Application Details

Manage Application: Geoffrey G. Eichholz Faculty Teaching Award - 2018

Award Cycle:	2018
Internal Submission Deadline:	Friday, February 2, 2018

Application Title:	Qin
Application ID:	002110
Nominator's First Name:	Naresh
Nominator's Last Name:	Thadhani
Nominator's Title:	Professor and Chair
Nominator's Primary Organization:	COE-MSE
Nominator's Email Address:	naresh.thadhani@mse.gatech.edu
Nominator's Phone Number:	404-89402651
Nominee's First Name:	Dong
Nominee's Last Name:	Qin
Nominee's Title:	Associate Professor
Primary Organization(s):	MSE - Materials Science and Engineering
Nominee's Email Address:	dong.qin@mse.gatech.edu
Submission Date:	Wednesday, January 24, 2018

GEOFFREY G. EICHHOLZ FACULTY TEACHING AWARD

NOMINATION PACKET

DONG QIN

ASSOCIATE PROFESSOR

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

GEORGIA INSTITUTE OF TECHNOLOGY

TABLE OF CONTENT

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Memo to: Geoffrey G. Eichholz Faculty Teaching Award Committee

From: Naresh Thadhani, Professor and Chair, MSE Naresh Thadhani

Date: January 24, 2018

Subject: Nomination of Prof. Dong Qin, for Geoffrey G. Eichholz Faculty Teaching Award

Dear Awards Committee:

I am delighted to nominate Prof. Dong Qin for the Geoffrey G. Eichholz Faculty Teaching Award in recognition of her passion and joy for teaching, and her sustained record of teaching excellence. In my opinion, Prof. Qin exemplifies the type of outstanding teacher fully deserving of this recognition. Let me highlight some of the key attributes in support of my nomination of Prof. Qin.

Dr. Qin joined the School of Materials Science and Engineering as a tenure-track Associate Professor, in January 2012. She is currently running an active research group that includes four Ph.D. students and three undergraduate students, with sponsored research funding exceeding $1M. Her research embraces multiple disciplines, including materials science and engineering, chemistry, physics, and optics, for the design and rational synthesis of novel colloidal noble-metal nanocrystals with desired properties for applications in catalysis, photonics, sensing, and imaging. During the span of past six years at the Georgia Tech, Dong has published more than 20 papers in peer-reviewed journals. Her h-index of 31 reflects the impact and scholarship of her research work. She deliver 23 invited seminars at various institutions, and another 26 talks at national and international conferences. She is the recipient of the 3M Non-Tenured Faculty Award (2015–2018).

In addition to demonstrating excellence in teaching, Prof. Qin considers teaching as the most rewarding experience for people working in academia. Since her arrival at Georgia Tech, she has consistently demonstrated outstanding teaching performance with a strong commitment to improving the learning experience of students, for which she received the GT-CETL/BP Junior Faculty Teaching Excellence Award in 2015. She has been very passionate about educating students at all levels, with the ultimate goal to increase their understanding and appreciation of materials science, and nanoscale science and technology through student-focused curricula. For her past 13 course offerings at Georgia Tech, she has maintained a teaching effectiveness score of 4.6 out of 5.0, which is amongst the highest in our school.

Since spring 2015, Prof. Qin has been teaching our core service course MSE 2001, *Principles and Applications of Engineering Materials*, to a total of 386 freshmen to senior engineering students from AE, BME, ChBE, ISYE, ECE, ME, MSE, and NE. The student enrollment has increased from 68 to 96 to 128 for her class sections in 2015, 2016, and 2017. Despite the challenges associated with the teaching students having such a diverse background and knowledge level, Prof. Qin demonstrated excellence in teaching and appreciation of every opportunity to work directly with individual students for promoting their learning effectiveness. During the course of her teaching MSE 2001 over four offerings, her teaching effectiveness scores ranged between 4.4 to 4.9 (average of 4.6), with a response rate of 52.8%.

Part of the reason for this success is her strong desire to improve student learning and her dedication to caring for student's success. She constantly refines the syllabus and lecture materials to make this course attractive and exciting while enriching students' learning experience regardless of their majors. Prof. Qin highly values student opinions in terms of "liked" and "disliked" through interactions during the office hours, post-exam surveys, and COIS surveys. She "learns" from her students, in particular, those who use very different technical languages in their own disciplines, and then implements changes in her lectures, to promote better engagement among students in the classroom. It is truly amazing to see her proactively engaging and working collaboratively with the students to achieve effective teaching and learning together. In fact, her offering of the MSE 2001 course has become a very popular, serving as a powerful vehicle to encourage students to consider MSE as a minor.

