



### Dynamic Duo Feature Story: Adelmar DoCanto and Dr. Thomas Kling

Adelmar DoCanto is a senior physics major who moved from Cape Verde to Boston five years ago where he attended Jeremiah E. Burke High School. His research project entitled "Can Weak Gravitational Lensing Determine Matter Halo Fall-Off?" looks specifically at the ability of current and future telescopes to constrain the matter density truncation mechanism of large clusters of galaxies. He explains, "I have been investigating these abilities by performing a series of weak gravitational lensing simulations." Gravitational lensing is key to finding large clusters of galaxies.

His mentor, Dr. Thomas Kling, Associate Professor of the Physics Department for eight years at BSU, discusses the significance of Adelmar's research: "Clusters of galaxies are important in astrophysics--how many big ones there are, how they formed, what they looked like are all important clues in unraveling the mysteries around how the universe formed and evolved. Adelmar's work was designed to investigate a mystery about these clusters--namely, our models for them predict that each cluster should have an infinite mass, which we know is wrong." He explains further, "So can gravitational lensing constrain the mass of the clusters? Adelmar found that in the very far future this might be possible, but that current technology cannot do it."

Adelmar reflects on his summer research experience, saying, "This opportunity to work in direct modern research has provided me with hands-on experience that reflects what it's like to be a graduate physics student and researcher. I know for certain that this experience will be crucial as I make my graduate school plans and begin my career as a physicist." Adelmar presented his research findings at the 2011 Summer Research Symposium in August.

Dynamic-TRIO Feature Story: Jennifer Ashley and Drs. Pamela Russell and Tom Wu



Jennifer Ashley is an Athletic Training major originally from Columbus, Indiana. Her research project entitled "Feasibility of a Bike Share Program at BSU" looks at the viability of bike sharing as a form of alternative transportation on and around the BSU campus. Part of her methodology included traveling to other local campuses that already use alternative modes of transportation. There, she conducted interviews to gather information that would aid in her creation of various models that could be applied to the BSU campus. She also created a survey that was disseminated on the BSU campus. Her

findings? "It's definitely possible," she reports. "Ninety-percent of the students surveyed want access to bikes for usage [around campus]."



Jennifer was mentored by two BSU faculty members, Drs. Pamela Russell and Tom Wu, both of the Movement Arts, Health Promotion and Leisure Studies Department. As an avid bicyclist herself, Dr. Russell was enthusiastic about the project and fully supportive of a bike share program on campus. Dr. Tom Wu elaborates on the importance of Jen's research: "This project has a significant impact to us because it can reduce the CO<sub>2</sub> pollution and promote physical activity at the same time." Dr. Wu's own research interests deal with sports biomechanics and tie in nicely with Jen's

research. He adds, "If in the future we are able to implement a bike sharing program at BSU and we have many faculty members and students participating in the program, we can then begin to evaluate people's mechanics on riding a bike. Perhaps we can then educate people on how to ride a bike more efficiently, and even attempt to design a bike that is more ergonomically-friendly." Jennifer presented her research at the 2011 ATP Summer Symposium at BSU.



## Dynamic-Duo Feature Story: Katherine Saucier and Dr. Elizabeth Spievak



Have you ever wondered why left-leaning Americans think Jon Stewart's "The Daily Show" is hilarious, while people who lean right are more amused by Glenn Beck? If so, be sure to spend some time with Katherine (Kat) Saucier, a BSU senior Psychology major with a History minor from Middleboro, MA . Kat's ATP summer research project, "All Kidding Aside: The Serious Business of Humor in Politics," studies which kinds of political comedy are considered funny by people who identify themselves as liberals, conservatives, or somewhere in between. The research brings

together Kat's interests in politics and psychology, as she examines how humor both reflects and initiates individual biases. Her work focuses on the biases and differences in opinion that affect decision-making, particularly with regard to what is funny to which audiences.

Kat's research not only illuminates how contemporary political leanings may dispose us toward particular forms of entertainment; it also furthers the work of BSU's Attention and Decision-Making Psychology Lab. Kat explains, "The findings from this research will inform the direction of forthcoming studies run in the Psychology Research Lab, the results of which will be presented at conferences in the future."

