Application Summary

Competition Details

Competition Title:	2020 CTL/BP Junior Faculty Teaching Excellence Award
Category:	Institutional Awards - CTL
Award Cycle:	2020
Submission Deadline:	03/02/2020 at 11:59 PM

Application Information

Submitted By:	Steven Biegalski
Appplication ID:	4314
Application Title:	Dr. Dan Kotlyar Nomination for CTL/BP Junior Faculty Teaching Excellence Award
Date Submitted:	02/28/2020 at 10:19 AM

Personal Details

Applicant First Name:	Steven
Applicant Last Name:	Biegalski
Email Address:	steven.biegalski@me.gatech.edu
Phone Number:	(404) 385-5973

Primary School or Department
Woodruff School of Mechanical Engineering

Primary Appointment Title:	Professor

Application Details

Proposal Title
Dr. Dan Kotlyar Nomination for CTL/BP Junior Faculty Teaching Excellence Award

February 1, 2020

Re: Nomination of Dr. Dan Kotlyar for CTL/BP Junior Faculty Teaching Excellence Award

Dear Center for Teaching and Learning (CTL) and BP America,

"A teacher affects eternity: he can never tell where his influence stops." declared Henry Adams. This quote makes me think of Dr. Kotlyar regarding the relationships he builds with students that extend far beyond the classroom and their years at Georgia Institute of Technology.

With this letter, I nominate Dr. Dan Kotlyar for CTL/BP Junior Faculty Teaching Excellence Award. I am currently Chair of the Nuclear and Radiological Engineering and Medical Physics program at Georgia Institute of Technology where Dr. Kotlyar is currently an Assistant Professor. This is Dr. Kotlyar's fourth year at Georgia Institute of Technology and during this time he has been innovative in his teaching, had a positive impact on his students, and has exhibited a passion for teaching. I strongly recommend him for this award.

When Dr. Kotlyar started at Georgia Institute of Technology, he was assigned two undergraduate courses to teach: NRE 3208 Nuclear Reactor Physics I and NNRE 4208 Nuclear Reactor Physics II. These are core courses within the Nuclear and Radiological Engineering B.S. degree program and closely align with Dr. Kotlyar's research interests. Specifically, Dr. Kotlyar's research involves computational reactor physics and he was able to leverage his background in this area to develop computational models and codes that support both of these courses. Accordingly, students were able to utilize these codes on assignments to reinforce the reactor theory concepts taught in the class. Students also learn to improve/modify the codes to address temporal feedbacks within reactor systems. These innovation utilize Dr. Kotlyar's research and improve the learning dynamics within NRE 3208 and NRE 4208.

Dr. Kotlyar has had a positive impact on students outside the classroom. He maintains a large research group including twenty undergraduate research assistants over the past 3.5 years. The quality of this work illustrated by numerous undergraduates being involved in research publications and multiple student awards. I approached just last Fall by Peter Newby (Georgia Tech alumnus and Vice President at Framatome). He told me how he was impressed with a paper written by Ms. Coral Kazaroff (undergraduate research assistant for Dr. Kotlyar) on the assessment of the Vogtle Nuclear Plant moving to a 3x24 month nuclear fuel cycle. Ms. Kazaroff was also awarded the President's Undergraduate Research Award (PURA) for this work. This is not an isolated case as Dr. Kotlyar and mentored undergraduate students to a total of five PURA awards in the last 3.5 years. He also mentored a senior design group to win the overall nuclear engineering Capstone project award in 2019.

801 Ferst Drive Atlanta, Georgia 30332-0405 U.S.A.
PHONE 404.894.3200 FAX 404.894.1658
me.gatech.edu – nremp.gatech.edu

Dr. Kotlyar's passion for teaching is clearly evident through his interactions with students. He spends a considerable amount of time both inside and outside the classroom mentoring students. He aids them in their understanding of complex concepts, guides them through the research process, and mentors them to develop careers after their graduation. As a result, Dr. Kotlyar's students are making an early impact in industry and the National Laboratory Complex.

In summary, I strongly recommend Dr. Kotlyar for the CTL/BP Junior Faculty Teaching Excellence Award. If you have any questions or comments regarding this letter, please feel free to contact me at steven.biegalski@me.gatech.edu.

