congratulations
class of 2015

IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY

Thanks to the greatest mother Um Falah<3

Shaymaa Abdulla

Thank you to my parents and my sister for all their support and guidance, and to all my family and friends, for keeping me sane over the past 4 years

Aman Aberra

ASU has given an amazing and irreplaceable experience. My experiences have granted me various priceless opportunities that I am greatly thankful for.

Edward Acquah

I would like to thank my family and friends for their support these last couple of years. I would also like to thank my professors for their guidance.

Matthew Ryan Adame

Thanks mom and dad for all your support! I couldn't have done it without you two! Love you lots!

Anngela Christina Adams

I would like to thank my family for their support throughout my college career. I wouldn't be here without their encouragement.

Raj Ahir

Thank you Mom, Dad, my little Brother and all of my friends for supporting me to come this far.

Mamun Ahmed

Thank you my wonderful wife, Maria.. LOVE YOU!

Bradley Ailor

Thank you to my parents for all of your support but mostly to my wife and sons. Thank you for helping me through.

M. Bryce Albretsen

Dear Family,
I want you to know how much I appreciate all of the time and energy you put into helping me throughout my college career.
I Love You All

Ziyad Alhassnah

AZ is My 1st USA State, and ASU is the one and the only one who I will be admiring the most for my life.

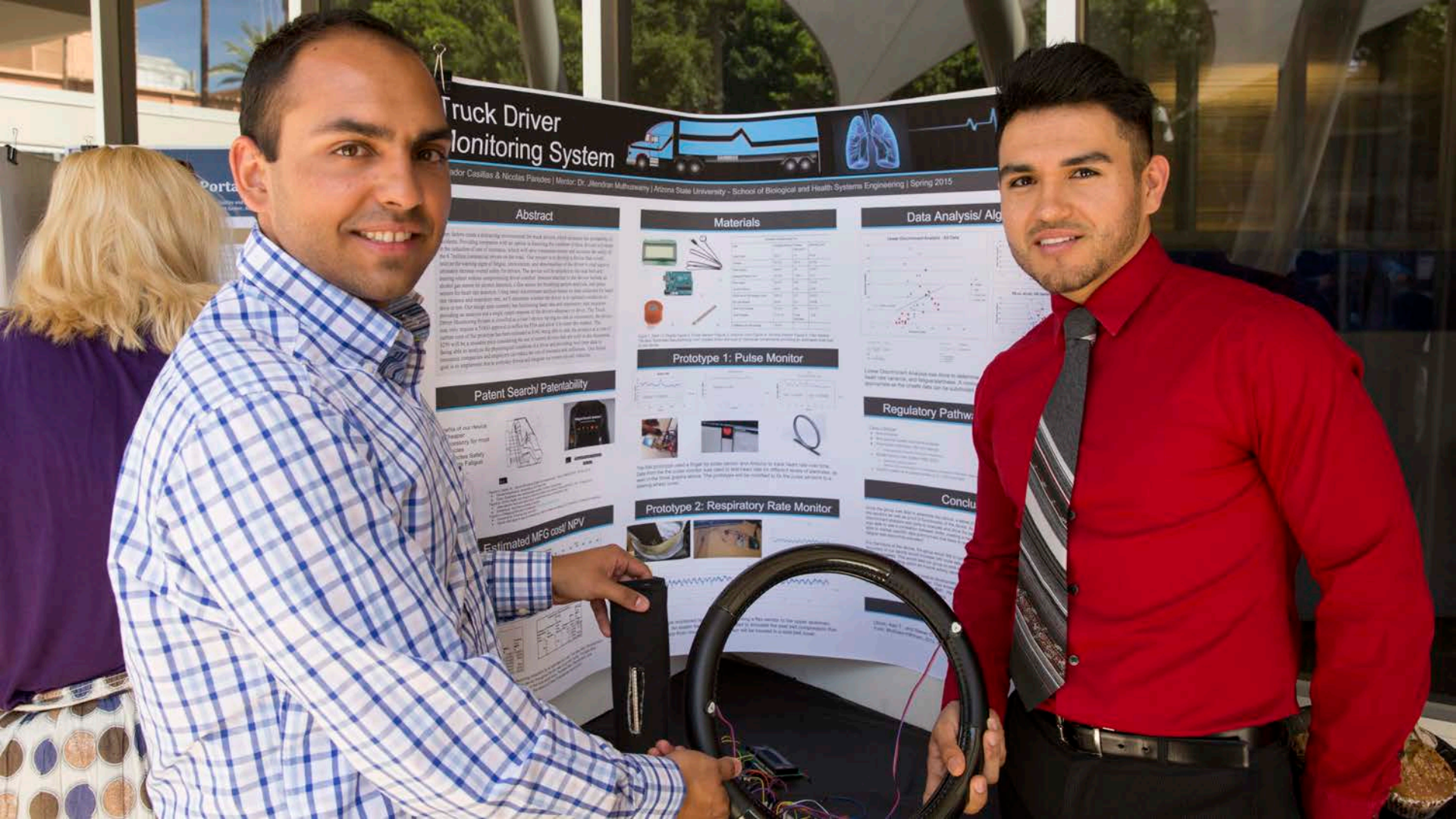
Abdulaziz Ahmed N Alhuwaymil

I have learned so much during my time at ASU and none of it would have been possible if not for my family and friends' support. Love you all!

Jason Kenneth Allen

I want to give a big thanks to my parents for always motivating me to my success.

Sara Almalih


Truck Driver
Monitoring System
Abstract
Materials
Data Analysis/ Alg
Prototype 1: Pulse Monitor
Patent Search/ Patentability
Regulatory Pathw
Prototype 2: Respiratory Rate Monitor
Estimated MFG cost/ NPV
Conclu

I truly could not have made it here today without all of your love and support

Saleh Mutair Almutair

i wouldn't even dream of being here if it wasn't for my beloved family! <3

Abdulaziz Al-Tamimi

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you for everything you've done for us Mom. I love you more than you could ever know! Diego, you're pretty cool too dude. I guess I love you too.

Antonio Alvarado


EXIT
ASU ARIZONA STATE UNIVERSITY
Design
Results

I would like to thank my friends and family for all the love and support I have gotten. I could not have done it without them.

Bailey Ammons

A special thank you to my parents, Mr. & Mrs. Mahdi Al-Ansari. You supported me through thick and thin and I appreciate it!
I love you!!!

Ahmed Mahdi Ansari

Thank you to my mom & dad for supporting me in all my dreams & aspirations & for always believing in me. I love you both!
- Camille Armendariz

Camille Armendariz

Congratulations and Thank You to My Parents. Two kids down, one to go! Thank you for everything you have given us, love, support, and funding ;)

Alexander Arveson


ASU engineering
Sean Howard

Thank You to all my family and friends for the support and motivation to finish my degree, especially my Mom, Dad, and Brother.

Daniel Ascencio

Thank you J.T. Austin, Jacey Austin, Brock Austin, and Melissa for all your love and support! I love you all!

Charles Barry Austin

ASU changed my world by making me realize how vast and diverse it is. Thank you ASU for being the biggest and most diverse college in the U.S.

Shayan Azimi

To the family and friends who endured me during my teenage years, and school years, the biggest thank you!!

Kale Aziz

Thank you Irene, Hunter and Reese for all of your support and understanding during this journey. I couldn't have done it without you. I love you!

Cecil Otto Baird


ASU engineering
Shih-Kang Lin
Mechanical

I'm so lucky to have a supportive family as I pursue higher education. Shout out to my grandparents who made a special effort to be here. Love you all!