Kat's mentor, Dr. Elizabeth Spievak, Assistant Professor of the Psychology Department at BSU for seven years, explains the significance of Kat's research: "Kat's topic is particularly relevant as the chasm between parties widens and as the line between journalism and entertainment narrows." Dr. Spievak says that Kat's research methods are "unique, in that she measured self-reported endorsement of politically charged humor and media preferences to demonstrate how bias may be recursive."

Kat says her summer research experience allowed her to engage in academically engaging conversations with other students and with faculty. "Conversing with my fellow ATP students, sharing their passion and genuine excitement in their research and studies as they progressed, was exciting." She expresses deep appreciation for the Adrian Tinsley Program (ATP) for undergraduate research, which provided "the opportunity to pursue an area of study that is not just important to me personally, but is of great consequence to the academic community at large."

### DYNAMIC DUO: Saide Ranero and Dr. Lee Torda



Saide Ranero is a junior English major with a Writing concentration who attended Jbeil High School in Byblos, Lebanon. Her research project, entitled "Reading and Writing Women of the Middle East: A Story of War and Recovery," focuses on young adult Lebanese who came of age during the 15-year Lebanese Civil War (mid-1970s-1991) and had to contend with its political and social repercussions. It also addresses the struggle of Christians living with the cultural influences of Islam. The end product of Saide's summer research is a creative piece of fiction inspired by her own experiences. She explains, "I am working on writing a novel that gives a voice to the young generation that survived the Lebanese Civil War...To better understand the context I am writing out of, this project required me to analyze the works of other women writers in the Middle East, to read literary criticism of those writers, and research the history of the war."

Her mentor, Dr. Lee Torda, Assistant Professor of the English Department, explains the significance of Saide's research: "Saide's story offers the world something new and important—a way for Westerners and English Speakers to understand, more specifically and thoughtfully, one part of what we too often lump together as 'conflict in the Middle East'. As Saide's mentor, I think a lot about how to help her learn the craft of creative writing—that love of language, that verbal play, that deftness with theme, plot, character, voice—that really marks exceptional writing." Dr. Torda will be presenting at the Conference on College Composition and Communication (CCCC) about how Undergraduate Research and Composition programming share similar values and could help each other achieve their respective goals by working together.



Saide plans to use her creative-writing project as the foundation for her honor thesis.

## DYNAMIC DUO: Diana Demont and Dr. Cindy King-Frode



Diana DeMont, a senior Social Work major from West Springfield, MA, has effectively brought together her academic discipline, community service, career plans, and commitment to social justice in an inspiring undergraduate research project, "Overcoming Educational Disadvantage: Shelter Initiatives for Homeless Children." Her research focuses on homeless children in Massachusetts and the academic disadvantages they encounter when their families lack secure housing. Her work as a volunteer in homeless shelter tutoring programs lit the spark for an academic research study of the needs of school-age children living in shelters. She received an ATP research grant and spent ten weeks last summer interviewing shelter staff members and gathering information about several family shelters across the state. Her data show the educational obstacles that homeless children encounter and make clear the need for academic services at the family shelters. Diana says, "I greatly enjoyed interacting with the staff who exuded great passion and care for their work with homeless children." She hopes that the results of her research will support funding for shelter services and staff and raise awareness about the need for shelter volunteers.



Diana's mentor, Dr. Lucinda King-Frode, an Associate Professor of Social Work who has been on the BSU faculty for 18 years, notes that Diana's research is connected in significant ways to her commitments to social justice and a career in social work: "Diana has an abiding interest in the homeless and in services needed to support children therein. Knowledge of how shelters support the learning needs of these disadvantaged children, beyond what the school does, can help providers strengthen services and thereby support these kids." Dr. King-Frode has mentored three other ATP summer grant students and considers the program "a wonderful opportunity for students." The success of ATP students has prompted Dr. King-Frode and her colleagues in the School of Social Work to identify and encourage Social Work majors early in their academic careers to pursue research opportunities at BSU.

Diana says her summer research was "a wonderful experience!" and is grateful to BSU for the opportunity: "I am incredibly fortunate to attend a university that is so dedicated to the academic success of its students and that is supportive of my interests in research and social justice."

Diana is interning this semester at a middle school in Brockton, continuing her learning about social work in educational settings.