Regards,

Steven Biegalski, Ph.D., P.E.
Nuclear and Radiological Engineering and Medical Physics program Chair
Georgia Institute of Technology

REFLECTIVE STATEMENT ON TEACHING
KOTLYAR DAN, ASSISTANT PROFESSOR
MECHANICAL ENGINEERING/NRE
01/27/2020

Teaching Philosophy:

I incorporate both the design and modeling aspects of nuclear systems and their associated fuel cycles into my lectures. My main guideline is creating the next generation of nuclear engineers with a strong understanding on how different methodologies are applied to analyze and design state-of-the-art nuclear reactors. My teaching philosophy and style aim to place students in key positions within the industry, national labs and also to better prepare them to conduct quality research in the future.

Innovation in Class:

Over the past 3.5 years in Georgia Tech, I have taught and fused my experience into the classroom, in which each lecture is designed to have a profound understanding of the material and the relation to real life applications. I prepare original lecture notes, partially blanked to be completed by students, to maximize students' attention. Mathematical formalism is supported via multiple unique computational demonstrations to allow the students to comprehend the validity of assumptions and the behavior of a physical system. I also ***conduct class workshops*** with emphasis on the implementation of the covered material. The students are then tasked with various mini-projects, in which they are required to program a product that enables them to better understand the behavior of a nuclear system under nominal and off-nominal conditions. In my NRE4208 class, for example, the ***students analyzed the dynamic behavior of a real*** Boiling Water Reactor (BWR) system following a realistic reactivity insertion transient scenario.

Some Examples of in- and out-class activities:

NRE 3208 and 4208 constitute the discipline of reactor physics. NRE 3208 aims to explain the relationships among variables underlying the theory of nuclear fission reactors using mathematical models and their associated physical behaviors. NRE 4208 is an advanced course in reactor physics, which aims to introduce various important concepts. In-depth comprehension is promoted through the use of relevant mathematical models, *i.e.* analytic and numeric, and tools for reactor physics modeling. A sample of activities and projects are summarized below:

1. The concept of time-dependent diffusion theory is extremely important to understand the time-dependent behavior of any reactor-core system during a transient. The students were assigned with a homework that required them to apply mathematical methods to solve the differential equations by analytic and numerical means. More specifically, the students were required to solve the point-kinetics equations and couple these with a lumped thermal hydraulics model. This allowed the undergraduate students to ***gain a graduate-level understanding***. In order to solve such ***multi-disciplinary*** and coupled problem, the students had to understand how to formulate the problem in a matrix notation and numerically solve the coupled differential equations that describe the rate of change of the power, concentration, and the temperature fields.
    a. The students had to understand the concept of a reactivity initiated accident scenario and its evolvement during the accident. In addition, the students were required to understand the inherent feedback associated with the coolant and fuel temperatures.
    b. A specific section of this project requires to understand a full sequence of the accident including the insertion of shutdown rods.

2. The materials in the core are changing their isotopic composition during the irradiation cycle. The students were required to formulate the mathematical model via the description of the differential equations. The students were also required to understand what assumptions are allowed to be made in order to simplify the problem and achieve an analytic solution.
    a. The students were required to solve the differential equations via Laplace transforms.
    b. The project also asked how the isotopic composition variation would affect the core time-dependent behavior and thus the system during normal operation and following shutdown.
3. Typically, various reactor physics courses focus on homogeneous reactor systems, in which the material is uniformly dispersed within a specific geometry of interest. Although, many times, such homogeneous concepts are enough to describe the underlying physics, they cannot unfold various phenomena unique to real reactor-core configurations, which are heterogeneous in nature (i.e., the material is not uniformly dispersed). In order to solve such problems, the students were tasked to write a ***multi-regional nodal*** solver and obtain the spatial flux distribution in a heterogeneous system as a function of energy. The students used this tool to analyze a realistic ***core- reflector concept*** and to comprehend the importance of the reflector in the reactor-core.