Lindsey Baker

Thank you Papa and Mama Carmen y Armando Baldenegro

Armando Baldenegro

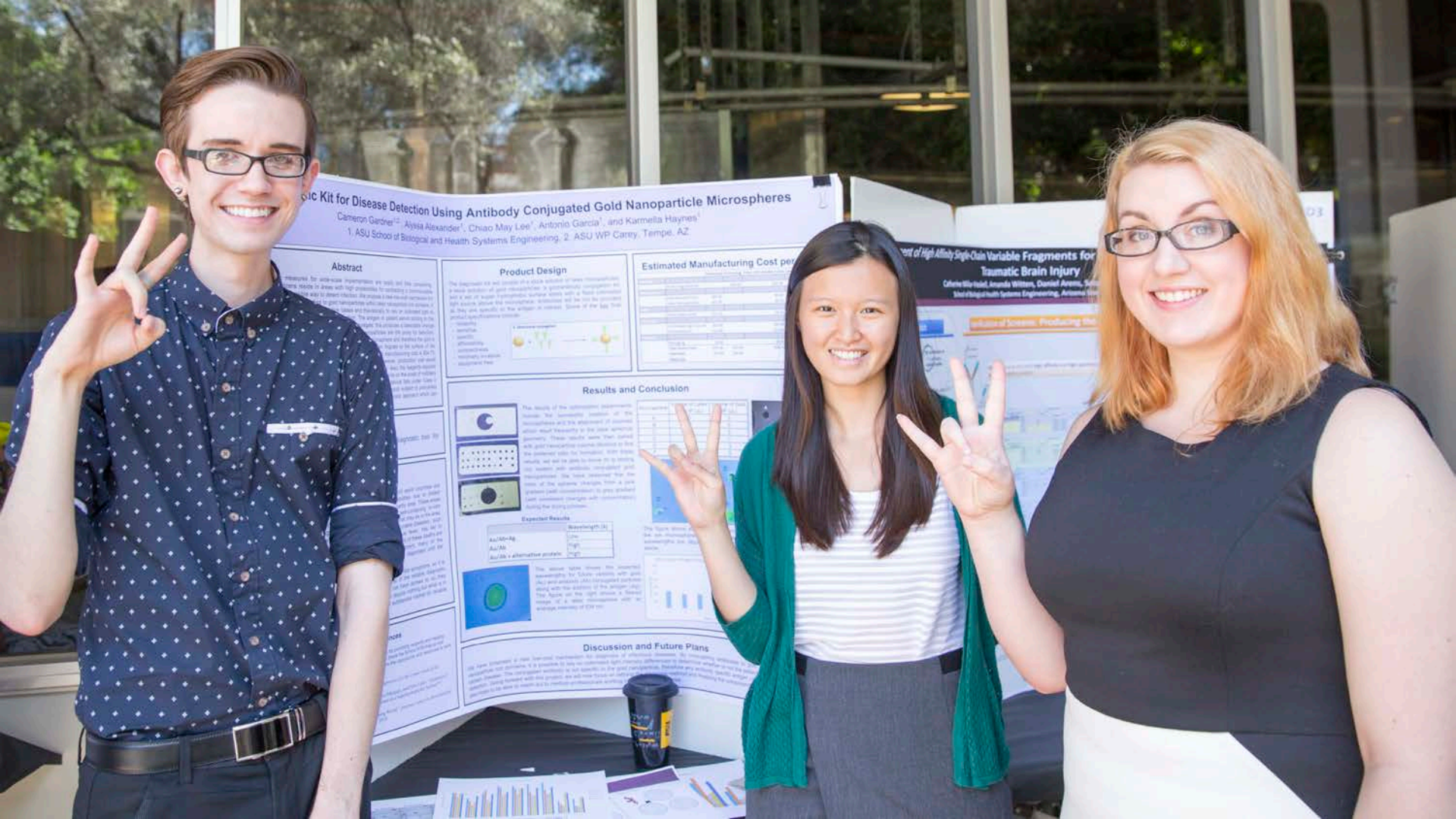
Thank you to all my family and friends for all of the love and support. I love you!

Amy Lynn Baldwin

"It's All About Choices" -Troy Bales

KCCO

Jeffrey Robert Bales


ic Kit for Disease Detection Using Antibody Conjugated Gold Nanoparticle Microspheres
Abstract
Product Design
Estimated Manufacturing Cost per
Results and Conclusion
Discussion and Future Plans
Traumatic Brain Injury

Thank you to all my family and friends. I wouldn't have been able to make it without you all.

Matthew Ryan Banuelos

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

My family and friends for all of their support

Raul Hernandez Barbosa

The light at the end of the tunnel is no longer an on coming train, but rather a whole new world to explore! Thanks for everything.

Bryan Robert Barchey

Gracias por todo el apoyo!
Los quiero mucho!

Jeanette Rosas Barillas

My time spent here at ASU has been an absolutely incredible experience. I owe my success and happiness to the loving support of my friends and family.

Andrew Robert Barkan

I would like to thank my Mom and Dad for supporting me throughout everything. They have been my role models and I could not have asked for more.

Trevor Michael Barker

I would like to thank my family, friends, and colleagues for their kindness and support throughout these past four years at ASU. You're the best.

Sylvia Barnai

Family INSPIRED me.
Friends ENCOURAGED me.
Faith CARRIED me.

Sharon Arlene Bast


Abstract
Research
Samantha Feist

Thanks family, friends for your support throughout all these years. You positive encouragement has meant a lot. Especially my wife Lauren. I love you.

Isaac Adrian Bates

My Bateson Family is the reason I'm here today. I would not have been able to without your infinite love and support.

Amanda Marie Bateson

Thanks for all your support Mom, Dad, Megan, and Jess.

Joshua Peter Befort

My experience:
#PvWest #SigEp
#Puppy #SwitchedMajorTwice
#VictoryLap #ByeASU
#ThanksMom

Timothy Stephen Belda


Built In Self Test for STAR Communica
Applications Include
Wireless Network Towers
Doubles Wireless Capacity
Reduce frequency spectrums needed
Greatly Reduces Complexity
Military Radar and Security
Longer Duration and Accuracy

Couldn't have done it without my family and friends.

Jonathan Scott Bell

Thank you Melissa, Nicole, Gabrianna, Morrigan and Maddison for your patience through this journey! We did it! Go Vols and Go Navy!

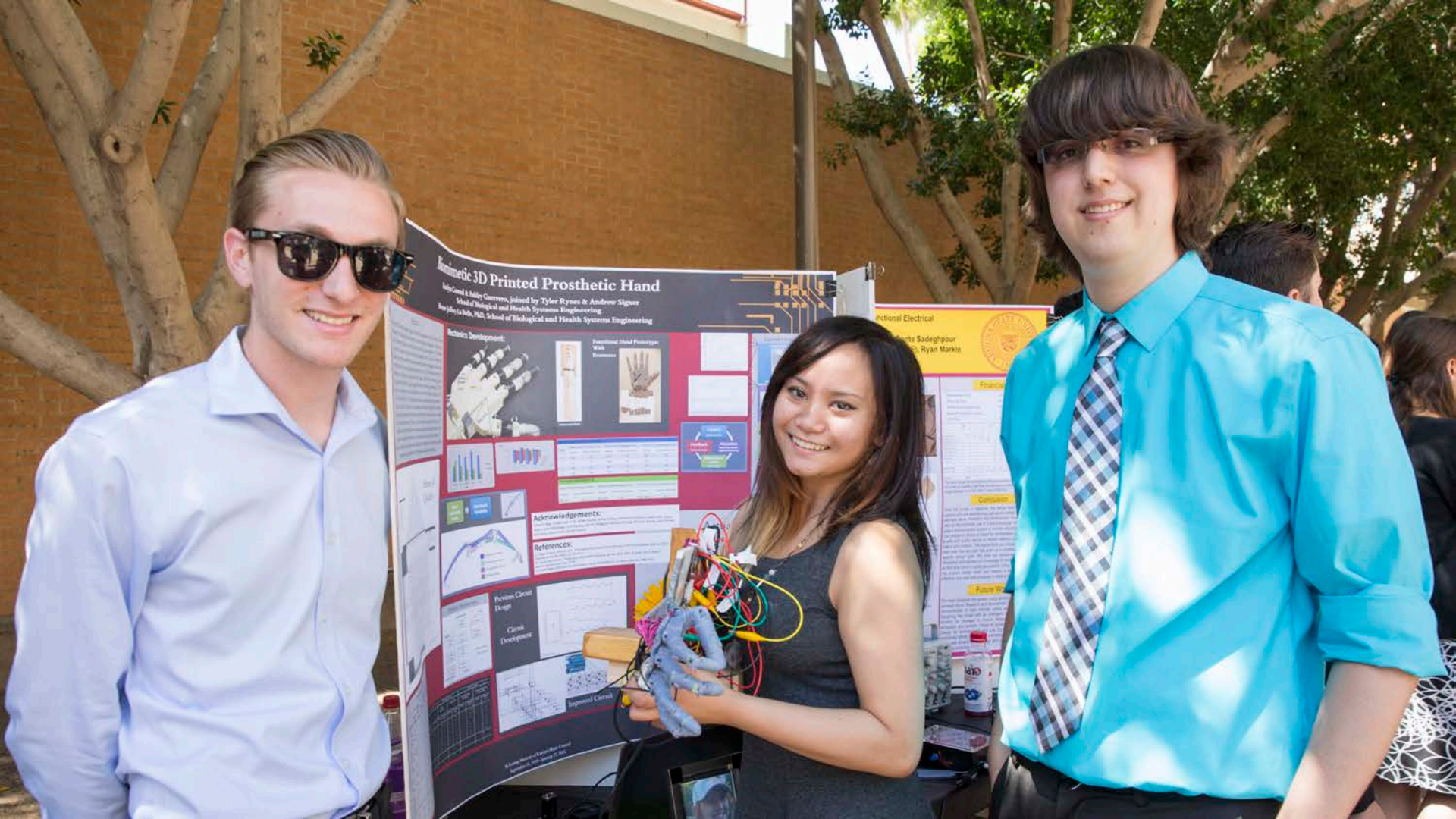
Jeffrey Brian Benson

I credit God's blessing, my family's support, and my mentors' guidance in helping me obtain this goal in my education and success.