Since fall 2012, Prof. Qin has also taught MSE 4330, *Fundamentals to Nanomaterials and Nanostructures*, to juniors and seniors from various disciplines including AE, BME, CHBE, CHEM, ECE, ME, MSE, and PHYS, every fall. She designed the courses with modules that include the physical and chemical concepts of nanoscience; characterization and fabrication of nanomaterials; and case studies on uses of these advanced materials in a broad spectrum of applications. To provide opportunities for the students to appreciate the practical aspects of methodologies, she implemented lab sessions for students to work on the synthesis and characterization of nanomaterials in her own lab and the Institute of Electronics and Nanotechnology (IEN), as well as bringing lab components to the classroom. She demonstrated her competence in teaching, receiving effectiveness scores in the range of 4.5 to 4.9, averaging at 4.7.

In addition to her strong commitment to teaching in the classroom, Dong enjoys working with undergraduate students and high school students in her own research group. She often invites students from her undergrad classes to start doing research in lab right after the semester. Among 16 undergraduate students who have worked in the Qin Lab over the past six years, four of them have co-authored peer-reviewed publications. Three of them received the President's Undergraduate Research Award (PURA) and a rising senior student from Duluth High School in Atlanta contributed to a publication in 2012. Remarkably, the original work of the high school student also earned him the semifinalist prize at the 2013 Intel Science Talent Search, and a 2012 semifinalist and regional finalist for the Siemens Competition. Since 2015, Prof. Qin has served as a Grand Challenges Faculty Fellow at Georgia Tech upon nomination by students. She has also served as a judge of regional finals for the Siemens's Competition in Math, Science & Technology in 2015 and 2016.

Prof. Qin has demonstrated extraordinary capability, and dedication and passion for teaching, cultivating vibrant interactions with students to address their challenges and learning, connecting research to teaching, bringing educational outreach beyond the classroom, and positively contributing to the educational mission at Georgia Tech. It is these principles that make Prof. Dong Qin most deserving of the Geoffrey G. Eichholz Teacher Award.

REFLECTIVE TEACHING STATEMENT

The mission of higher education is to develop independent and creative thinkers who will serve and contribute to the society. Institutions should challenge their students, and faculty alike, to seek new knowledge while deepening their understanding of an ever-changing, multi-dimensional world. As a faculty member at Georgia Tech, Dr. Qin is committed to training her students to be innovative, capable of learning continuously throughout their careers, and able to adapt to changes. Specifically, Dr. Qin is keen to integrate science, engineering, and technology into the undergraduate and graduate curricula for educating students across multiple disciplines. She have been developing an interdisciplinary approach to teaching and research that values the following aspects in the context of materials science and engineering: *i*) ***learning*** that exposes students to a multifaceted, integrated path to learn about the fundamentals and new developments in materials science and engineering, as well as its environmental and societal impacts; *ii*) ***training*** that offers students research experience in the faculty research lab for the exploration of state-of-the-art research tools and new discoveries in the forefronts of materials science and engineering; and *iii*) ***engaging*** that connects the students with community and society to impart and promote a basic conceptual understanding of materials science and engineering by high school students and teachers. The goal is to expand both the scientific and engineering communities by exposing the students to interdisciplinary approaches traditionally exclusive to materials scientists, engineers, chemists, physicists, and biologists.

Curriculum Development: Dr. Qin is passionate to educate the students at all levels with an increased understanding and appreciation of materials science and nanoscale science and technology through student-focused curricula. Since 2015, Dr. Qin has been teaching a core course–*MSE 2001, Principles and Applications of Engineering Materials*–to a total of 386 non-MSE major engineering students from AE, BME, ChBE, ISYE, ECE, ME, and NE. Dr. Qin constantly refine the syllabus and lecture materials to make this core course attractive and exciting while enriching the students' learning experience regardless of their majors. She puts an emphasis on the structure-property relationship of materials in the context of atoms and chemical bonding by leveraging the student's knowledge of introductory chemistry. She also introduces technology-driven applications of materials through a strong connection to the properties. This course has been well-received, serving as a powerful vehicle to encourage students to consider MSE as a major or minor for their undergraduate training. Part of the success should be credited to the students who shared their "liked" and "disliked" remarks through close interactions with Dr. Qin during the office hours, post-exam surveys, and COIS surveys. The feedback enables Dr. Qin to "learn" from her students, in particular, those who use very different languages in their own disciplines, to implement changes in her lectures for better engaging students in the classroom. For example, Dr. Qin always encourages students to bring their questions to office hours during which she could have another opportunity to explain the concepts. In fact, these questions greatly help Dr. Qin identify the "weak" points in her initial discussion of some key concepts and so she can try a different angle to explain the subjects more clearly. The two-way interactions between the students and teacher have become an essential component in addressing some of

the major challenges associated with the teaching of such a large class of students with extremely diversified background and knowledge. It is truly amazing to engage students proactively and work collaboratively with them to achieve effective teaching and learning together.