Teaching excellence in core classes:

I aim to teach at the highest level and during these last years as a lecturer I always received only the highest marks as indicated from the Lecturer-Student feedback surveys. In Georgia Tech, I taught three courses multiple times and received excellent feedback from students, which is reflected in my CIOS scores:

	Response %	Overall effectiveness	Enthusiasm	Respect for Students
Nuclear Reactor Phys I	89%	5	5	5
Nuclear Reactor Phys II	100%	4.9	5	5
Computational Transport	100%	5	5	5
Nuclear Reactor Phys I	89%	4.9	4.9	4.9
Nuclear Reactor Phys II	95%	4.8	5	4.9
Nuclear Reactor Phys I	57%	4.9	5	4.9
Nuclear Reactor Phys II	97%	4.8	5	5
Nuclear Reactor Phys I	64%	4.9	5	4.9
Nuclear Reactor Phys II	48%	4.8	5	5

The median score for "the instructor was an effective teacher" during the last three and a half executive years was above 4.9/5, with the last semester reaching a 5/5. Some of the feedback regarding my teaching expertise include: "*The best aspect of the course? There were many aspects that were the 'best'. The structure of the in-class development of the notes was extraordinary, the in depth knowledge of the material, and the extremely meticulous details to understanding the material was brilliant. One of the best Profs. I have ever had the pleasure to learn from*."; "*Honestly the best aspect of this class was its ability to revitalize the desire I initially had to pursue Nuclear Engineering. Not to say that I ever really lost that desire, but taking this course and the amount of intentionality that the instructor put into it, helped to make me realize the beauty of the major. What more can a student ask for in a course*."; "*The projects - the application of nuclear concepts to real-life situations using programming. I never got how useful what I was learning in class was until I did those projects and saw how applicable the theory was, which made me honestly want to learn more*.".

I would also like to add that teaching activity is something that I find very important and rewarding and the students can easily see this in class. I am well prepared for every lecture and conduct each lecture with tons of enthusiasm (see the above table). ***My goal is to invoke passion*** for the subject as much as it is to educate.

I am always accessible to students in- and out- of the class. As my classes are challenging, students come to my office frequently and I am always happy to help. Many times I would stay after the lecture and help the students with their projects. Many of my projects require some level of programming, however this skill is not mastered by every student equally. I am always happy to instruct and help outside the class and teach how to implement the program and the associated mathematical models properly.
In addition to the class activities, students that have research questions (from other research groups) frequently come and ask questions. These questions typically relate to reactor physics and/or engineering and I am always more than happy to assist.

I was acknowledged for my educational contribution by receiving a "Thank the Teacher" award more than 6 times.

Connection between research and teaching:

I profoundly believe in the value of undergraduate research experience, and actively encourage undergraduate students to perform research and produce publications before graduation. In spring 2017, I led two groups of ten students in the Senior Design Class (NRE4232) to study a nuclear thermal propulsion engine with low-enriched cermet-based fuel for deep space exploration. The students were tasked to design multiple components of this high-temperature engine including the fuel elements, supporting elements, reflectors, and the control reactivity system. The students applied various neutronic and thermal-hydraulic tools to assess the performance of the proposed design. The project was very successful and sparked interest from NASA, Ultra-Safe, Inc., and BWX Technology Inc. From the above groups, three students are now perusing graduate studies in the field, two students were offered and completed internships in NASA and Ultra-Safe, Inc. during the summer of 2018. At the moment there is an ongoing joint GT-BWTX project to study the safety characteristics of the NTP systems. I also offer many undergraduate research projects, via special topic courses, in which students can strengthen their experience in different computational methodologies or develop design expertise. In fall 2017, a group of three undergraduate students received national recognition (awarded 3rd place) at the ANS National Conference in Washington DC. Overall, I had around 20 students that conducted undergraduate research in my group. The students were trained to work with industry production tools, which better prepared them for post-graduation. I had the pleasure to produce three journal publications with some of the ***undergraduate*** students and above 10 conference publications:

J.T. Gates*, A. Denig*, R. Ahmed*, V. Mehta, D. Kotlyar, 2018. "Low-enriched Cermet-based fuel options for a nuclear thermal propulsion engine," Design of Nuclear Engineering, 331, 313-330.

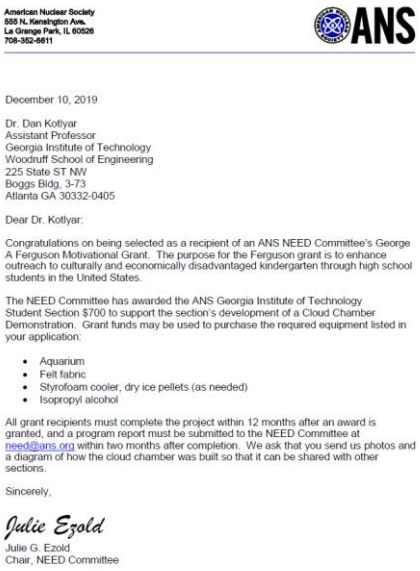
N. Kaffezakis*, D. Kotlyar, 2020. "Fuel Cycle Analysis of Novel Assembly Design for Thorium-Uranium Ceramic Fueled Thermal, High Conversion Reactor," Nuclear Technology, 206, 48-72.