Gabriel Rudy Bernal

God Blessed me with an amazing family, I wouldn't be here without them. Thank you for always being there.

Derek Biah


Biomimetic 3D Printed Prosthetic Hand
Mechanics Development:
Acknowledgements:
References:
Circuit Development
Improved Circuit

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

I love you Sarah! I couldn't have done it without you!

Joseph Bihms

Mom and Dad: Thank you for your love and support! I couldn't have done it without you. Andrew: Thank you for being such a great role model! - Kyle

Kyle Robert Binder

Thank you to all my family. You've been so supportive as I have continued my education at ASU. I love you and thank you for coming to see me graduate.

Tanner Jacob Bitz

Thanks for the support during this time frame. I love you very much!!!

Your Hubby

Cecil Ofier Blandon


PICKENS ST

Thanks god to make my dream come true. Also,without my parents support, courage,and faith I will never reach this point. Big thanks to my whole family

Abdulrahman Fareed S Bogari

Thank you to my supportive parents. I could not have done it without you believing in me and cheering me on all the way!

Heather Lynn Borgard

Thank you to everybody who supported me, especially my parents!

Anthony Nicholas Boyd

Thank you Russ for all your support & Mom, Kate, friends, family and co-workers for being my cheerleaders!!

Tina Bradley

Thank you Mom (Debbie), Dad (Bryan), Nana (Sharon), and Catie for your support these last few years. I truly could not have achieved this without you!!

Alexander Bryan Briggs

Thanks Mum!

Matthew Jefferson Briggs

Would like to thank my mentor Dr. Bruce Towe for all of his help throughout the past year. Also I would like to thank Michael Juby and Nathan Deacon.

Cole Truman Brown

Thank you Brown family for enduring this process and believing in me. Thank you Jenny, Wyatt, Mom, Dad, and Shawn. I couldn't have done it without you

Jason William Brown


The Development of Hig
CADmarker
Introductio
1.7 million

Thank you to everyone who helped me get here. I would not be here without you!

Kyle William Brue

Thank You, Mom Qua Cao, Dad Hoa Bui, Wife Kim Ky, and Sons Chase and Brenden Bui. This would not be possible without your love and support.

Hoc Van Bui

Thank You all who have provided, guided, and simply put up with me over the last four years. I greatly appreciate you all!

Sean Buizer

share your victory 

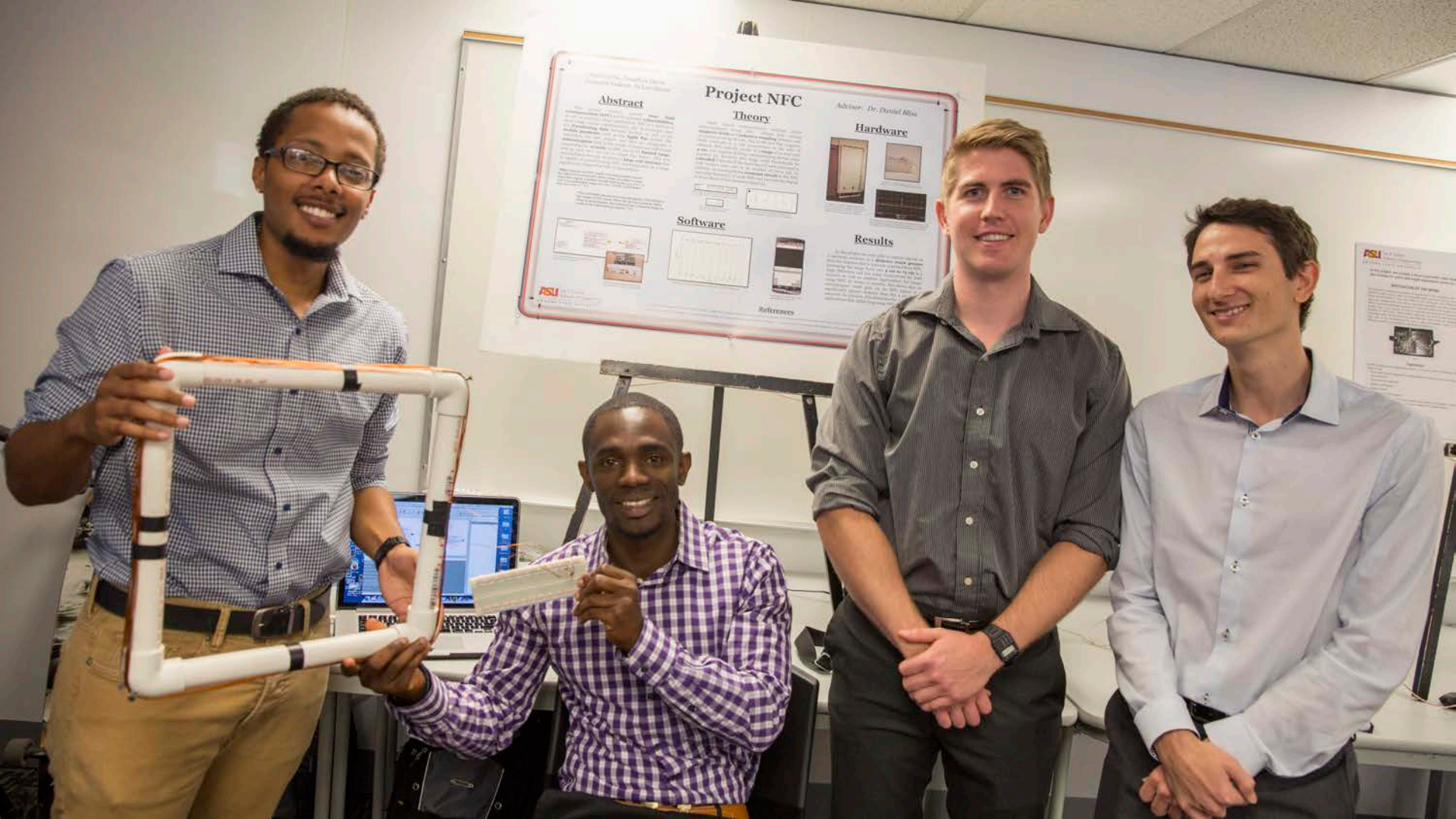
#ASUGrad

#FultonGrad

#ASUengineering

Thanks to my Parents Chris and Teri Burger, my Grandparents Chris and Marie Burger and my wife Rachel for supporting through school.

Joshua Christian Burger


Project NFC
Abstract
Theory
Hardware
Software
Results
References

I couldn't have made it this far without the support of my Family, Friends, and most of all my wife Lindsey! Thank you all!

Ryan Joseph Burke

Thank you Mom & Ash for everything! I wouldn't be were I am today without you guys! I love you both!!

- Love Andrew

Andrew John Burnham

Shout to the Caffie, Barone, and ASU Engineering family for their continued love and support. You all have allowed me to mature and pursue my goals.

Brandon Ayanti Caffie

It was good. Classmates, Hope Christian Church, Navigators, Beautiful Campus. 4 years of experience and growth

Joshua Lee Cantrell

Special thanks to my parents (Orhan & Beyhan) for their support. Tesekkurler

Koray Canturk

Thank you to my family for all of your sacrifice, love, and support. I love you!