Dr. Qin also taught upper-level undergraduate and graduate courses–*Fundamental to Nanomaterials and Nanostructures* (MSE 4330/CHEM 4803C, Fall 2012–2017) and *Advanced Nanomaterials* (MSE 6405/MSE 4803B, 2013–2017). As the applications of nanomaterials and nanotechnology proliferate, there is an ever increasing demand for scientists and engineers who can think, measure, and process at the nanometer scale. To meet this demand by undergraduates and graduate students from AE, BME, CHBE, CHEM, ECE, ME, MSE, and PHYS, Dr. Qin carefully designed both courses with different modules that include the physical and chemical concepts of nanoscience; characterization and fabrication of nanomaterials; and case studies of advanced nanomaterials for a broad spectrum of applications. To promote a better understanding of important concepts discussed in the lectures and to provide opportunities for the students to appreciate the practical aspects of methodologies, Dr. Qin also implemented one-week-long lab sessions for the students to spend time working on the synthesis and characterization of nanomaterials in the Qin research lab and the Institute of Electronics and Nanotechnology (IEN). Such an integrated approach to bringing lab components to the classroom has been applauded by all the students.

Student Success: Since 2012, Dr. Qin always strives her very best to teach all courses with her wholehearted dedication to the success of every student and commitment to fairness. Within a short period of time, Dr. Qin has emerged as one of the most popular teachers for MSE 2001 because her class enrollment has been increased more than 88% (from 68 to 96 and 128) in the span of 2015 to 2017. Students highly applauded her enthusiasm in teaching the subject and the respect and caring for her students. Dr. Qin always prepares extremely well for each of her lectures, and most important, she is willing to walk extra miles to adjust the lecture content according to student's feedback and remarks during the semester. Dr. Qin provides all possible resources, including lecture slides, important concept sheets, rubric for all quizzes and exams to the T-square in a timely fashion. More significantly, Dr. Qin always makes herself available for out-of-class meetings in her office. She truly cares and goes above and beyond to make sure students who are struggling are able to get the help they need. For example, Dr. Qin gives a quiz every week in order to keep the students on top of materials throughout the semester and she always makes rubrics immediately after the quizzes. For the sake of fairness, she carefully reviews each individual copy of student quizzes and exams, even for such a large class with a student population between 70 and 128, before their final scores are posted. Dr. Qin makes herself available to address any questions about grading during office hours or scheduled meetings, from which she is able to achieve a better understanding of the challenges faced by students with different backgrounds. Dr. Qin always encourages the class to participate in after-the-exam survey, including their assessment on the degree of exam difficulty, their expectation on the performance (or grade), and their recommendation on the improvement of teaching effectiveness. For those students who had a poor performance on the exam, Dr. Qin often sends email

invitations to schedule individual meetings during office hours or at the students' convenience (even weekends) to reiterate the class materials, work on homework and exam questions, and show them how to improve the performance. Dr. Qin truly values and respects all questions from her students through personal conversations and COIS class surveys, from which she continuously refines her class materials and improves the clarification of her lectures to enrich the learning experience of all students. Based on the COIS surveys from 204 students of GT over the past six years, Table 1 demonstrates a remarkable track record in terms of median scores for "The Instructor is an Effective Teacher": 4.6, 4.7, and 4.6 for MSE 2001, MSE 4330, and MSE 6405, respectively.

TABLE 1: ICOS SCORES

CORE COURSE – MSE 2001: PRINCIPLES AND APPLICATIONS OF ENGINEERING MATERIALS
2015-2017
ICOS Median Score for "The Instructor is an Effective Teacher": 4.6 (%Resp. 204/386=52.8%)

INSTRUCTOR EFFECTIVENESS (TOTAL OF STUDENTS)	SPRING 2015 (69)	FALL 2015 (96)	FALL 2016 (96)	FALL 2017 (128)
CLARITY	4.2	4.5	4.3	4.2
COMMUNICATED HOW TO SUCCEED	4.7	4.9	4.7	4.8
RESPECT FOR STUDENTS	4.8	4.9	4.8	4.9
ENTHUSIASM	4.8	5.0	4.9	4.9
STIMULATE INTEREST	4.2	4.6	4.2	4.5
AVAILABILITY	4.6	4.9	4.7	4.8
FEEDBACK HELPFULNESS	4.3	4.8	4.2	4.5
OVERALL EFFECTIVENESS	4.6	4.9	4.4	4.6

ELECTIVE COURSE – MSE 4330: FUNDAMENTAL TO NANOMATERIALS AND NANOSTRUCTURES
2012-2017
MSE 4330 ICOS Median Score for "The Instructor is an Effective Teacher": 4.7 (%Resp. 75/190=39.5%)

