Arts [name] program at [university name].

I currently hold my Bachelor's of Arts in Art History [subject] from the University of [name], having graduated with cum laude with a GPA of 3.82 [grade]. After attending the University of [name], I completed a 3 month internship at the National Gallery in London (GB) followed by a 6 months internship at the Museum of Modern Art in New York (USA).

During my studies and internships I developed a deep interest in Italian Art, with a particular focus on artists form the 17th century. Having worked under the supervision of Prof. [name] at the National Gallery enabled me to get a very deep understanding of [specific subject] and I see the Masters of Arts [name] program at [university name] as a unique opportunity to intensify my knowledge and continue my studies.

Given my education and experience from [university name], National Gallery and Museum of Modern Art, I am confident that I am an excellent fit for the Masters of Arts [name] program at [university name]. I have researched the program and determined that the coursework and research profile of the college are a strong match. I'm particularly impressed by the volumes of [name] books in the university's library, which are of particular interest for me and which I would love to study in great detail.

If you have any further questions, please contact me using the information at the top of this letter.

Kind regards,

Your name

Example: 3

Personal Statement for MSc in Physics,

It is my conviction that persistent hard work is the most important key to success. I learned this belief from my own experience. Years ago, while I was preparing for the national physics contest for high-school students, I fell ill with nasosinusitis, suffering migraine, insomnia, and memory retrogress. I had thought of giving it up, yet with strong will and perseverance, I overcame the pains and kept study hard, and won the first prize in my province in the contest.

That experience will live in my memory for my whole life. Now I am a senior undergraduate student in the Physics Department of Peking University. Just like many other people, I have had a dream about science since my childhood. It is this dream that has made me interested in physics and choose the Physics Department of Peking University and make physics my life goal. To me, four years' study is much like a spiritual journey into the magnificent palace of physics, enjoying its wonders by taking every step. From Mechanics, Electrodynamics to Statistical Physics, again Quantum Mechanics, I realize the ever-deepening process of human understanding of nature; meanwhile I cannot help marvel at nature's beauty of simplicity and harmony. During this journey, I have acquired the fundamental knowledge about physics and developed basic physics experimental abilities and physical thinking. I have earned the excellent academic records of overall GPA 3.53 and major GPA 3.84. Moreover, I have scored points above 90 in most of the kernel specialized courses. Yet most important of all, in this process I have enjoyed both the ideas of previous physics masters and the beauty of harmony and simplicity in nature's evolution and function, i.e., what the masters have termed the beauty of nature.

In order to satisfy my passion for physics, I have furthered my studies from two aspects. One is to broaden my vision by reading extensively. In the past three years, I have read much works about physics, especially those of the masters, such as The Eeynman's Lectures on Physics and Dirac's The Principle of Quantum. Through reading I have obtained not only much knowledge out of the textbooks, but also those masters' peculiar thinking in analyzing and solving questions, which have provided guidance to my studies. The other is to try to get as many as possible experiment opportunities. It seems to me that experiments are helpful for my acquiring much perceptual knowledge about physical phenomena and developing powers of intuition in physics. Bearing this in mind, in addition to finishing every in-class experiment, I have made use of my vacation to conduct other experiments in other laboratories. For instance, during the winter holiday in my second year in college, I went to the provincial key material laboratory at Zhengzhou University to make some test of the fatigue properties of aluminum-silicon-titanium. In this experiment I adopted the probability theory made a detailed analysis of the experiment results and arrived at a satisfactory conclusion. Thanks to my outstanding performance in this experiment, in the summer vacation of grade two, my teacher recommended me to conduct experiment at the icon beam bioengineering laboratory of Zhengzhou University. There I made an analogue computation of the function of low-energy ion on the surface of organism and mastered Monte-Carlo algorithm. Earlier, I have participated in a research work chaired by an associate professor of my university. The purpose of the research was to sinter superconductor by means of resistor furnace and measure its temperature and resistance with computer-controlled circuits.

These experiments have helped develop my practical ability in the laboratory. Through them I can ponder on the fundamental physical phenomena and the laws behind them. Moreover, they have fostered my habit of independent thinking and analysis.