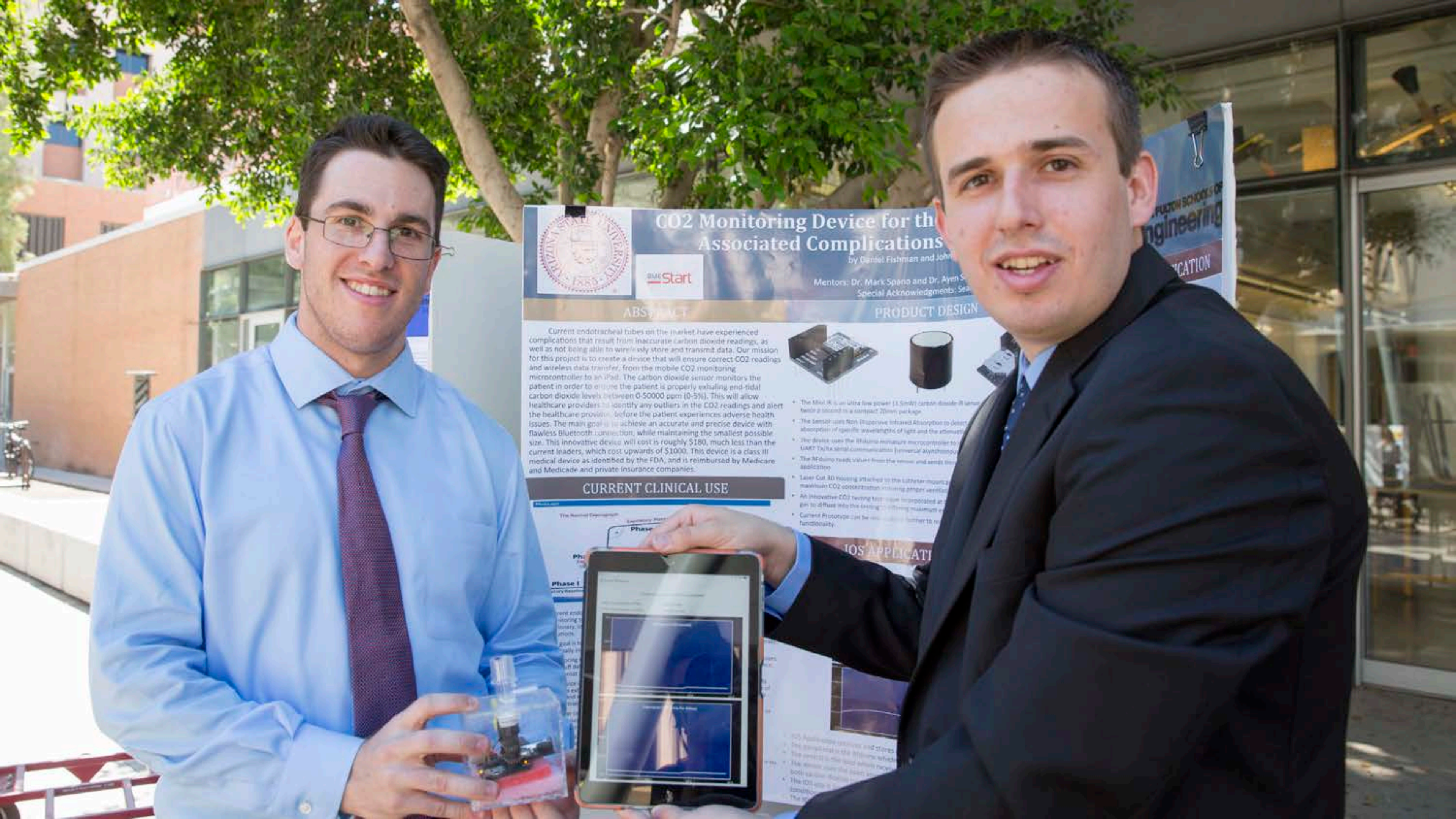
Josiah Edward Carlon

Thank you Redbull and Google for making this possible

Ryan Michael Case

OAK STREET!!! Thanks and love to all my family, friends, and classmates! I feel blessed, WAY UP, I feel blessed!

Parminder Singh Chanda



CO2 Monitoring Device for th
Associated Complications
by Daniel Fishman and John
Mentors: Dr. Mark Spano and Dr. Ayen
Special Acknowledgments:
Engineering
PRODUCT DESIGN
Current endotracheal tubes on the market have experienced complications that result from inaccurate carbon dioxide readings, as well as not being able to wirelessly store and transmit data. Our mission for this project is to create a device that will ensure correct CO2 readings and wireless data transfer, from the mobile CO2 monitoring microcontroller to an iPad. The carbon dioxide sensor monitors the patient in order to ensure the patient is properly exhaling end-tidal carbon dioxide levels between 0-50000 ppm (0-5%). This will allow healthcare providers to identify any outliers in the CO2 readings and alert the healthcare provider before the patient experiences adverse health issues. The main goal is to achieve an accurate and precise device with flawless Bluetooth connection, while maintaining the smallest possible size. This innovative device will cost is roughly $180, much less than the current leaders, which cost upwards of $1000. This device is a class III medical device as identified by the FDA, and is reimbursed by Medicare and Medicade and private insurance companies.
CURRENT CLINICAL USE
IOS APPLICATI

Go Air Devils! Thanks Dr. T, Don, Tyler, Jeffrey, Brandon, Sid, James, Nathan, Colton, Joseph, Morden, Nick, Ben, Brendan, Lee, Ivan, & everyone else!

Eric Chang

I want to thank my family for all the successes and failures to this point and many more in the future.

Jacob Ernest Chavez

Thank you to my wife, mother, step-father and father. Calling out my brothers, sisters and siblings, I don't want to be the only graduate, let's go!!!

Antoine Jordean Chee

Thank you to my beautiful wife Lauren and my kids Genivieve & Luke, I love you! To all of my fellow ChemEs, It's been a real pleasure. We did it!

Brent Clarke Chesley

Hi Mom!

Thank you for your support.

- Robert

Robert Jay Chiang


AIRDEVILS
AIRDEVILS
AIRDEVILS
AIRDEVILS
ARIZONA STATE
1885

Thank you Dave, Maria, Deanna, and Julia for always being there for me and being the best family in the world. I couldn't have done it without you.

Robert David Chittum

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you to my mom and dad for raising me right. And a big thanks to all my family and friends; without your love I wouldn't be where I am today.

Matthew Ryan Christen

To my wife Summer and my daughter Leah: Thank you for standing by me and believing in me. It wasn't always easy but we did it!

Charles Brock Christiansen


Spatiotemporal Modeli
Abstract
ckground
Methods
jugated Amikabeads for Pl
Importance of La
Synthesis

Thank you Mom and Dad for all of your support and help over the last few years!

Sarah Elizabeth Churchwell

Muchas gracias familia!
Agradezco su apoyo

Javier Alfonso Corral Clayton

Thank you to the Conaway and Chance family for all of your support! And welcoming our baby girl to this world!

Ian Taylor Conaway

Your support through this endeavor was important. I would not be here without it.

Genaro Contreras

I am grateful for the love and support from my family. Love you all!

Samantha Lynn Cooper

Thank you for the education and the opportunity arising from it, I appreciate all the learning I have done over the last four and a half years.

Ryan Joseph Copeland

Learning about computer code taught us that a compiler's favorite word is: 'No'

Joseph Franco Cosme-Bandola

Thanks for all the love and support over the years! We made it!

Alphonso Sean Crawford

To my Dad, Mom, and everyone else that has supported me: thank you so much for believing in me! My journey is just beginning.

Kyle Benjamin Crosner


Moryssa

Mom & Dad, thank you. Being here, is a dream come true. I am truly blessed in having a wonderful family who supports me in the pursuit of my dreams.

Erik Gabriel Rios Cruz

Thank you Andrew, Mom and Dad!

Jonathan Daniel Davis

Thank you Mom and Dad for giving me this amazing opportunity. To my best friends Stephen Renee Marie & Alex thank you for making these the best 4 years

Brittany Debes

Thanks to my family for understanding what this meant for me and excusing me from countless family time to get this degree! I Love You!

Adam Jason Degner


Sensing Current in Power
nted Magnetic Sensor

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thanks to my family and friends for support and love. Dad you are my hero.
-Maddy.

Madhure C. Desarda

Exceptionally appreciative for support from my family and friends throughout my education and especially thankful to my parents Rosa and Sergio Diaz.

Jose Filiberto Diaz

I would like to thank you all for the support of what I am doing, the long hours of work, and school, and training. I love you all so much!

Zachary Lee Dieman


Adsorption Capacity and Kinetics of ZIF 68
Jacob Langley, Chemical Engineering
Mentor: Jerry Lin, Regents Professor
School for Engineering of Matter, Transport and Energy
What are the optimal conditions for carbon dioxide adsorption using ZIF 68?
DISCUSSION
Jacob Langley

Thanks Mom

Nickolas Gregory Dodd

Thank you for everything you've done and being there for me since this all began.

Alex Eleneski

Thank you Mom, Dad, Lauren, Grandpa Marv, Grandma Helen, Haley and friends for supporting me!
Love,

Tanner Michael Erickson

The heroism of my father empowered me on this journey. By defeating adversity through selflessness he taught me courage. My father Isidro is my hero.

Tomas Espinosa

Gracias mi Famila te amo bastante! Thank you very much family you will always be there and thank you DiTore family as well!

Ricardo Manuel Farfan


Infrared Vasodilation Device (IV)
Variable Frequency Mechanical Indenter for Peripheral Nerve Stimulation
Design Team: Kyle Eyster and Gabrielle Maestas
Mentor: Stephen Helms Tillery, Ph.D.
School of Biological and Health Systems Engineering
Arizona State University, Tempe, AZ 85281

I would like to thank Dr. Stabenfeldt and my lab members for giving me the opportunity to be involved with research involving traumatic brain injury.

Chase Fauer

Thank you Dad and Mom. Thank you for supporting and respecting me when I chose a way to adventure. Thank you for loving me. I love you!

Jingxian Feng

Thank you Mom, Dad, and Landa for your continuous support and love. Thank you Alex for always believing in me. I love you all!

Kaylee Elise Fentnor

Thanks Mom, Dad and Charlie!!

Mark Travis Ferry


ASU
ira a. fulton schools of engineering

To my wife and son, thank you for walking with me into the future.

