Delores G. Kelley, Chair Brian J. Feldman, Vice Chair 3 East Miller Senate Office Building Annapolis, MD 21401

Dear Chair Kelley, Vice Chair Feldman, and Members of the Finance Committee,

I am currently a bi-national Ph.D. student in Materials Science and Engineering at the University of Maryland (USA) and at Kiel University (Germany). I am also a National Science Foundation Graduate Fellow as well as a Clark Fellow. I have been an active member of the A. James Clark School of Engineering since 2013. In undergraduate, I served in many prior student leadership roles including Clark Engineering Student Ambassador, and Vice President for the undergraduate Materials Science Student Society. Since I have been in graduate school, I have directly supervised various interdisciplinary research projects for 10 undergraduate students, and five master's students.

I am writing this letter to implore you to make vital reformations to the graduate school program at the University of Maryland, College Park. I will outline the most urgent concerns of UMD graduate students, provide methods for rectifying concerns, and highlight the profound benefits the university will incur if changes are made. I thank you in advance for your serious consideration of this testimonial.

In virtually all cases, UMD graduate students receive a salary that is insufficient to satisfy their cost of living and basic necessities. This places students under undue financial strain, with no good option for remedy. If students work a second or even third job to accommodate their financial needs, it will redirect substantial amounts of time away from essential research functions they provide to the university. If students focus entirely on their academic duties, the financial strain of living paycheck to paycheck will drastically lower their ability to make productive contributions to the university. This is in addition to the myriad of devastating physical and mental health effects that chronic stress exerts on the body and mind. Simply increasing the salaries of graduate students would alleviate a major cause of stress, redoubling motivation and productivity instantly.

UMD graduate students also suffer from a lack of standardized health benefits. Each department provides disparate insurance plans, with the commonality across the board being low quality. If a student were to develop an acute problem, they cannot be assured they will receive proper care. If a student has a chronic health concern, they cannot be assured they will be able to afford their medication. Even a perfectly healthy student lives with the constant underlying concern that they are underinsured. With the massive expectations placed on graduate students, they can hardly afford to be getting sick in the first place. Providing all UMD graduate students with the same standardized options for quality health insurance would give peace of mind to these concerns.

Graduate students at Maryland are greatly overworked. I have seen regular examples of my colleagues feeling compelled to work 12+ hour days, staying in the lab until midnight and quite frequently work on weekends and holidays. Even if the students were being properly compensated for their huge amounts of overtime, which they are not, such a work schedule is completely unsustainable. Consistently working long hours drains the morale of students,

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causing sleep deprivation and mental health concerns such as depression and anxiety. It is apparent in many cases that Ph.D. advisors place heavy burdens on students so that they may achieve goals that are in their own best interest as professors competing for funding, publication, and prestige. This culture of servitude rather than mentorship and growth is an unethical philosophy. Research science is a discipline that should be focused on progress over large periods of time that contribute to society. There is no reason to exhibit a false sense of urgency that places students under a high level of duress. Students should not be made to work excessively without proper compensation. Either they should be compensated, or hours should be reduced.

Finally, UMD graduated students need the right to unionize and engage in collective bargaining. Without the ability to come together in solidarity, students have no chance to negotiate better terms of employment for themselves. Students feel a sense of learned helplessness; either they must bend to the will of their advisors and the university graduate program at large, or they face the prospect of being removed from their Ph.D. program. The underlying threat of removal from the program, in the absence of the ability to unionize, perpetuates poor conditions of employment for dedicated students. Granting graduate students the right to unionize and negotiate with their superiors is a basic liberty that would bring to light unethical practices.

I would like to conclude my letter by addressing the profound benefits the University of Maryland will enjoy, should these reformations be instituted. First, retention will improve. With students feeling happier and more secure in their livelihood, more of them will see their Ph.D. to its completion. Second, acquisition will improve. With the newly minted graduate students salaries, benefits, and rights, more prospective graduate students are likely to choose UMD for their Ph.D. programs. Third, the university's reputation will improve. UMD will gain prestige as a research institution, increasing the amount and magnitude of government funding and other grants. Last, UMD's graduate program will have a larger societal impact. UMD will gain ethos as an institution that demonstrably contributes to scientific progress, the ultimate goal.

We are aware that these are not small requests, and we greatly appreciate your consideration of the aforementioned reformations presented in this letter.

Very respectfully,

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