INSTRUCTOR EFFECTIVENESS (TOTAL OF STUDENTS)	FALL 2012 (18)	FALL 2013 (41)	FALL 2014 (31)	FALL 2015 (33)	FALL 2016 (38)	FALL 2017 (29)
CLARITY	4.1	4.2	4.6	3.7	4.7	3.8
COMMUNICATED HOW TO SUCCEED	4.6	4.5	4.7	4.8	4.9	4.6
RESPECT FOR STUDENTS	4.6	4.7	4.9	4.9	5.0	4.6
ENTHUSIASM	4.9	4.9	5.0	5.0	5.0	4.9
STIMULATE INTEREST	4.6	4.5	4.6	4.6	4.8	4.6
AVAILABILITY	4.6	4.9	4.8	4.9	5.0	4.6
FEEDBACK HELPFULNESS	4.5	4.6	4.8	4.6	4.8	4.7
OVERALL EFFECTIVENESS	4.5	4.7	4.9	4.6	4.9	4.6

MSE 6405: ADVANCED NANOMATERIALS
2013-2017
MSE 6405 ICOS Median Score for "The Instructor is an Effective Teacher": 4.6 (%Resp. 35/65=53.9%)

INSTRUCTOR EFFECTIVENESS (TOTAL OF STUDENTS)	SPRING 2013 (15)	SPRING 2014 (22)	FALL 2015 (14)	FALL 2017 (15)
CLARITY	4.2	4.1	4.5	4.5
COMMUNICATED HOW TO SUCCEED	4.9	4.8	4.9	4.7
RESPECT FOR STUDENTS	5.0	4.9	4.9	4.8
ENTHUSIASM	5.0	4.9	4.9	4.9
STIMULATE INTEREST	4.7	4.6	4.2	4.2
AVAILABILITY	4.9	4.8	4.9	4.3
FEEDBACK HELPFULNESS	4.9	4.9	4.8	4.5
OVERALL EFFECTIVENESS	4.5	4.6	4.7	4.5

Dr. Qin has also received “Thank-a-Teacher” letters. As of today, Dr. Qin still plays her role as a teacher by interacting with her students who later became undergraduate researchers at GT or graduate students at GT or elsewhere, contributing to their career development and future success.

Undergraduate Research: Dr. Qin’s commitment to undergraduate education goes farther than just the classroom. She is fully deveoted to cultivating an environment for undergraduate students to engage in research as soon as they embark on their college education. She is a strong believer that hands-on research experience will greatly help the students develop scientific knowledge, effective problem solving skill, self-directed learning talent, effective collaboration capability, and intrinsic motivation. Since January 2012, Dr. Qin has enjoyed working with one high school student, five freshmen, and eleven junior or senior students on a number of research projects related to plasmonic nanomaterials. Specifically, the students were offered an opportunity to learn about the challenges in rational synthesis of bimetallic nanocrystals with unique properties and develop the technical competence to characterize the nanocrystals using state-of-the-art tools. In addition to working with graduate students in the lab, the undergraduate students meet with Dr. Qin weekly or biweekly to discuss experimental details, analyze data, and plan for future experiments. Three of the GT-MSE undergraduate students were awarded the PURA grants (fall 2014, spring 2017, and fall 2017). Among them, Junki Kim and Daniel Wang served as the second author of two *ACS Nano* articles published in 2016 and 2017, respectively. Junki Kim also received the 1st place award in the 5th Annual School of Materials Science and Engineering Undergraduate and Graduate Poster in spring 2017. When Junki presented his work at the Materials Research Society (MRS) spring meeting, his work was also nominated for the Best Poster Award. Jonathan Li, a rising senior student from Duluth High School in Atlanta, contributed to the first publication from the Qin lab during his NSF-supported summer internship in 2012. His original work with Qin earned him recognitions as a semifinalist of the 2013 Intel Science Talent Search (STS) and a 2012 semifinalist and regional finalist of the Siemens Competition. After graduation from Columbia University with a BS degree in 2017, Jonathan is currently working for the Wall Street in New York City.

Education Outreach and Community Service**:** Dr. Qin is actively engaged in the outreach programs. In the summer of 2012, she managed the NSF-supported Nanotechnology Undergraduate Education (NUE) program that engaged twelve GT undergraduate students across campus to perform research. She has been serving on the seminar and undergraduate committees at MSE, together with her active role in the MSE nanomaterials certificate program. In 2015, Dr. Qin joined the Grand Challenges Faculty Fellows program upon nomination by students at GT. The Grand Challenges program provides students with an opportunity to develop problem solving, analytical, and critical thinking skills in order to find solutions to real-world problems. Dr. Qin was invited to serve as a reviewer for the Marion Milligan Mason Award for Women in the Chemical Sciences, American Association for the Advancement of Science (AAAS) and she also served as a judge for the regional finals at the Georgia Institute of Technology for the Siemens's Competition in Math, Science & Technology in 2015 and 2016.