N. Kaffezakis*, S. Terlizzi, C. Smith*, A. S. Erickson, S. K. Yee, D. Kotlyar, 2020. "High Temperature Ultra-Small Modular Reactor: Pre-conceptual Design," Annals of Nuclear Energy, *In print*

*****undergraduate students

Measure of success:

Vedant K. Mehta	– Summer Fellowship Program Award, Center for Space Nuclear Research, Idaho National Lab, 2018. – 3-Minute-Thesis Winner (Masters' category), Georgia Institute of Technology, November 2017. – 2019 Innovations in Nuclear Technology R&D Award
N. Kaffezakis	– The student was awarded with the President's Undergraduate Research Awards (PURA). – The student was awarded with the Outstanding Undergraduate Research (UROP) Researcher Award.
Andrew Denig	– The student was awarded with **two** President's Undergraduate Research Awards (PURA). – The student was awarded with the Outstanding Undergraduate Research (UROP) Researcher Award. – Completed an internship in Ultra-Safe Inc.
Coral Kazaroff	– The student was awarded with the President's Undergraduate Research Awards (PURA).
Ethan Grey	– The student was awarded with the President's Undergraduate Research Awards (PURA).
Andrew Johnson	– M&C2017 Best Paper Award (3rd place) for outstanding scientific research and excellent paper presentation.



American Nuclear Society
555 N. Kensington Ave.
La Grange Park, IL 60526
708-352-6611

December 10, 2019

Dr. Dan Kotlyar
Assistant Professor
Georgia Institute of Technology
Woodruff School of Engineering
225 State ST NW
Boggs Bldg, 3-73
Atlanta GA 30332-0405

Dear Dr. Kotlyar:

Congratulations on being selected as a recipient of an ANS NEED Committee's George A Ferguson Motivational Grant. The purpose for the Ferguson grant is to enhance outreach to culturally and economically disadvantaged kindergarten through high school students in the United States.

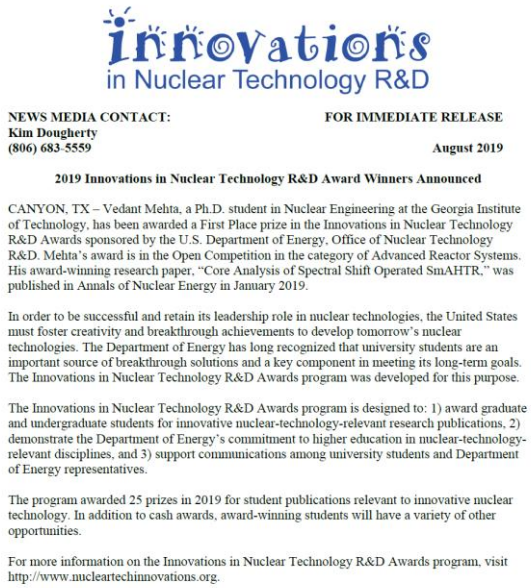
The NEED Committee has awarded the ANS Georgia Institute of Technology Student Section $700 to support the section's development of a Cloud Chamber Demonstration. Grant funds may be used to purchase the required equipment listed in your application:

- Aquarium
- Felt fabric
- Styrofoam cooler, dry ice pellets (as needed)
- Isopropyl alcohol

All grant recipients must complete the project within 12 months after an award is granted, and a program report must be submitted to the NEED Committee at need@ans.org within two months after completion. We ask that you send us photos and a diagram of how the cloud chamber was built so that it can be shared with other sections.

