

# NSF HSI National STEM Resource Hub

## DECEMBER NEWSLETTER



## DECEMBER IS STAFF APPRECIATION MONTH

The NSF HSI National STEM Resource Hub comprises a partnership between New Mexico State University, Dona Ana Community College, and California State University Northridge. The mission of the Hub is to increase institutional capacity at HSIs for improving matriculation and increasing graduation rates of students in STEM. The Hub facilitates a myriad of trainings and provides diverse resources to support faculty and administrators for successfully achieving this goal, including robust training for grant writing; resources for multicultural awareness and STEM pedagogy; and a platform for networking with others throughout the country. A team of Principal Investigators and Co-Principal Investigators lead the Hub and key personnel, staff, and graduate students make substantial contributions to the Hub's daily operations. This newsletter features the incredible NSF HSI National STEM Resource Hub staff and students.

While searching for a famous quote that captures the appreciation and significance of every individual on this team and their contributions to the Hub's success, I found many that spoke to

the Hub's success, I found many that spoke to elements of this team, but none that quite captured just how impactful, important, and committed this team is to the Hub's success. As you meet our team through this feature, I hope that you too will appreciate the calling every one of our team members has for advancing diversification of the STEM enterprise; the unwavering commitment to providing and creating robust resources that are easily accessible by the community of faculty and administrators we serve to achieve this; and the personal pledge to commission equitable access to STEM for every student across the country whose curiosity and intrigue guides their search for knowledge.

## FEATURED STAFF

### CELINA MORALES



Celina Morales earned her undergraduate degree in Public Health and Biology and is currently a Master of Public Health Candidate in Applied Epidemiology at California State University, Northridge. She is a MHIRT scholar, RISE scholar, and

scholar and her research interests include nutrition, violence, and sociocultural stressors among minority and immigrant populations. She plans to obtain her PhD in global health and as a future educator she is committed to breaking barriers to academic equity and success.

**What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission?**

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The various team efforts to eliminate barriers to STEM student success at HSIs inspires me to advance the HUB's mission. The interdisciplinary team dynamics and efforts are key to advancing institutional capacity at HSIs.

**How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?**

The HUB has provided me with many opportunities to learn and collaborate with others from various disciplines. My role has allowed me to grow as a professional and develop skills that make me a better researcher.

**Career-wise, how do you define success for yourself?**

Success would be a position in academia with the opportunity to mentor students. My success as a student in higher education has been largely due to mentors and I look forward to paying it forward.

**If you were to ask your family what they are most proud of regarding your career, what would they say?**

They would likely say by shining light on issues of equity that affect diverse populations, but do not always get the attention or monetary resources needed.

### SHANNON RODRIGUEZ

Shannon Rodriguez graduated with university honors from New Mexico State University with a Bachelors of Arts Degree in Philosophy. As an undergraduate she was selected for a Congressional Hispanic Caucus



Her areas of interest are ethics, social justice, immigration and public policy. Post-graduation, Shannon has worked in the New Mexico State Legislature and has been accepted for a Master of Science in Migration Studies at the University of Oxford where she hopes to start in the fall of 2021.

**What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission? ‘**

Hispanic Serving Institution’ is a designation that often lacks real intent to serve Hispanics, and we are trying to do something to change that. Moreover, I get to work in something for the greater good. I would have loved to step into a classroom where as a POC I would have been able to see myself in the STEM curricula.

**How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?**

I am given a lot of independence to carry out projects, which means a great responsibility to deliver a final product, but at the same time, this has helped me gain confidence in the work that I put forward. Additionally, I am often given the opportunity to pursue projects where I learn new skills that will only help me in the future. Lastly, I get to work and learn from an amazing group of leaders that inspire me to become a great leader.

**Career-wise, how do you define success for yourself?**

For me success means using your privilege (whatever that looks like) to have a meaningful impact for the greater good, while paving the way for others to be able to do the same.

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If you were to ask your family what they are most proud of regarding your career, what would they say?

That I have decided to use my privilege and my hardships to affect the inhumane immigration policies of this country.