ILLUSTRATIONS OF TEACHING EXCELLENCE

In fall 2017, Dr. Qin taught her largest class of MSE 2001H with 128 non-MSE major students. Although it was the fourth time for Dr. Qin to teach this core course, she still redesigned the lecture materials to better fit a more diversified student body. According to the 72 students who participated in the ICOS survey at the end of the semester, the greatest strength of Dr. Qin can be summarized as the following:

- ✓ ***She truly truly cares. She goes above and beyond to make sure people who are struggling are able to get the help they need. Wonderful woman***
- ✓ ***Enthusiastic and caring***
- ✓ ***Letting to students know what they need to know, no unnecessary details***
- ✓ ***Enthusiasm***
- ✓ ***She was so excited to help and teach which I always really appreciate seeing***
- ✓ ***Dr. Qin's enthusiasm about materials science and availability for consultation***
- ✓ ***Easy to talk to, very enthusiastic about subject***
- ✓ ***Such a wonderful professor who loves what she is teaching and truly cares about her students***
- ✓ ***Really great at lecturing, really cares about her students, really really kind professor***
- ✓ ***The enthusiasm. DIAMOND!***
- ✓ ***Easy access to materials and help***
- ✓ ***Being able to meet with students in office hours and answer any questions that they may have.***
- ✓ ***Very knowledgeable and enthusiastic. Outstanding professor.***
- ✓ ***Decently clear and useful lectures. Extremely helpful about any and all questions.***
- ✓ ***She is very enthusiastic and always available to help.***
- ✓ ***She really enjoys teaching and really cares about our success in the course.***
- ✓ ***Office Hours***
- ✓ ***I really enjoyed having Dr. Qin as my professor. She was always prepared for lecture, always arrived on time, but the most important aspect of all, she was excited about the material she was teaching. With consistency, she came to class each lecture with excitement, ready to teach, something I had not seen before in my prior courses. She was passionate about the course, and so, it translated to me being passionate about it also.***
- ✓ ***How much she cared for her students and her ability to make us laugh!***
- ✓ ***Very entertaining to listen to.***
- ✓ ***Your humor kept class interesting***
- ✓ ***Her greatest strength was her passion for MSE - she clearly knew everything she was doing and more.***
- ✓ ***She is a lovely person. Her attitude, concern, help, and enthusiasm is commendable, and I thoroughly enjoyed the experience with her. She is a great person and a lovely professor.***
- ✓ ***Clearly defined what we needed to know. Lots of study materials online and direct textbook references. Great all around.***

- ✓ ***Enthusiastic, she knew the material very well. An experienced professor.***
- ✓ ***She was great at presenting the material and making it interesting.***
- ✓ ***She was extremely knowledgeable, passionate, and fun! She was very down to earth and understanding. She mad accommodations for students in extenuating circumstances. She posted all of the notes and practice materials/problem you could ever want.***
- ✓ ***Very helpful and willing to help. Always have open office hours if needed.***
- ✓ ***Greatly enthusiastic of material, willing to help students with the material even if it took a good deal of time.***
- ✓ ***Enthusiasm for materials taught.***
- ✓ ***Explained everything in depth, but made it seem easy***
- ✓ ***Dr. Qin is extremely caring and wants her students to succeed. She goes out of her way to make the lectures entertaining. Overall, I really enjoyed her lecturing style.***
- ✓ ***Effective teacher. A lot of fun.***
- ✓ ***She truly wants her students to succeed.***
- ✓ ***Extremely concern and respect student. Good at explaining the material***
- ✓ ***Ability to relay the information and to help students understand what is going on. Knows what the students need to learn and don't need to learn and making everything fair for everyone.***
- ✓ ***Very enthusiastic.***
- ✓ ***Many helpful resources. Made herself very available for out of class meetings.***
- ✓ ***She is very passionate and energetic about the material, which helped me be engaged. Also, she is very clear about what she expects from us, and she is very consistent with the textbook she used.***
- ✓ ***Dr. Qin was incredibly enthusiastic an always ready to help. Overall, I think Dr. Qin was a great professor.***

Other comments on Dr. Qin from the students:

- ✓ ***Really makes an effort and will listen to feedback, which is really cool and you don't see a lot in professors.***
- ✓ ***Great teaching style, which makes this course a wonderful experience.***
- ✓ ***Professor Qin made me more interested in MSE & was a really sweet and awesome professor. I hope to have her again in the future!***
- ✓ ***I really enjoyed this course and I learned a lot about how materials can affect the uses of objects and devices.***
- ✓ ***Great professor! Keep it up.***
- ✓ ***Dr. Qin is one of the best professors I have worked with while at Georgia Tech. She is a truly passionate professor and researcher, and she showed it each time in the classroom. Not only did she get excited with each lecture, ready to teach us, but she taught us beyond the course, by telling us the things we could do with materials science. She is one of the many reasons why I want to pursue a PhD education, and I hope to someday teach the way she does, or use some of her tools. Thank you for making my learning experience this semester one of the best.***
- ✓ ***I really enjoy her personality and style of teaching.***