Sincerely,

Julie Ezold
Julie G. Ezold
Chair, NEED Committee



innovations in Nuclear Technology R&D

NEWS MEDIA CONTACT:
Kim Dougherty
(806) 683-5559

FOR IMMEDIATE RELEASE
August 2019

2019 Innovations in Nuclear Technology R&D Award Winners Announced

CANYON, TX – Vedant Mehta, a Ph.D. student in Nuclear Engineering at the Georgia Institute of Technology, has been awarded a First Place prize in the Innovations in Nuclear Technology R&D Awards sponsored by the U.S. Department of Energy, Office of Nuclear Technology R&D. Mehta's award is in the Open Competition in the category of Advanced Reactor Systems. His award-winning research paper, "Core Analysis of Spectral Shift Operated SmAHTR," was published in Annals of Nuclear Energy in January 2019.

In order to be successful and retain its leadership role in nuclear technologies, the United States must foster creativity and breakthrough achievements to develop tomorrow's nuclear technologies. The Department of Energy has long recognized that university students are an important source of breakthrough solutions and a key component in meeting its long-term goals. The Innovations in Nuclear Technology R&D Awards program was developed for this purpose.

The Innovations in Nuclear Technology R&D Awards program is designed to: 1) award graduate and undergraduate students for innovative nuclear-technology-relevant research publications, 2) demonstrate the Department of Energy's commitment to higher education in nuclear-technology-relevant disciplines, and 3) support communications among university students and Department of Energy representatives.

The program awarded 25 prizes in 2019 for student publications relevant to innovative nuclear technology. In addition to cash awards, award-winning students will have a variety of other opportunities.

For more information on the Innovations in Nuclear Technology R&D Awards program, visit http://www.nuclearetechinnovations.org.

Impact on students' lives:

My research is tightly related to on-going activities at national laboratories and in the nuclear industry. Therefore, I encourage and assist undergraduate and graduate students to get into the national labs and key positions within the industry. My students spend summer months at top industry institutions and national laboratories, which allows them to facilitate and expand research relations with: TerraPower Company (A. Johnson, 2017), Ultra Safe, Inc. (A. Denig, 2018), NASA MSFC (T. Gates, 2018), Oak Ridge National Laboratory (N. Kaffezakis, 2018), and Sandia National Laboratory (V. Mehta, 2018). In addition, I have established an excellent international network, and recently a Master's student from my group spent a year as an intern in the International Atomic Energy Agency. This up-coming summer my student should be spending her summer in a student program at Helmholtz-Zentrum Dresden-Rossendorf in Germany. I should probably mention that in the last 3.5 years in Tech, I have always complied with students' requests, such as various course adjustments/activities, seminar invitations, and recommendation letters. As a matter of fact, I have written more than 30 recommendation letters during my time in Tech. I believe that most, if not all, of these letters resulted in the students getting the position of interest, and I strongly believe that my letters had some contribution.

Service:

Outside the university I am engaged with students from high-schools in nuclear related projects. For example, recently I had the pleasure to mentor a student from a Commonwealth Governor's School (CGS) student for her senior culminating project on nuclear waste management. I am also the American Nuclear Society Advisor in Georgia Institute of Technology. Last year, for example, we have organized a science fair for elementary-level students and taught them on the basic principles of radioactivity through interactive exercises.

Good citizenship:

The ***door to my office is always open*** and the students are aware and do not hesitate to come and talk to me about any problem they might have. Recently, I had two incidents where students struggled academically due to personal affairs. They came to my office and talked about their challenges and about possible ways to solve these. Both students were already assisted by the university, so I had little to do but I have listened and made sure they can approach to me anytime. I did offer them additional time slots for one-on-one tutoring sessions to help them understand the material covered in class and the home-assignments/projects. I have also provided them with detailed lecture notes and my own commentary. I want to emphasize that I strongly promote diversity, which could be clearly seen in my own research group.

Concluding remarks:

I have the privilege to shape and teach the new generation of nuclear engineers. I find teaching, educating, mentoring, and supervising activities to be fulfilling and rewarding and hope to continue to transfer skills, knowledge, and passion as enthusiastically as I do this now.

Dan Kotlyar

Georgia Institute of Technology

Dr. Bojan Petrovic, Professor
Nuclear and Radiological Engineering Program

Atlanta, 02/24/2020

To: **Award Committee**
Subject: **Letter of Support for Dan Kotlyar Nomination for CTL/BP Junior Faculty Teaching Excellence Award**

It is my pleasure to provide this letter of recommendation enthusiastically supporting nomination of Dan Kotlyar for CTL/BP Junior Faculty Teaching Excellence Award.