Yet I am fully aware that physics itself is far from enough. A person's success depends not only on his professional background, but also on his overall quality, such as ability of self-study and communicative skills. So I have tried my best to enlarge my range of knowledge and improve my overall quality. In order to master computer knowledge and to test my ability of self-study, I have grasped the PHP and MYSQL languages in one week and wrote with other people A Guide to PHP Programming in three months (a press has promised to publish it). Owing to my excellent academic performance and outstanding work in the student union, I was awarded a P&G scholarship and two Three-Good Student scholarships.

These achievements, however, are just illustrations of my past. Looking forward I find that I have just started my new journey. Modern physics has a history of several hundreds; yet it is still full of contemporary vigor. In the past ten years, the introduction of methods such as MBE and MOCVD have made it possible for various devices with distinctive quantum effects possible; meanwhile, they have resulted in numerous novel phenomena, including electronic interference and conductivity oscillation. And the issue as to how to explain theoretically the properties demonstrated by quantum electronic and opto-electronic devices of or under the size of 100mm has become a very challenging novel sphere of physics. This is just the field in which I am interested and hope to achieve some breakthroughs.

To undertake future research in those areas, I have equipped myself with some necessary qualifications. My long-time interest in computational physics and my extensive study of this subject have enabled me use Monte-Carlo simulation and Molecular Dynamics simulation skillfully. I also discovered a way to improve my understanding of those algorithms. I have subjected myself to trainings in several aspects of mathematical physics such as the real analysis, Green function and the differential coefficient equation. By learning C/C++ programming, I have made my knowledge of mathematics more practical.

It is precisely the existence of these questions and challenges that have made me choose to pursue advanced studies on physics in your honorable institution. I have learned from my former classmates now studying in the United States and from media that the University of Michigan has strong background in physics. The education and research are renowned for their excellence and creativity. I believe that studying physics there will help me tap my full potential. I will be able to learn advanced physical sciences and, upon completing my Ph.D. degree, I will return to China to devote myself to both research work and to a teaching career at one of the first-rate institutions of higher learning in the country.

Example-4

Since my childhood, I have been enthralled by incredible feature of physics, which can explain the complex real world with simple theories and elegant formulas. Not only can we reveal and appreciate the beauty of nature, but nowadays, thousands of kinds of fabulous industrial products, as the fruition of physics researches, enable us to enjoy the facilities in modern society. Driven by the hope to seek further understanding of physics and the awareness of the significance of fundamental physics research, I wish to pursue my graduate study at your esteemed institution, with the hope that I could be with your program aiming to contribute to the scientific community.

Four years undergraduate study at ***University not only lays me a solid foundation in physics area, but broadens my horizon as well, telling me how I should use textbook knowledge to solve practical problems. As a student major in physics, I have to face tremendous amount of theorems and formulas; however, looking through the ostensible boring theories, I have found boundless fun, as all theories in hand are powerful tools available for me to solve problems. The combination of specialized knowledge and full enthusiasm about computer technique allows me to treat various issues. For instance, at my sophomore year, I took part in the robot soccer-stimulation game, programming according to neural network algorithm; at my junior year I won the mathematical contest in modeling pertaining to AC motor stimulation by solving ODE with the help of Matlab; under the guidance of software engineering, I won the programming prize for developing a practical application using Delphi on "Network Technique Cultural Festival". All these experiences accruing, offer me confidence whenever a problem confronts me, and the joy from the explorations really enhances my interest in theory and technology.

Along with the enthusiasm about solving problems, I understand I need to choose a specialized field for my future career. During the last year of my college, I was lucky to join the research group of atomic, molecular and optical physics (AMO) at ***University. Since then I have become familiar with AMO physics and decided to devote myself to it. My first task was to investigate the feasibility of the scheme to realize population transfer in molecule via continuum using two-color field. Day after night I was plunging into the study pertaining to coherent control theory, to acquaint myself with every detail of the work. For a novice in the beginning, there were many difficulties in front of forward pace; however, I overcame them with my endless enthusiasm and efforts, and now, I really find I have grown up. I benefited a lot from both the successes and the failures: I still remember the disappointment for the compromise of higher accuracy due to the limitation in the hardware capability and poor optimization, as well as the excitation of achieving the final convergence after weeks' laborious debugging.