Lhoussaine Ferza

Thank you Jade, Mom, Dad, Amanda and Craig for all of your help.

James Finch

I'd like to give a special thank you to my friends and family for supporting me both in school and in my personal life throughout the many years.

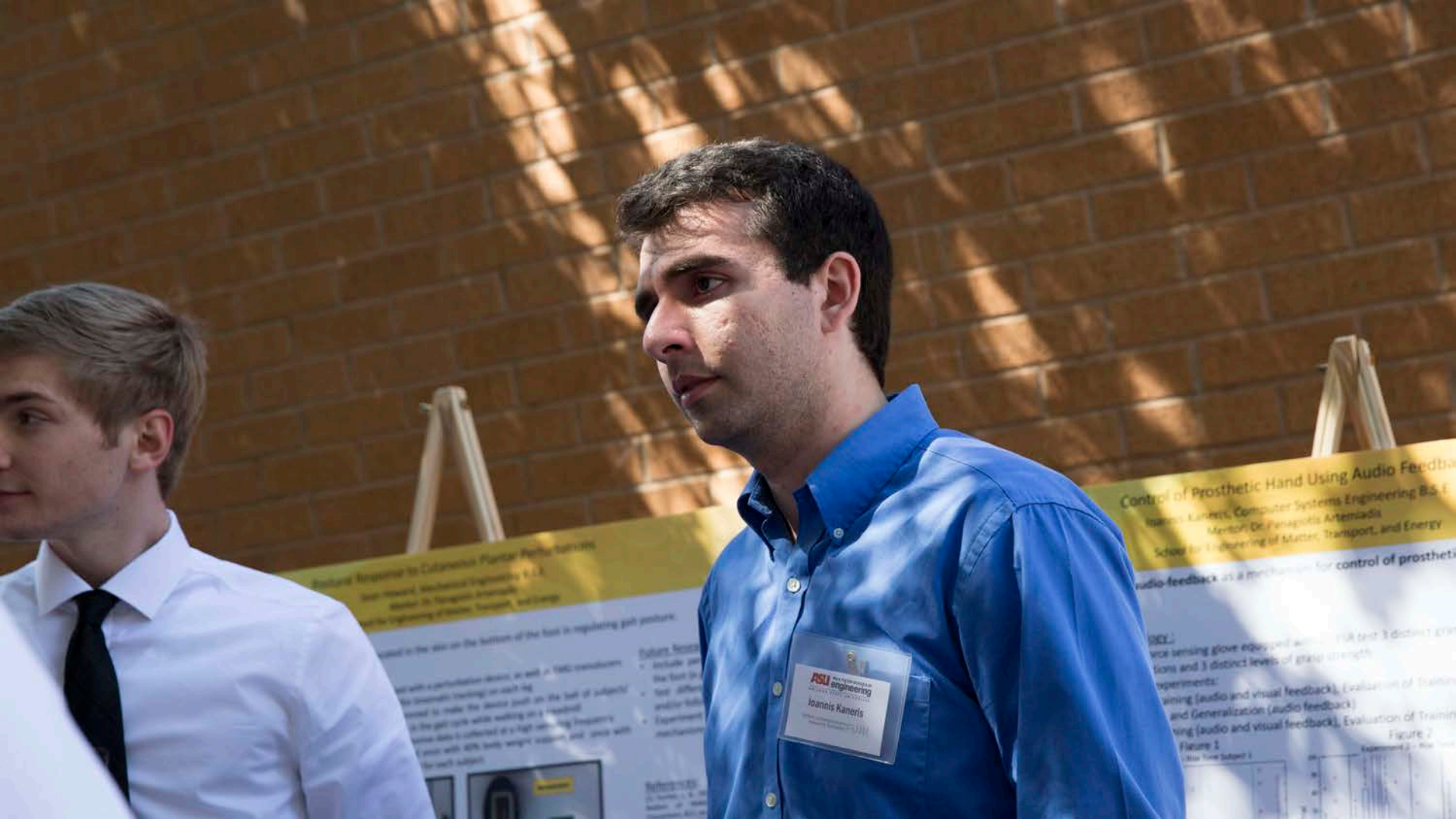
Fabian Josef Fink

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering


Joannis Kaneris

Thank you so much for everything! I love you guys!

Marcus Finney

Thanks to my family, friends, and 1st rates. Especially to Rawn, my fiancé Michael, and student loans. Would've lost my mind without all the support!

Brooke Olivia Fisher

Thanks for all the help and support family, finally made it!!

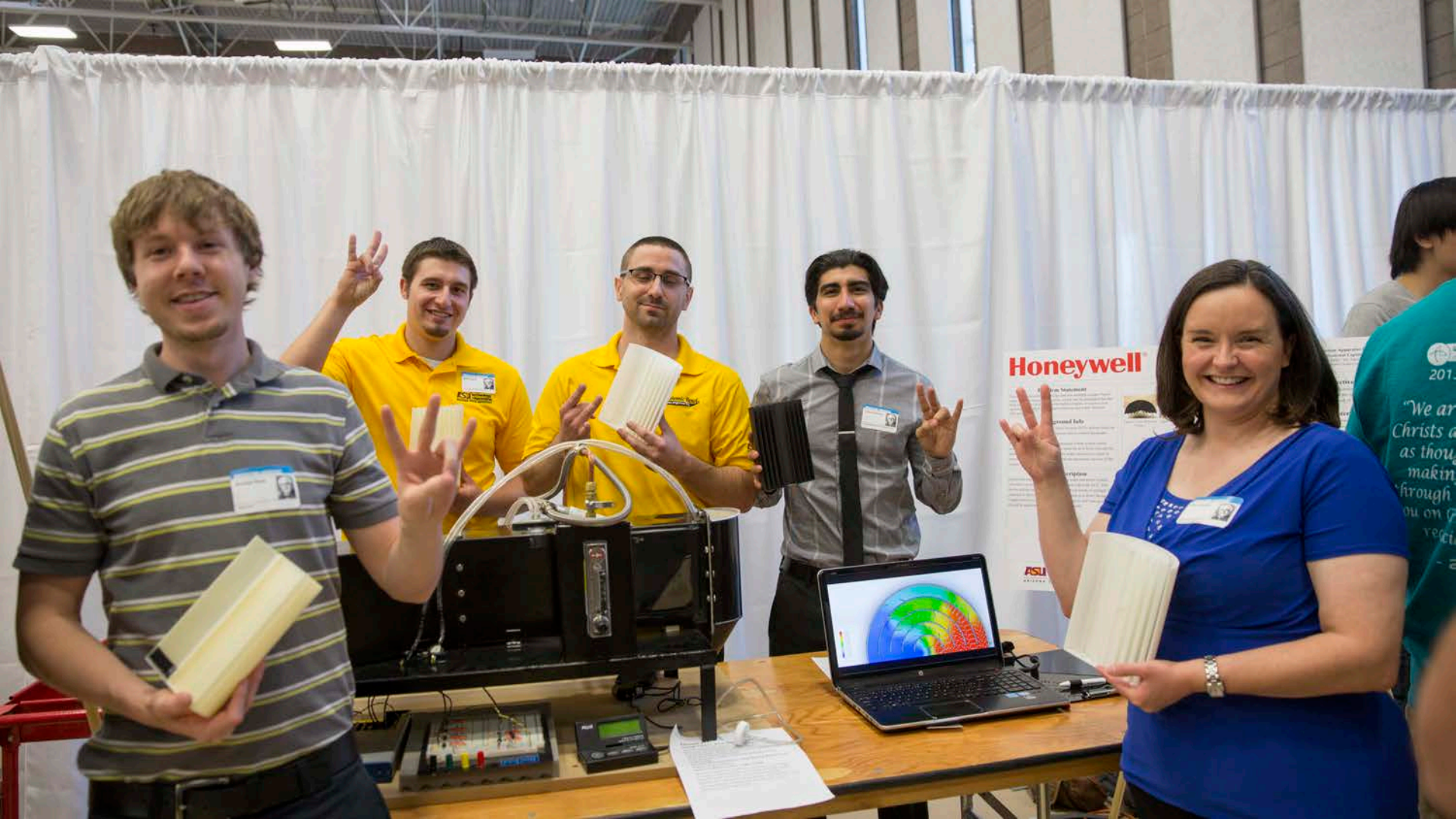
Jermaine Kyle Fowler

Thank you to my family! I love you all so much!

Amanda Rose Freed

A big thanks to Madre and Padre Gabrielson for supporting a hopeless cause!

Olaf M. Gabrielson


Honeywell

To all my friends and family, thank you for your continual support and motivation through these years.

Alex Mauricio Pompa Gale

Thank you Mom, Dad and Sis for all your love and support! Couldn't have done it without you!

Kyle Alexander Galloway

To my parents, siblings and all other friends and family, thank you oh so very much. I wouldn't be here without your continual guidance and support <3

Aaron Henry Gardner

I first and foremost give thanks and glory to God - my Lord Jesus Christ. I also thank my family and friends for all their support. God Bless!!!