- ✓ ***She's become one of my favorite teachers.***
- ✓ ***Really enjoyed the fact that Professor Qin managed to make the big lecture hall class feel like a smaller class through hands on examples in class, real life examples, willingness to really help students learn the material.***
- ✓ ***Very fair and very understanding of student's time. Also really funny!!***
- ✓ ***Overall, I thoroughly enjoyed how she taught the course because I learned so much.***

In the fall 2016, Dr. Qin received two Thank-A-Teacher notes from her students:

The semester/year of the course: Fall 2016

Campus Address of Instructor: Materials Science and Engineering/0245

What would you like to tell instructor? Hi Professor Qin,
I wanted to thank you for a great semester this Fall! I loved your enthusiasm for the course and your willingness to always keep your schedule as open as possible for students to come to office hours (especially before the final). I remember in the beginning of the semester when you told the class that we would finish the course with a greater appreciation of Chemistry than before, and I know that I was one of those students who laughed. However, you proved to be correct. After seeing the applications of materials and the reasons behind which materials are chosen for certain purposes, I do have a greater love of chemistry and probably will be able to explain the behavior of silly putty to anyone for the rest of my life.
So again, thank you for the time you put into this course. Regardless of how I performed overall, I loved being in your class and hope that I have the opportunity to be your student again in the future.

Title of the course: Materials Science & Engineering 2001

The semester/year of the course: Fall 2016

Campus Address of Instructor: Materials Science and Engineering/0245

What would you like to tell instructor? Dear Dr. Qin,
Thank you for a great fall semester in MSE 2001! I still remember the first time I met you during my sophomore year in the Grand Challenges Program. I was giving a presentation when you came over and enthusiastically chatted with my team. I knew that I would love to be in your class and learn from such a passionate professor. I'm lucky that I was afforded that opportunity!
You were always so helpful and supportive of me this semester with achieving my goals. I truly learned a lot this semester and am excited to continue this subject next semester as a BME depth elective. Your energy and friendly nature always brightened my day, and I sincerely appreciate your caring and optimistic personality in and out of class. Your dedication to the class is remarkable and commitment to accommodating me for any help needed was extraordinary. I cannot express my gratitude fully for all that you have done.
I hope to see you around campus and wish the best for you and your next class of MSE 2001!

Georgia Tech

SETH R. MARDER
Regents' Professor & Georgia Power Chair in Energy Efficiency

January 8, 18

RE: Letter of support for Dr. Dong Qin for the Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award

To Whom It May Concern:

I am writing in support of **Dong Qin's** nomination for the 2018 Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award. I have known Dong for six years and believe that her contributions to teaching of concepts in materials science and engineering, and beyond, have been both seminal and impactful. As soon as you meet Dong, you appreciate her incredibly high level of energy and enthusiasm. She comes from an academic family and for her teaching is not a profession but a way of life. One can see her joy when she discusses teaching. I observed her lecture for an introductory materials science course and her level of energy and joy is exuded constantly throughout the lecture as she interacts with students, which is self-evidence by her teaching evaluations and students' comments as noted below. Thus it is clear that Dong has a passion for teaching, is excellent at it, and this is recognized by students.

Dong has built a viable research and education program in nanoscale science and engineering for both graduate and undergraduate students at Georgia Tech. She has made connections between research and teaching, as demonstrated by her support of undergraduate research in her lab and through her classroom lectures on research specific topics. She has been successful in creating an exciting environment for undergraduate students to be engaged in both research and classroom learning. In particular, she has created a hands-on demonstration component and undergraduate research component for the nanomaterials course (MSE 4330). For this reason she receives extremely high marks in regards to her teaching evaluations, as evident by her median scores for "The instructor is an Effective Teacher" being 4.63, 4.72 and 4.60 for MSE 2001, MSE 4330/CHEM 4803C and MSE6405/CHEM 4803B. Her ability to address and reach all students, even those who were not performing well in the class, is apparent by her teaching scores and student comments. She stimulates interests in learning and helps students to develop their attitudes to work hard. I have excerpted a few of such comments from her teaching evaluations:

> *"I very much enjoyed this class and found that the topics which were covered were very interesting and without question relevant to today's ongoing research in nanotechnology. I was also very impressed with Dr. Qin's enthusiasm for teaching and her drive to engage with her students in and out of class."*
>
> *"I really enjoyed that we were looking at research that was on the cutting edge."*
>
> *"Lectures were engaging and genuinely informative. The class was about learning, not about performing well on exams."*
>
> *"The instructor clearly stated what was expected from the student. She is very fair with grading and continually encourages students."*
>
> *"I thought the breadth of topics covered in this course was helpful and allowed students from a variety of backgrounds to engage with the material."*
>
> *"Her passion for the subject and continuous encouragement makes the class great. All of the lectures are extremely organized, clear, and easy to understand. Also, she is always available for extra help and clarification for any confusion a student may have."*
>
> *"One of the best professors I've had at tech! She was so helpful and I was never afraid to go to her office hours. I loved learning and studying for this class even though I thought it was going to be a challenge at the beginning of the semester and doubted myself for a bit. But she made me want to put a lot of effort into this class. I thoroughly enjoyed this class and would definitely recommend it to anyone! Thank you so much!!"*

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SETH R. MARDER
Regents' Professor & Georgia Power Chair in Energy Efficiency

"She was excited about teaching, which made me excited about learning. She always had a great attitude and could keep me alert even from 4:30-6 at night."