### DANIEL ALEJANDRO GONZALEZ



Daniel is a doctoral student and ethnographic filmmaker at New Mexico State University. Academic works include an edited volume on multicultural children's literature, book chapter on

identity and consciousness in pedagogy, and research on social movements in Latino communities. Daniel has consulted with NASA to improve collaborations with Latino communities and NATO on institutional and intercultural conflict. His research examines ethnic and cultural identity in teacher development, pedagogy, critical studies, visual arts production and representation, and digital communities of practice. He serves on the editorial board of the Bilingual Review/Revista Bilingüe and has been a Senior Editor on the Harvard Journal of Hispanic Policy. He also co-produced film series on Art, STEM, and Identity.

Links:

Visual Artist: Adriana Garcia on Identity, Borders, and STEM in art.

<https://vimeo.com/109824154>

Dr. Marina Suarez on her path from her grandmother's backyard geology to a career in academia.

<https://vimeo.com/106482134>

What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission?

An effective and inclusive STEM pedagogy is the most exciting part of the mission that I am working on. There are so many facets to work with, from digital labs to making connections, to practices and assessments, all existing across disciplines, content, and complex spaces. Every day, I am excited to blend pieces of community, critical, and creative pedagogies with the STEM domain, especially during this massive move to digital learning.

How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?

I work best and always benefit from collaborations, so working with the Hub team has been fantastic. I'm learning new ways of approaching content and communicating across disciplines. Also, connecting community and STEM domains to gender and intersectional identities has been very beneficial to my research and progression in scholarship and pedagogy.

Career-wise, how do you define success for yourself?

Creating effective and insightful work. It's a challenge to speak with and work with mixed groups but that is one of my priorities, maybe a goal. Success for me exists in implementing effective teaching, contributing to inclusive projects, and making these accessible.

If you were to ask your family what they are most proud of regarding your career, what would they say?

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If my mother were alive, she'd be curious and fascinated about how STEM speaks to identities and feminisms. I think my extended family would say that I've gone to places, physical and conceptual, that they have not. I think they are both proud and anxious about that.

### NICOLAS MENDEZ

Nicolas Mendez is a Master's student in Industrial Engineering. He is from Bogota, Colombia, and completed his Bachelor's degree at La Salle University in 2018.



During his professional career, he has worked in the pharmaceutical industry performing quality control, process analysis, and cost evaluations. He is a member of the Recruitment Team for the Department of Industrial Engineering at New Mexico State University, working with middle and high school students to pursue a career in engineering.

Links to Newsletter collaborations

- [A helpful tool for Researchers and Project Investigators interested in COVID-19](#)
- [Tips for Improving Student Focus During the Pandemic](#)
- [Keeping academically active during Summer and Covid-19](#)
- [Quality Management Systems helpful during COVID 19](#)
- [Brace Yourselves, Classes are coming!](#)

### What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission?

One of the most relevant elements that motivate me and inspire me to contribute to this team is the determination of all the Hub members to increase and improve student success in the US. How they prepare and communicate their knowledge, ideas, experience, and advice on how to become a better grant writer and professional is one of the reasons that I like being part of the NSF HSI National STEM Resource Hub.

### How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?

As an Industrial Engineer, one of the most important features that we must possess is teamwork. In this team, everyone is committed to achieving the objectives of the Hub and with the collaboration between team members, we are reaching the desired results. All of us share their perspectives from diverse backgrounds and cultures that create good strategies and actions that benefit the team and help me to know how to work in a team in the US.

### Career-wise, how do you define success for yourself?

For me success is not related to salary, position, or company; success is enjoying the work that you are doing. It is going to work knowing that your contribution is making the company and the community a little bit better than it was, realizing that with even small actions that any person does, it is one step closer to achieving the goals and the plans that we all have.

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**If you were to ask your family what they are most proud of regarding your career, what would they say?**

I did my bachelor's in Colombia, study for a semester in Argentina and now I'm doing a master's in the US, so I think that they would say my determination of having a broader perspective of how the world works and the knowledge that I've gained during these academic experiences. Also, they could mention overpassing the barriers that I faced and what I have learned from these situations that make me a better person and professional.

### EDMUNDO MEDINA



Edmundo Medina holds a medical degree from the Universidad Autónoma de Ciudad Juárez (UACJ), where he found a passion for understanding different biological mechanisms. After working on the clinical side of medicine

and as a professor for Medical Physiology, Human Physiology and Patient Management courses, he decided to expand his research skills, finishing an M.Sc. Degree in Genomics at UACJ. For his Master's thesis, he directed a project in the characterization of an ion channel in a heterologous expression system where he developed expertise with neural cell culture and whole-cell patch-clamp techniques. Currently, he is a Ph.D. candidate in the Department of Biology at New Mexico State University focused on projects that combine his clinical knowledge with neuroscience connectomics, molecular modeling, and lipid analysis.