Isaac Garnica


ECG152

Thank you to my Mom for being the strongest rose with thorns To my Dad for being the noble soul he is and Thank you to my siblings for believing in me

Khrizya Yojarah Gastelum

Thank you to my family for supporting me through the last four years. It has been tough but very rewarding.

Nicholas Edward Giovannucci

Thank you for the great memories and for fostering an innovative environment for change.

Shardul Suresh Golwalkar

I want to thank my family for helping me out throughout these 4 years. I love you all.

Jimmy Alejandro Gomez


Methods
Device Concepts
Design Concepts
Mock Vessel for W.L. Gore & Ass

Thank you for providing the means to achieve a privileged education.

Gian Paolo Gonzalez

Thank you to my family in helping me graduate. When times were tough you were always there supporting and encouraging me to do my best.
TGood

Tyler Justin Good

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

I would like to thank my parents, my sister, Rebecca, for all of their support in completing my education.

Zachary Daniel Gordon

Special thanks to my mother Teresa, father Jesus, Jorge, Karla, Paty, Kathya, Erick, and everyone who supported me by making this day a reality
Thank You

Jesus Guadalupe Granados

Thank you to my wife, my family, and all those who have supported me in this journey!

Tanner Blake Green

thanks mom

Katherine Elizabeth Grinstead

To my family,
Thank you for always being my support system.
Your love and faith gave me the strength and perseverance to follow my dreams.
I love you!

Alicia Mae Guccione

Thank you for all your support & guidance. I love you Mom & Dad!

Ashley Denise Guerrero


Impacts of understanding conation on student satisfact
honors thesis
How does the "bee" phase separ
at the asphalt-agg
Relevance
Procedure
Results
FURI
research program

"When everything goes to hell, the people who stand by you without flinching — they are your family."

I love you all. "Thank you" just isn't enough.

Cameron Alexander Gunn

Thank you to my dad and mom, thank you Yuki, thank you Alex and Shane, love you all.

Xin Guo

Thank you to my parents for all of their love and support. This ones for you!

Mayuri Gupta

I would like to thank my mom, dad and my sister Nikita! Couldn't have done it without the support and love from you guys!

Nehal Gupta


Automous Swarm Transpo
Abstract
Overview

To all of my parents: Thank you so much for helping make all of this possible! I love you more than you can count to!
Love

Jenifer Marie Gura

Thanks Mom and Dad for providing me with this wonderful opportunity to better my future! I love and appreciate all the support you have given me! -Fav

Favian Guzman

I want to thank my wonderful wife and my three beautiful boys, Edwin, Samuel and Valentin.

Troy Alan Haddock

Guys I did it!!

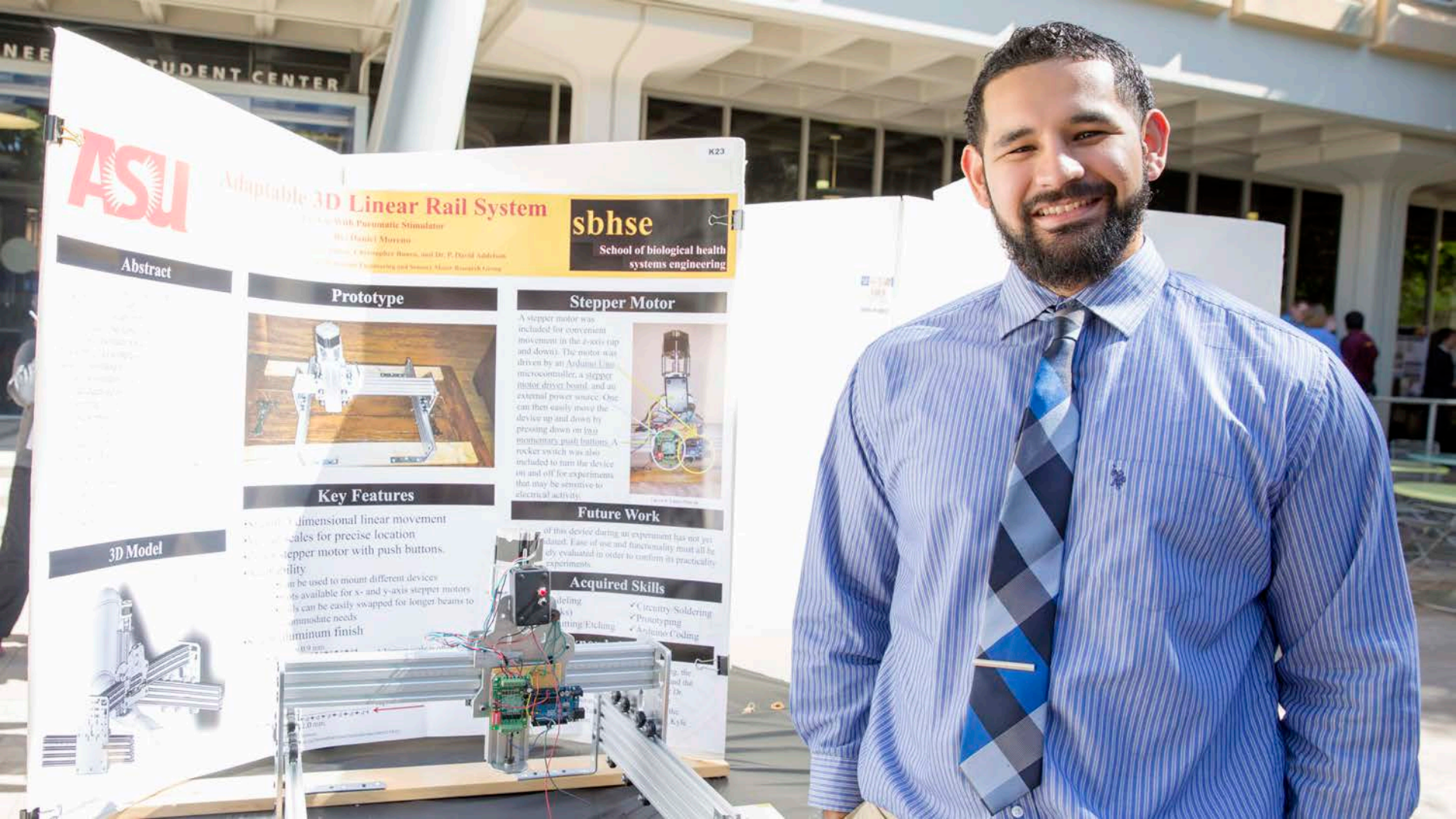
Thank you for your unwavering love & support. I'm so blessed to have you all in my life, I love you all so much!

Mackenzie Ann Hagan

Thank you so much

Jazakum Allah khairan for every thing

Hossam Ali M Halawani


ASU
K23
Adaptable 3D Linear Rail System
sbhse
School of biological health systems engineering
Abstract
Prototype
Stepper Motor
Key Features
3D Model
Future Work
Acquired Skills

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Mom and Dad
Thank you for the many years of love and support! I could not have accomplished this without you!

Eric David Halverson

Thanks for everything love you all!!

Tyler Charles Hansen

Thanks for all of your support!

Cory Robert Harasha


engineering=∫e
ring=∫e*y

Mom and Dad, I love you! Thanks for supporting me for 4 years of college and 22 years of life!
P.S. Thank you for paying my tuition.

Chad Jackson Hardgrove

I would like to thank my family for their continued support. I would also like to thank my friends and falculty who aided me in my success at ASU.

Keithan Anthony Harris

I have to honestly say that it was my sister that helped me stay "mostly" focused on college and to do what I loved, so thank you nee-chan!

William Skylor Haselwood

Thank you for all your loving support Mom, Dad, Clay, and Chandler!

Brandon Cory Hatathlie

Thank you Mom, Dad and Melissa for the support over the years. Love you all, and can't wait to spend my extra time with you!

Aaron Craig Hatfield

Great to be graduating as a Sun Devil. I want to thank my family for all the support, this wouldn't have been possible without them. Love You all!

Anthony Hayer

A special thanks to everyone who supported me and my crazy schedule!