"I really enjoyed having Dr. Qin as my professor. She was always prepared for lecture, always arrived on time, but the most important aspect of all, she was excited about the material she was teaching. With consistency, she came to class each lecture with excitement, ready to teach, something I had not seen before in my prior courses. She was passionate about the course, and so, it translated to me being passionate about it also."

Dong's participation in a Research Experience for Teachers (RET) program through Dr. Nancy Healy with NNIN at IEN is a demonstration of her commitment to creating learning opportunities beyond the classroom and laboratory. In regards to Dong's service to Georgia Tech, she contributes best in her role as an effective teacher and mentor. She has been working with Drs. Sankar Nair and Peter Hesketh at Georgia Tech to develop a nanotechnology minor program, and serves as a member of the Undergraduate and Seminar Committees in MSE.

In summary, Dong has represented every aspect of the criteria for this award – she has made great strides in terms of educational innovation, has had positive impact on her students' lives, demonstrates a passion for and excellence in teaching and learning, connects her research and teaching, brings educational outreach beyond the classroom, considers students' needs and has positively contributed to the Georgia Tech community. Accordingly, I very strongly support recognizing her many important contributions by awarding Dong Qin the 2018 Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award.

Sincerely,

Seth Marder

Seth Marder

School of Chemistry and Biochemistry
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January 1st, 2018

Dear Teaching Award Selection Committee,

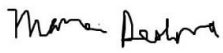
My name is Manasi Deshpande and I am a 4th year Biomedical Engineering student. I am writing to recommend Dr. Dong Qin for the Geoffrey G. Eichholz Faculty Teaching Award due to her remarkable character in serving every student that enters her class. Dr. Qin stands as an outlier; her determination, agility, and vision are a true inspiration. I believe that writing this letter is extremely important to recognize Dr. Qin's outstanding performance and award her with this honor.

I first met Dr. Qin my sophomore year as part of a student presentation. As a Faculty Fellow of the Grand Challenges Program, Dr. Qin regularly attends student presentations, interacts with all program participants, and even hosts monthly coffee talks to engage with students. At this particular presentation event, I was able to interact with Dr. Qin, explaining my team's proposal to her. Immediately, I was struck by how enthusiastic she was and it fueled my own confidence for delivering the presentation. Not only did she listen to every idea we put forth but also provided ample suggestions for us in the future. She spent nearly an hour with my group, reciprocating the same excitement. When I realized that she taught MSE 2001, a required class for biomedical engineers, I knew that would want her as a professor, committed to student excellence and effort.

As a former student of this class, I can attest to Dr. Qin's passion and talent for teaching. Prior to every lecture, she prepares lecture to make it as effective for her students. She makes herself available beyond her office hours, even staying after class to answer questions and blocking off time in her own schedule to accommodate students. She evens makes herself available over weekends or for phone calls and is so dedicated to serving every student's needs and academic excellence. Dr. Qin has a natural ability to recognize every student's ability and will push them to challenge common notions and absorb the knowledge in another way. She is beyond the conventional professor that instructs, rather she seeks to foster intellectual curiosity and love for knowledge. For example, when I attended Dr. Qin's office hours, she would have me explain concepts to her using a whiteboard to draw out my thoughts and articulate them well. She sought to prepare students for real-world challenges that are beyond the classroom, such as having to communicate ideas thoroughly in interviews and in the workplace. She truly cares about students and wants them to grow academically and personally as good citizens. I enjoyed her class so much because of her creative measures for teaching that I have decided to declare a concentration in materials and am working toward depth electives in the biomedical engineering curriculum to further my interest. Dr. Qin's trait of treating every student with openness, friendliness, and kindness is extraordinary. She is very diligent, and I wholeheartedly hope she acquires this high honor.

Dr. Qin has demonstrated great ability and talent and I wish the best to her in this process. I hope that the committee appreciates her principles and values of education enrichment for students. It is a privilege to write this letter to you all demonstrating Dr. Qin's distinguished characteristics and I hope it demonstrates her qualified nature to be bestowed this merit. If you have any questions, please feel free to contact me. Thank you for your time.