I first interacted with Dan when he was a team member from the University of Cambridge, UK, participating on a large DOE-funded international project, and was impressed with his research attitude. A few years later, during his job interview visit to GT, I attended his class lecture. The lecture was very well organized and very clear, still, delivered in a more traditional format. Since he joined Georgia Tech, about three and a half years ago, I have observed a steady and significant further advances in his teaching, both in quality as well as in expanded and novel delivery methods. His students, essentially unanimously, share extremely positive opinion of his classes, teaching quality and teaching style. I had opportunity to attend a few of his classes, and observe how he engages the students, uses a range of teaching methods from traditional white-board derivation, to use of modern simulation tools, to direct interaction with the students, and that is reflected in the knowledge imparted on the students that took his classes. Since I teach NRE senior design, I believe I am in a good position to assess the knowledge that NRE students acquire during their undergraduate study.

Since joining Georgia Tech, Dan has consistently been willing and eager to contribute to teaching beyond his formal assignments. For example, he has been contributing to the NRE senior design class by advising a team. Again, students on his team uniformly provide the highest evaluation of his qualities and effectiveness as an educator and advisor.

Dan will be a deserving recipient of the Junior Faculty Teaching Excellence Award, and I am pleased to fully and without any reservation support his nomination.

Sincerely,

Bojan Petrovic

Dr. Bojan Petrovic, Professor
Nuclear and Radiological Engineering
Georgia Institute of technology
Atlanta, GA 30332-0745
Bojan.Petrovic@gatech.edu
Phone: 404-894-8173

Dear Members of the Selection Committee:

I previously wrote on Dr. Martin Mourigal's (2019 award winner) nomination packet, commenting on how he is a fantastic and motivational lecturer. Dr. Kotlyar in every way lives up to, and possibly exceeds the standards that Dr. Mourigal gave me for a Georgia Tech lecturer. Where Dr. Mourigal hand wrote notes, then shared them electronically; Dr. Kotlyar has typed guided notes, ensuring that students record important pieces of information while still carrying on a discussion-based lecture style. Dr. Kotlyar's lecture style frequently had me engaged in a call-and-response cadence, where I could focus all my thoughts on thinking through a complex subject without worrying about recording a critical piece of information. He is also very good at explaining complex problems. I have been taught about eigenfunction expansion methods in three different classes now, in Mathematical Methods in Engineering (taught by math department faculty), Dr. Kotlyar's Reactor Physics, and Heat Transfer (taught by mechanical engineering faculty), and Dr. Kotlyar's descriptions and explanations have been by far the clearest. The way that he rationalized orthogonality and inner products to solve the series expansion was immensely helpful.

Dr. Kotlyar is also very active outside of the classroom. He attended an American Nuclear Society research social, where he informed undergraduate students about the types of research being performed in his laboratory for well over an hour, continuing to talk with me about the research done as we walked to his lecture. I only went to office hours a few times, but each time he was actively engaged and new exactly how to handle my confusion and questions. I only went to office hours a few times due to his very fast response times to emails. I don't bring this up lightly, as it seems insignificant, but Dr. Kotlyar typically responds to emails within minutes. I asked him to write a letter of recommendation for me over the holiday break, and he was back to me in under an hour. On holiday break. The dedication he has for his students in always putting them first astounds me.

Sincerely,

Luke Black

Dear Members of the Selection Committee,

I am writing in my capacity as a previous undergraduate researcher in Dr. Kotlyar's Computational Reactor Engineering lab to support his nomination for the CTL/BP Junior Faculty Teaching Excellence Award. I first met Dr. Kotlyar when he was teaching NRE 3208 (Nuclear Reactor Physics 1) for the first time. Everyone in the class quickly learned how passionate Dr. Kotlyar was for his work and for teaching the students. It was very refreshing to see a bright, young face in the Nuclear Engineering department who always had their door open to students should they need help with homework, understanding tough concepts, or general questions regarding academic life and research. In my graduating class, if you surveyed the students about who their favorite teacher was during their undergraduate career, I can guarantee that a majority would have said Dr. Kotlyar. His charisma and the clarity of his teaching made everyone excited to learn about reactor physics.