In summer 2007, I started to focus on ultrashort intense field phenomena of atom and molecule, especially on attosecond physics. I spent a month coding and testing the program to study the high-order harmonic generation of 3D H$^+_2$ model. Despite various troubles, the beneficial discussion with fellow workers led me to work it out; meanwhile, it told me the importance of team-work and leadership in research, and I found more fun with it. While my calculation was limited owing to its poor optimization, I have confidence I am able to improve it with better algorithms and code-frame for practical analysis. In

this sense, I believe a better academic environment would definitely help me attain my goal. All in all, research provides me the excitement of seeking; research offers me the joviality of thinking; research satisfies my curious mind about the nature; research gives me the chance to put what I have learnt into practice. The most import thing is that the laboratory experience has helped me identify the future research direction. It is why I want to continue my graduate study in AMO and chemical physics.

I feel that my course work as a physics major and my laboratory experience have largely prepared me for my further study. With a wide range of interests but definite goals, I am attracted to the Graduate Program in Atomic and Molecular Physics at XXX University. XXX University, which is prestigious for her AMO research, would suit me well and offer me perfect academic environment. My motivation to succeed is reflected in both my academic standing and my dedication to research. I feel that these attributes, combined with a profound interest, will ensure me to success as a graduate student.

Example-5 Physics Statement of Purpose

My goal is to combine my background in physics and mathematics with experimental neuroscience to build quantitative models of how brains work. As a child, I fell in love with mathematical problem-solving but it was not until college that I knew what to do with that love. I considered several majors in my first few semesters at USC, but my persistent question - "yes, but how does that work?" – eventually led me to the physics department and an electricity and magnetism course with Dr. Paolo Zanardi. Using the mathematical problem-solving that I reveled in, we explored the physical mechanisms behind magnets, sunsets, and a wealth of fascinating natural phenomena. The uncompromising inquisitiveness of physics resonated with my own curiosity, and I was hooked.

I became especially interested in the physical basis of information processing and joined Dr. Zanardi's Quantum Information Theory group in Torino, Italy the following summer under a USC Provost Research Fellowship. Through calculations and simulations, we sought to define an appropriate concept of thermal equilibrium in quantum mechanics. I learned a great deal about milking mathematical models and simulations for physical results, but most importantly, the excitement of constructing a new theory convinced me that I wanted to spend the rest of my life doing science. Combined with a desire to inspire other students as Dr. Zanardi had done for me, I knew then I wanted to become a professor.

It struck me that while I and other researchers grappled with the fundamental limits of computation, we still lacked a deep understanding of the very information processor that enabled us to do so – the human brain. When I thought about math, which neurons fired? How were the things I learn embodied in my brain? Was it possible to understand the physical basis of the human mind just as we understand a magnet or sunset? I searched for a neuroscience group at USC who might have need of a physicist and soon found Dr. Ted Berger's group, who were having an issue with their simulations of neural synapses. Their numerical integration algorithm was having trouble with the multiple timescales present in biological dynamics, and I discovered the source of this difficulty and proposed an adaptive algorithm to significantly speed up simulations. I also assisted a graduate student in building compartmental models of hippocampal neurons, gaining valuable experience in using the simulation package NEURON. Trading lessons in differential equations for explanations of AMPA dynamics, I also rapidly expanded my budding

knowledge of modern neuroscience. Working with the Berger group confirmed to me that (1) it was indeed possible to understand the physical basis of the brain, (2) a background in physics and mathematics was quite useful in doing so, and (3) seeking to understand the biophysical mechanisms of neural computation was exactly the science I wanted to do.

Since then, I have pursued neuroscience and physics in parallel – neuroscience for the questions that drive me and physics to better understand the physical basis of information processing and hone my ability to build and analyze mathematical models. I spent the first half of summer 2010 at the Institute for Quantum Computing (IQC) in Waterloo, Ontario working with Dr. Andrew Childs on the proof of a mathematical theorem that we felt might lead to new algorithms for quantum computers. Over six weeks, Dr. Childs and I iterated between provisional theorems and test cases generated by a computer program I had written, converged on a candidate for the theorem, and found our proof. I gave an IQC colloquium on our findings, and Dr. Childs and I are currently working on a generalization of our result for publication. Beyond offering new tools of analysis, my physics research has also influenced my neuroscience by giving me a visceral understanding of the play between theory, simulation, and experiment and how to iterate between them.