Colt Patrik Hegardt

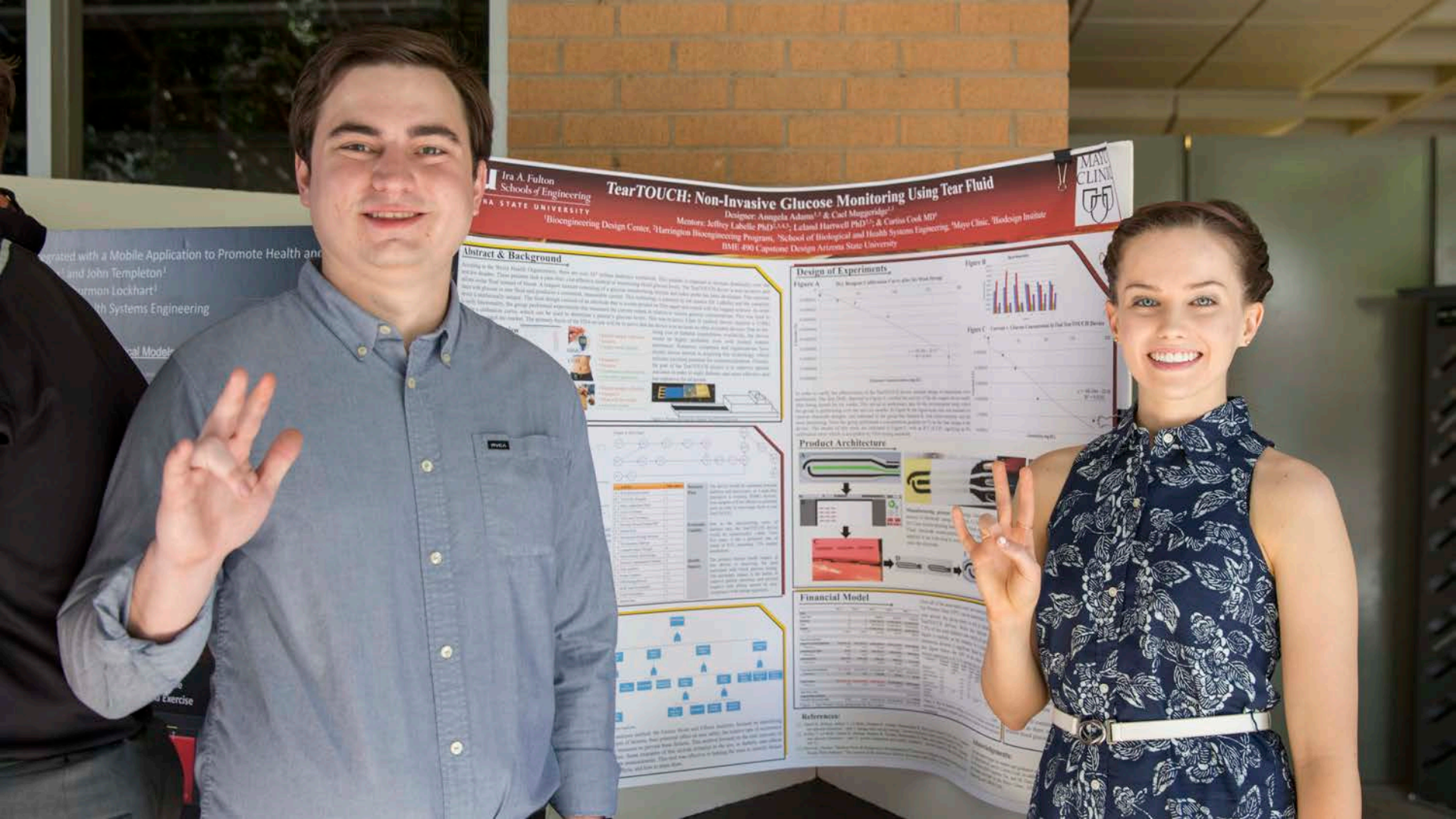
Thanks for supporting me all these years, Mom and Dad! Much love; it wouldn't have been possible without you.

Stephen Edward Hermens

I wanted to thank my wonderful family for the support they have showed me during my time at ASU. I love you all very much, especially my son Ethan.

Michelle Hernandez


Owen Ma


Ira A. Fulton Schools of Engineering
TearTOUCH: Non-Invasive Glucose Monitoring Using Tear Fluid
Abstract & Background
Design of Experiments
Product Architecture
Financial Model
References:

Thank you Elena and Jose, mom and dad, for all your love and support. Thank you Tia Rosa y la familia Flores.

Sayra Guadalupe Hernandez

Thank you to everyone who helped me get to this point in my life, I appreciate everyone for all their support. Thank you ma and dad, love you!

Shannon Lee Hertfelder

Hi Mom and Dad!

Support S.683 - Compassionate Access, Research Expansion, and Respect States (CARERS) Act of 2015

Go Green!

Cameron James Hines

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you Mom and Dad, for giving me the opportunity Love you!! your son-Gary

Gary Ho

Mom, thank you for being my biggest fan and supporter, I couldn't have done it without you! Love Matt

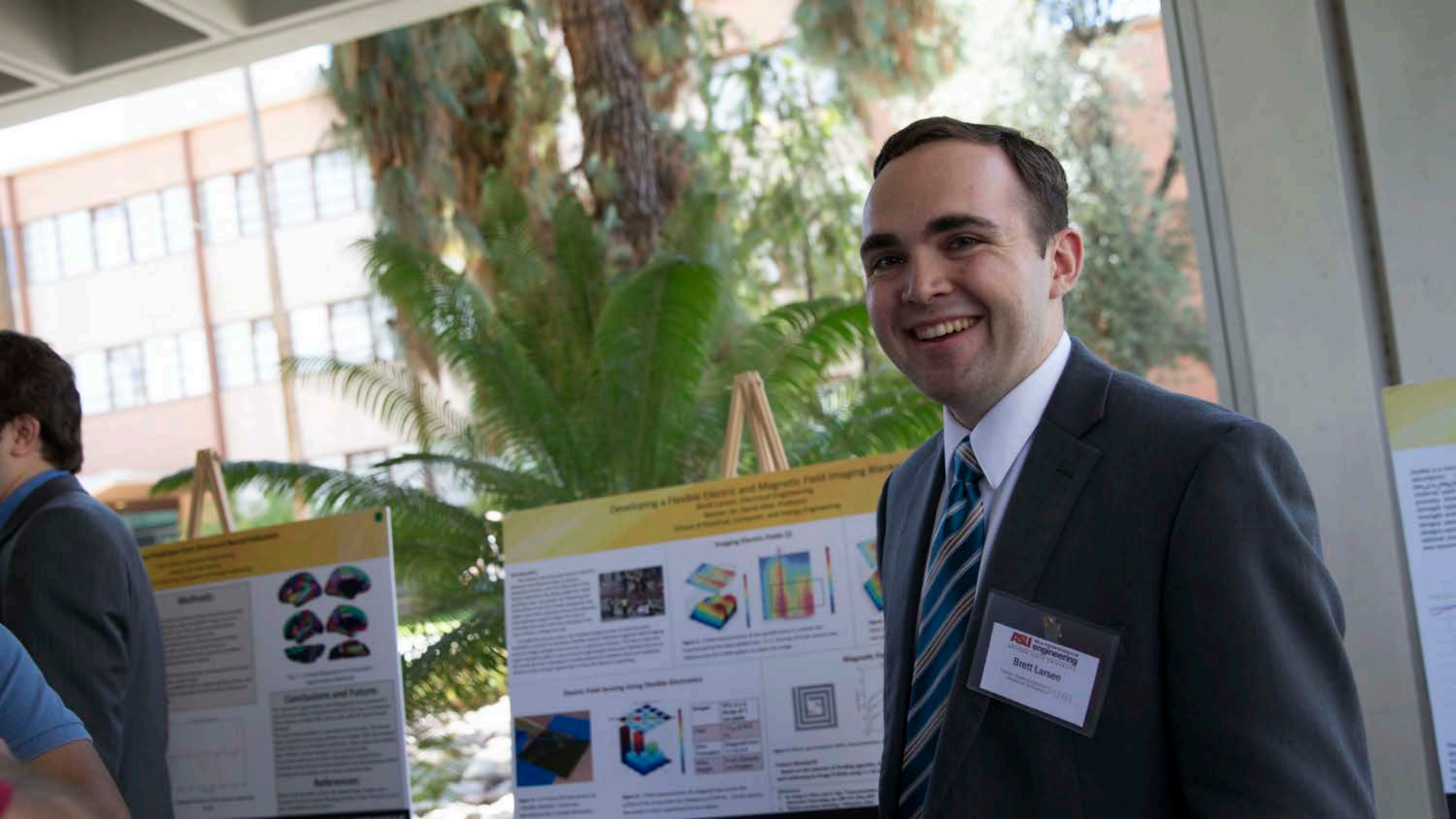
Matthew J. Homco

Thank you, Mom and Dad! I truly could not have done it without you.
-Love,

Molly Kindelan Hopcraft

I have had an amazing time and experience with ASU. Rock on devils!!

Fallon Marina Howard


Developing a Flexible Electric and Magnetic Field Imaging Sheet
Brett Larsen

Thank you to everyone that has inspired me. I appreciate the support from friends and family that have brought us here today. Here's to the future!

Dallis Hughes

Thank you friends and family, for all your support. I could never have done it without you all.

Scott Richmond Hughes

My degree really needs two names on it, mine and my wife's. I could not have done this with out you Fabriza! Thank You! I LOVE You!
XOXO

Russel Hunt

A big thanks to my wonderful family Michele, Neil, and Angela Tugaoen for always being there and believing in me. I love you!