Coming out of high school, I decided to pursue a B.S. in Nuclear and Radiological Engineering because I was very passionate about the applications of nuclear technology for space, including power generation and propulsion. However, no professor seemed to be very passionate about nuclear technology in space until Dr. Kotlyar came to the university. Toward the end of the semester in which I was taking NRE 3208, Dr. Kotlyar attended a conference in Orlando, Florida which had a session on nuclear thermal propulsion, which happened to be a topic of significant interest to me. From there, a nuclear thermal propulsion research group was formed which blossomed over the next couple years. Because Dr. Kotlyar taught both reactor physics courses (NRE 3208 and NRE 4208), he was constantly integrating what we learned in class into research and vice versa. Soon, enough students had developed an interested in nuclear thermal propulsion through working with Dr. Kotlyar that two senior design groups were formed, amounting to ten students, that focused on designing and optimizing a nuclear thermal propulsion system. Because Nuclear and Radiological Engineering is such a small major, this was nearly one-third of the seniors at the time. In two years, Dr. Kotlyar had created a research group that blossomed, becoming arguably the most popular research topic in the department for undergraduate students.

Over the two years of working with Dr. Kotlyar, I grew very close to him. I learned how to properly conduct research, got the opportunity to present my research at conferences across the country, developed a passion for reactor physics and transport theory, and gained a mentor who I could go to for advice. I know I am not alone when I say that I would consider Dr. Kotlyar a friend of mine now. I definitely would not be where I am today without the relationship I developed and the experience I gained from Dr. Kotlyar. Throughout my undergraduate studies at Georgia Tech, I cannot think of someone more deserving of this award than he.

Andrew Denig
Georgia Institute of Technology, Class of 2018
B.S. Nuclear and Radiological Engineering, Physics Minor

January 29, 2020

Dear Members of the Selection Committee:

It is my pleasure to strongly recommend Dr. Dan Kotlyar for the CTL/BP Junior Faculty Teaching Excellence Award. As an undergraduate at Georgia Tech, I have been privileged to take two of my major classes with Dr. Kotlyar: Reactor Physics I and Reactor Physics II. I believe a dedicated professor such as Dr. Kotlyar perfectly demonstrates the values this award represents.

In spite of the rigorous courses I had already taken at Georgia Tech, I expected reactor physics to be a daunting subject. I was surprised to find a warm and welcoming instructor with the ability and desire to present complicated information in a way that was straightforward to his students. Dr. Kotlyar was able to structure the class in a way that retained the academic vigor of the subject material while making assignments and projects manageable for students. He manages to take something as complex as reactor physics and break it down in a way that makes his students feel confident they can perform the tasks handed to them.

For many students, including myself, material is much easier to retain when they can practice it themselves. Dr. Kotlyar strives to invent new ways to effectively teach students. It is obvious he spends an ample amount of time creating lecture notes and workshops to help his students. I found that instead of creating a traditional passive classroom environment, Dr. Kotlyar chose to engage students by intuitively adding hands on learning in his teaching practices. He led in class sessions where we would work on difficult coding problems, so we could get instantaneous feedback. This time and dedication he put towards the class enhanced my educational experience at Georgia Tech. In addition to breaking down subject material for students, he also develops self-confidence in students by encouraging them to always answer questions in class, even if they are uncertain. Dr. Kotlyar would never criticize a student for an incorrect answer. Instead, he helps guide them to the correct answer. Throughout both semesters of reactor physics, he consistently asked for feedback from students so he could adjust his teaching style to suit the students who were in his class that semester. His desire to help students extends beyond lectures as well. Dr. Kotlyar always makes himself available for guidance and support on anything a student could need assistance with.

Another commendable quality of Dr. Kotlyar is his devotion to education. Not only does he spend much of his time on campus with students, but he also takes the time to venture out into the community. Dr. Kotlyar is the faculty advisor to the Georgia Tech student section of the American Nuclear Society which encourages students to take advantage of educational and career opportunities. He has also collaborated with local schools to organize meetings in which students can go to local classrooms and teach young students about nuclear power. I had the opportunity to attend a family science night at a local elementary school that Dr. Kotlyar coordinated for the GT ANS to attend.

Dr. Kotlyar deserves this award. His commitment to students and to excellence in academics places him above and beyond other professors at Georgia Tech. He inspires me to learn more and to use my education to make an impact on the community around me. I hope Dr. Kotlyar is recognized for his efforts. I am certain that his future students appreciate having him as a professor as much as I have.

Most Sincerely,

Victoria Irvin
4th Year Undergraduate, NRE
Georgia Institute of Technology