Seeking additional neuroscience experience beyond USC, I spent the rest of summer 2010 at Stanford working with Dr. Kwabena Boahen's Brains in Silicon group through the sponsorship of the Amgen Scholars Program. My project was to investigate suitable conditions for the existence of a neural network substructure called a synfire chain that has been theoretically predicted to increase the reliability of spatially and temporally patterned responses. The goal of this line of research is to aid the experimental search for synfire chains by making predictions of their signature activity patterns as well as which regions of the brain are most likely to exhibit them. Using calculations and simulations, I investigated locally and globally connected neural network models chosen for their biological plausibility through consultations with one of Dr. Boahen's experimental neuroscience students. By simplifying synfire chain formation into a Markov process, I found that learning rules and past activity play a crucial role in the development of computationally useful synfire chains and presented my findings at the

Stanford Amgen Scholars Symposium. In addition to granting me confidence in pursuing graduate research, my project conveyed to me the subtleties and importance of collaborations with experimental

neuroscientists to build biologically realistic yet mathematically tractable models, an approach that I will continue to emphasize throughout my career.

Currently, I am working with USC Professor Bartlett Mel to understand how brains rapidly and robustly encode information presented only once. In particular, we are investigating the optimal dendrite morphology for memory capacity during one-shot learning tasks and studying how the optimal morphology varies with input features such as noise and density of activation. We hypothesize that dendrite morphology is optimized to shift response variability to a regime efficient for memory capacity. We are also exploring various definitions of memory capacity and the connections between them. One of Dr. Mel's students has amassed a collection of simulation data, and my role is to build mathematical models that help explain his results, enable analytic calculations of memory capacity, and suggest new simulations to further refine our hypotheses. Our hope is that the optimal biophysical variables we identify will correspond with experimental values in the brain. Our approach is characteristic of what I believe is a unique and important contribution that physics and mathematics may offer biology – explanations for the functional role of biological mechanisms rooted in arguments for their optimality.

My strategy of pursuing research in both physics and neuroscience has provided me with unique insights into the brain, valuable experience with interdisciplinary collaborations, and clarity on my career goals. I would like to pursue a Ph.D. followed by a professorship to continue my research and share my passion for discovery with eager young minds. Through collaborations with experimentalists and my training in physics and mathematics, I want to explore the links between biophysical mechanisms and their functional roles in neural computation. In addition to my research, I have pursued and excelled in several graduate courses in physics and mathematics and even picked up new analytic tools from other graduate departments, such as information theory and mathematical optimization. Concurrently, I have attained a significant knowledge of modern neuroscience through extracurricular study and research. Thus I am confident in my choice of graduate research and in my preparation for pursuing it.

Furthermore, I am confident that the University of Washington's Physics program would be a great place for me to do so. I am attracted by the large community of faculty and students interested in biophysics and particularly interested in working with Drs. Adrienne Fairhall, Fred Rieke, and Eric Shea-Brown, each of whom I have contacted. As I prefer theoretical work closely coupled with ongoing experiments, I am especially interested in a project co-advised by Dr. Rieke and either Dr. Fairhall or Dr. Shea-Brown. Two interests I might pursue with Drs. Fairhall and Rieke are the roles of prediction and online algorithms in vision. In particular, to what extent does the prediction of common input patterns enable the visual system to increase processing speed and reduce energy expenditure, and how do the temporal demands of a visual task affect the processing of neural signals? Another possibility would be to study the interactions of adaptive mechanisms acting on different timescales, a topic on which I have recently submitted an NSF GRFP research proposal (available upon request). With Drs. Shea-Brown and Rieke, on the other hand, I might seek an understanding of single-neuron response variability, exploring the relative contributions due to input statistics, biological constraints, the exploitation of stochastic resonance, and other potential sources. Another potential focus of our collaboration could be the modulatory effect of persistent network activity on single-neuron responses and the role of this modulation in neural computation. Though the research is my main attraction to UW, I would be remiss if I did not mention that I do my best thinking in the outdoors and welcome the opportunity to spend weekends hiking and mountaineering in the environs of Seattle.

NB. All information collected from available online sources.

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 # Credit goes to Bangladeshi Student Forum Germany (BSFG).