Sincerely yours,



Manasi Deshpande
Biomedical Engineering
Georgia Tech
Phone: 770-883-4848
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January 4, 2018

Kelsey Pepper
Undergraduate Student, Georgia Institute of Technology
Daniel Guggenheim School of Aerospace Engineering

To Whom It May Concern,

I am writing to express my support of Associate Professor Dong Qin for the Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award. As a student to Dr. Qin for MSE 2001 in the Fall of 2016, I have had the privilege of getting to know her quite well, directly benefiting from her dedication to both excellence in teaching and student success. Being able to provide insight into Dr. Qin's approach and commitment is thus an honor.

Dr. Qin is a remarkable professor who is able to engage students during lectures with ease. Her visual aids are well organized and maintain a flow that allows everyone in class to become involved in discussions where questions are encouraged and always answered. She has extensive knowledge of the topics taught and effortlessly weaves in real-world examples to further explain them. An example is when she used Silly Putty during class to help demonstrate the concept of a material's glass transition temperature.

Very important aspects of Dr. Qin's dedication to students are her flexible office hours and willingness to explain difficult concepts. Should her normal, posted office hours not fit with a student's schedule, she will work to find a time that will. I went to many office hours throughout my time in her class, and I can say without hesitation that she clearly answered all my questions with an encouraging smile. Even after performing poorly on one of her tests, she readily helped me after class and in office hours to correct my misunderstandings. This gave me confidence heading into the final exam, and I finished MSE 2001 knowing that my complete comprehension of the material was due to Dr. Qin. Her level of involvement with her students is unparalleled.

Dr. Qin knows that supporting her students means that her actions should have a positive impact on their futures. Her class made Deformable Bodies much easier, and I developed a deeper respect for chemistry and materials as she interweaved the two in examples during her lectures and presented us with optional readings to expand our knowledge. I remember her starting the first class of the semester by asking which of us enjoyed learning about chemistry. Only a couple people raised their hands, myself not included, and Dr. Qin smiled at us saying that we would after her class. After her class, if presented the question again, I would gladly raise my hand.

I personally have benefited from taking a class with Dr. Qin and sincerely hope that her efforts as an amazing professor will be rewarded with the Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award.

Sincerely,

Kelsey Pepper

Kelsey Pepper

January 4, 2017

Juan Sebastian Rubio López
Candidate for Bachelor of Science in Mechanical Engineering
1062 Hemphill Ave. NW
Atlanta, GA 30318

Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award
Awards Committee

I am writing this letter to support the nomination of Dr. Dong Qin for the Georgia Tech Geoffrey G. Eichholz Faculty Teaching Award.

Dr. Qin was my professor for Principles and Applications of Engineering Materials (MSE 2001) during fall 2017. Prior to taking this course, I presumed it was going to be the most difficult in the semester. Several friends who had taken it warned me on the difficulty of the material, worrying me on whether I would excel on the course. However, since the very first lecture, Dr. Qin displayed enthusiasm and determination for our success. She provided us with colored lecture slides for us to print and write on. These slides had excellent annotations, drawings, and summaries to grasp each concept. During lecture, she reviewed the slides and gave us hints on the most important topics we needed to understand. Often, she supplied us with extra reading material for understanding concepts like phase equilibria. She also used the classroom as an example to explain the concept of an impurity or dislocation glide, often referring to herself as an impurity and an empty seat in the classroom as a hole for the impurity to go in. At the end of each lecture, Dr. Qin's teaching assistant tied what we had learned in the class with a real-world application. These types of explanations were played out through the entirety of the course, and it facilitated my learning experience.

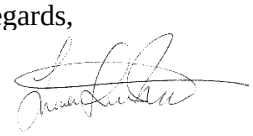
Not only was Dr. Qin excellent in the classroom environment, she also provided office hours during the week and was always accessible by appointment. She also held extended office hours before an exam. During office hours, she explained what we did not understand in lecture. She would write on her board and explained each concept until we fully understood it. Dr. Qin was also very attentive to our success in exams. Before an exam, she spent the entire lecture on an extensive review of the material that was going to be tested. After an exam, she provided us with a survey, allowing us to express the difficulty of the exam, our time spent studying, and what could be improved. She modified the next test depending on class statistics and survey answers. Dr. Qin was fully dedicated in our course.

Lastly, I would not be the student I am today if it were not for Dr. Qin. She inspired and motivated me in every lecture. She was always on time and ready to teach the course. Even though she was highly involved in her research, she devoted a large amount of time modifying slides, holding office hours, and preparing for our success in the course. Dr. Qin always pushed us to work harder, challenging us in exams and motivating us in every lecture telling us to put in extra effort in order to see great results.

Without a doubt, I can attest that Dr. Qin is the best professor I have had at Georgia Tech since I transferred in 2016. As a mechanical engineering major and aerospace engineering minor, I can say that I fell in love with material science because she inspired me to learn. I hope you take Dr. Qin into consideration for this award. We need more professors like Dr. Qin to inspire students to love to learn and to work hard.

Please contact me if you need any further information.

Regards,



Juan Sebastian Rubio López