**What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission?**

The element that inspires me the most is the mission of providing institutions with resources that will increase student retention in STEM and degree completion. I have seen minorities fall out of STEM because of gatekeeping, microaggressions, misogyny, racism, homophobia, and bullying. These negative past experiences motivate me to do my best work to deliver better resources and information. Sometimes it seems that Hispanic Serving Institutions do not serve enough the Hispanic and Latinx communities. I want to change that.

**How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?**

One of my responsibilities is webinar management and editing. One of the webinars I edited was the Preflight Grantsmanship Certification. I am grateful to have the opportunity to have access to this information. I noticed how vital was grant funding and managing its budget. I'm sure this information will be invaluable to reach my professional goals. Also, this hub allowed me to develop my science communication skills. It gave the platform to write about code-switching in academia and list various DEI organizations.

**Career-wise, how do you define success for yourself?**

I believe that success is a continuous journey. My definition of success today is not the same as it was during my bachelor's; it has slowly but surely changed over time. Sometimes, failure can be a success because there is growth in any adversity with the right mindset.

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First, I try to focus on the present and do the best possible job to achieve my professional goals. Second, I plan for the next three to five years my professional path and do all the steps needed to get the job I want to do. Also, I think it is hard to define success just by your career. I have always felt that it is not success when you have the perfect job, but no one to share it with, including friends and family. Having a strong support net, family not bound by blood, and doing something that I enjoy, is my current definition of success.

**If you were to ask your family what they are most proud of regarding your career, what would they say?**

They would say that they are proud of me for getting out of my comfort zone and shaping myself into a more accurate version of my true potential. For recognizing my talent, abilities, and for acquiring new ones that allow me to evolve in any professional and personal area. To find new ways of navigating situations where I could not win, succeed despite toxic environments, and learning how to deal with difficult people. They are proud of me for trying to reach what I want to accomplish, and finally, they are proud of me every time I look happy doing what I like. Thank you to my families for their help on this question.

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### MARGIE VELA



Margie Vela is a researcher, educator and public servant devoted to diversity, equity and inclusion (DEI) in higher education and STEM. She earned her Ph.D. in Water Science and Management from New Mexico State University (NMSU) in 2019

and served the State of New Mexico in public service as a Regent for the NMSU System from 2017-2019. She served as an intern at the National Science Foundation in 2015 and as a Farmer-to-Farmer USAID volunteer in 2018. Her career in DEI began at Fort Lee Garrison, where she served as Director for the HIRED! Program to prepare dependents of military personnel to enter college or the workforce. Her career in higher education began at a Historically Black University, in 2010, where she implemented a multi-million-dollar program focused on diversifying the STEM enterprise. Currently, Dr. Vela serves as Senior Project Manager for the NSF HSI National STEM Resource Hub working to implement a project aimed to bolster STEM at 539 Hispanic Serving Institutions in grantsmanship, multicultural awareness, institutional capacity building and STEM pedagogy: and facilitating partnerships across institutions and disciplines. Dr. Vela serves the NMSU Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Chapter as founding co-advisor and has served as a national panelist for SACNAS in DEI training as an alumnus of SACNAS Postdoctoral Leadership Institute. She recently earned a Certificate in DEI from Cornell University.

Link to Newsletter Archive:

[https://hsistemhub.org/newsletters\\_open/](https://hsistemhub.org/newsletters_open/)

**What element of the NSF HSI National STEM Resource Hub inspires you the most to advance its mission?**

Equitable access to higher education is at the center of my life's mission. I am a first-generation college graduate and while I was always encouraged to attend college, navigating the system to attend universities I was accepted to was unmanageable for me and my family.

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These missed opportunities for advancing my education as a young student inspire me to establish support mechanisms for those who find themselves in the same position I was in as I graduated high school. The NSF HSI National STEM Resource Hub gives me an avenue for impacting equity and equitable access in higher education through supporting the efforts of researchers across the country who are on the front-line. Creating, enhancing and maintaining mechanisms for fostering interdisciplinary and institutional collaborations, trainings, and resources for those writing proposals and implementing projects that will change the lives of students across the country gives me everything I need to remain committed to the Hub and its mission.

### How has your role with the NSF HSI National STEM Resource Hub contributed to your professional goals?

I have been working on diversity programs in STEM for over 10 years. The Hub has allowed me to utilize the skills I have acquired over the course of my career on a national scale. It has also given me an opportunity to engage in successful remote delivery of impactful trainings and digital resources. My professional goals entail working towards enhancing access to higher education and STEM for students across the country through high level policy work.

### Career-wise, how do you define success for yourself?

My success will be reflected by the pathways I can help build over the course of my career. The metrics I use are matriculation, retention and graduation rates. My work contributes to these rates in various ways on various levels, so these numbers mean a great deal to me.

I also define my professional success through the development of those I mentor and sponsor. In short, my success is defined by the people I help succeed.

### If you were to ask your family what they are most proud of regarding your career, what would they say?

I believe my family would be most proud of my funded project: The Water and People Project. I worked with high school students in experiencing transformation through acquiring running water during the past 5 years. I trained students as socio-environmental water issues and they acted as researchers using photovoice to document their community's relationship with water. The project was impactful and insightful.

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## HSI STEM HUB NEWS

### Grantsmanship Trainings Now Available

Preflight Grantsmanship Certification Series is a training for first-time grant writers as you begin formulating ideas and planning for writing your first grant. [Click Here for More Information](#)

New Resources for STEM Pedagogy – [Click here for more information](#)

Recording for An Overview of the NSF HSI STEM Program Solicitation – [Click here for more information](#)

STEMiversity Podcast hosted by Dr. Monica Torres  
[Click here for more information](#)

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### HSI COMMUNITY NEWS

Access our [community boards](#) to share important opportunities and information with HSI STEM Professionals Network members.

We have an HSI News Archive. You can access information here. Submit your News to [hsistemhubinfo@nmsu.edu](mailto:hsistemhubinfo@nmsu.edu).

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### COLUMN EDITORS

#### **Edmundo Medina, M.S.**

Edmundo Medina holds a medical degree from the Universidad Autónoma de Ciudad Juárez (UACJ), where he found a passion for understanding different biological mechanisms. For his Master's thesis, he directed a project in the characterization of an ion channel in a heterologous expression system where he developed expertise with neural cell culture and whole-cell patch-clamp techniques. Currently, he is a Ph.D. candidate at New Mexico State University, focused on projects that combine his clinical knowledge with muscle cell culture and cannabinoid pathways for the treatment of neuromuscular diseases.

#### **Nicolas Mendez**

Nicolas Mendez is a Master student in Industrial Engineering. He is from Bogota, Colombia and completed his Bachelor's degree at La Salle University in 2018. During his professional career, he has worked in the pharmaceutical industry performing quality control, process analysis and cost evaluations. He is a member of the Recruitment Team for the Department of Industrial Engineering at New Mexico State University, working with middle and high school students to pursue a career in engineering. For his academic program he is working on research composites that will help to reduce waste in industry and re-use of environmental contaminant materials.

#### **Margie Vela, Ph. D.**

Margie Vela is a researcher, educator and public servant devoted to diversity, equity and inclusion (DEI) in higher education and STEM. She earned her Ph.D. in Water Science and Management from New Mexico State University (NMSU) in 2019 and served the State of New Mexico in public service as a Regent for the NMSU System from 2017-2019. She served as an intern at the National Science Foundation in 2015 and as a Farmer-to-Farmer USAID volunteer in 2018. Her career in DEI began at Fort Lee Garrison, where she served as Director for the HIRED! Program to prepare dependents of military personnel to enter college or the workforce. Her career in higher education began at a Historically Black University, in 2010, where she implemented a multi-million-dollar program focused on diversifying the STEM enterprise. Currently, Dr. Vela serves as Senior Project Manager for the NSF HSI National STEM Resource Hub working to implement a project aimed to bolster STEM at 539 Hispanic Serving Institutions in grantsmanship, multicultural awareness, institutional capacity building and STEM pedagogy; and facilitating partnerships across institutions and disciplines. Dr. Vela serves the NMSU Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Chapter as founding co-advisor and has served as a national panelist for SACNAS in DEI training as an alumnus of SACNAS Postdoctoral Leadership Institute. She recently earned a Certificate in DEI from Cornell University.