Neil-Richard Tugaoen II

At ASU I was able to meet brothers and sisters; therefore I now call ASU my home for life. I am and will always be a Sun Devil family. Go Devils!!

Innocent N Irakoze


SMARGO
Hello
SMARGO

I am extremely grateful for your help.

Shinya Ishizaki

To my wife Nizhoni, my daughters (and future Sun Devils) Sydney, Nataani and Ella: You are the reasons I am here today! I love you all!

Kevin Ray Jacob

Thank you mom, dad, family and friends for all of your support these past four years!

Melissa Anne James

To my family and friends, thank you for all of your love and support through all the ups and downs.

Daniel Nolan Jameson

Thank you to my family and friends for their support through my years here at ASU. Finally done!

Martin Joseph Colmenero Jimenez

To Lindsay Lynch, the love of my life, thank you for pushing me to do this, thank you for all of your support, I love you like crazy! I crushed it :)

Dana Royce Johnson

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Family you all mean the world to me. I would not be here now if it was not for you. Thank you for your love and support. I love you all!

Kristine Yvonne Johnson


How does the "bee" phase separation correlate to microstructure at the asphalt-aggregate interface?
Zachary Kopp, Civil Engineering
Mentor: Shane Underwood, Assistant Research Professor
School of Sustainable Engineering and the Built Environment
Relevance
Procedure
Atomic Force Microscopy
Results
asphaltenes
maltenes
substrate
BEE AREA (%)
ARIZONA STATE
CHI EPSILON
THE CIVIL ENGINEERING HONOR SOCIETY

Thank you for your love and support! Your guidance to make it through and make decisions was invaluable.

Scott Thomas Johnson

A big thank you to my sponsors. I promise it was worth it.

Nick Kealii Jorgenson

To my Family thank you for your support, we did it. I love you, and a special thank you to Baby Girl and Eli my greatest gifts, my support, my life!!

Frederick R. Morris Jr.

Gracias mamá y papá, es por todo el amor y apoyo que me han dado que estoy aquí haciéndolos orgullosos. Los quiero muchísimo!

Fernando Estrada Jr

Thank you for all of your support, patience, and love!

Joel Greig Wright Jr

Big shout out to Mom and Dad for giving the best advice when I would call home crying in frustration over school. #EngineeringProblems

Kelsey Kristine Jull

Thank you to my wife and kids for helping me through this. It was a long road but I did it. Couldn't have done it without you by my side. I love you!

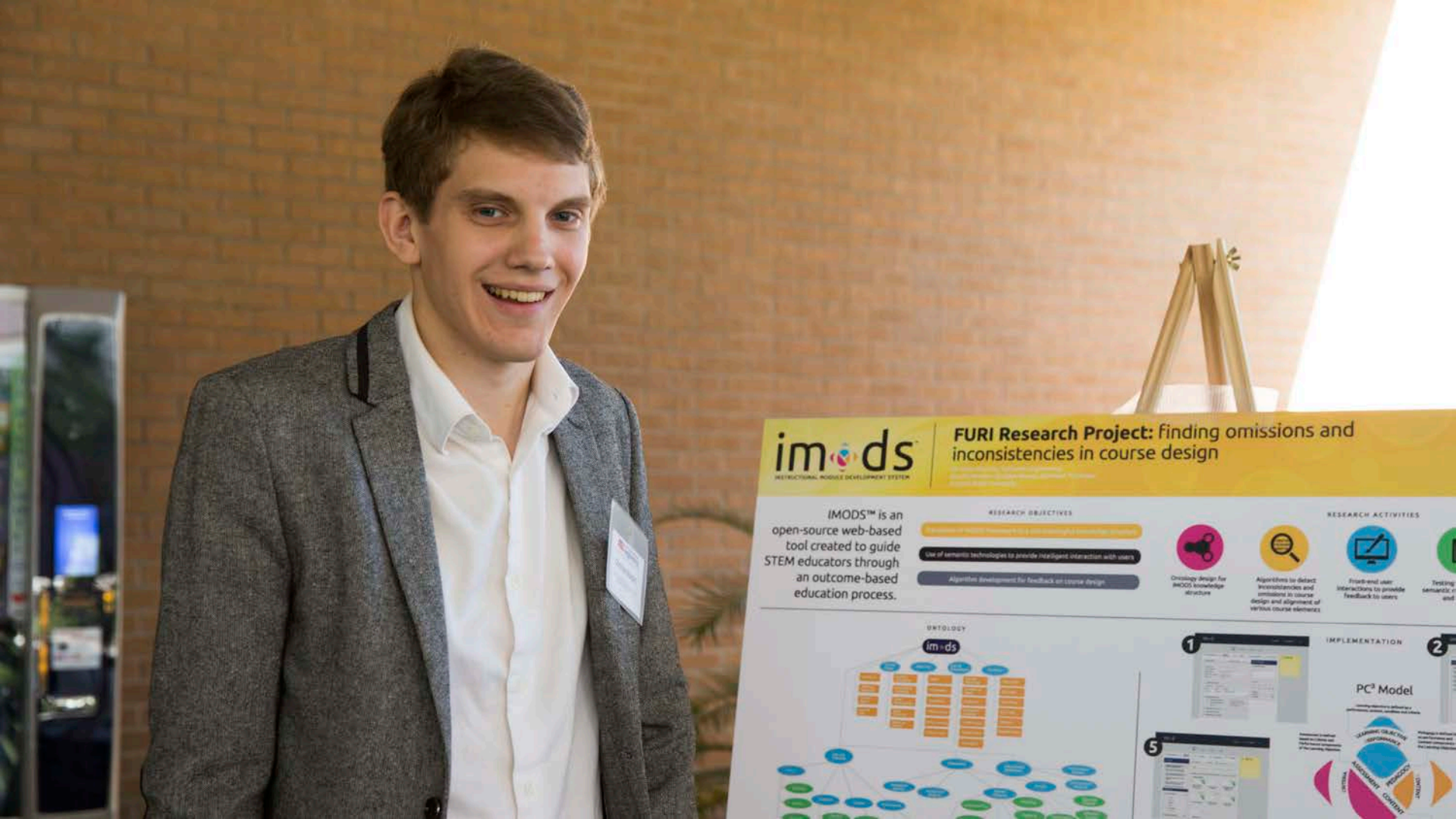
Michael Dennis Boggs Junior

Thank you to my mom and dad for always putting my best interests first, pushing me to do my best, and being my support. I love you both very much.

Samantha Maria Juntiff

Thanks for EVERYTHING Mom and Dad! I love you guys!

Omar Karaboulad


im·ds
INSTRUCTIONAL MODULE DEVELOPMENT SYSTEM
FURI Research Project: finding omissions and inconsistencies in course design
iMODS™ is an open-source web-based tool created to guide STEM educators through an outcome-based education process.
RESEARCH OBJECTIVES
Use of semantic technologies to provide intelligent interaction with users
Algorithm development for feedback on course design
RESEARCH ACTIVITIES
ONTOLOGY
IMPLEMENTATION
PC³ Model

Faraz joonaam, Maman, Baba, and Dadashi, I have the best family and friends that a person could wish for. Thank you for the support. I LOVE YOU all.

Bahareh Kargaran

I would not be standing here today without the support of my loving family. Words can not express how much I appreciate you all!

Kan Kawabata

While today is full of light and hope, they weren't always so. Here's to those of you with whom I learned more about the limits of my own strength.

Brandon Patrick Keeber

A heartfelt thank you to my wonderful wife and children who have been my compass on this incredible journey!

Tyler Cade Keeling


AS
Mock Superfic Femoral Artery

FORK EM DEVILS!!!

Ryan John Keen

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you MOM and DAD for pushing me and supporting me through these years of hard work. Thank you Sarah for being with me during this experience.

Sean Vincent Keever

Thank you to my mom, dad, and sister Lexie for all your love and support. I have learned through your example the value of hard work and dedication.

Amanda Nicole Keil

Dear Family, Thank you for your unending support and constant availability to take phone calls. Carry the flag!

Marion Zoe Branch Kelly


Gradational Solar Power Optimization and Monitoring System
Chris Raupp, Electronics Engineering Technology (Alternative Energy Technologies)
Mentor: Scott Pollat, MSEE Power Engineer, Senior Lecturer
The Polytechnic School
Experimental Setup
Cost Analysis
Installed Solar PV System Price: 35 m²
Residential Rooftop ($5.71/W
Chris Raupp

Thank you Vanessa for putting up with my shenanigans! I did it for my family.

Matthew Zane Kilford

...King Family!...

Thank you to my parents for being so supportive and helping prepare me for the world.

Hiieee Kenzie and Riley! I ran out of spac

Zakary Alexander King

To my friends and family:
Thank you for all of your support; without you this would not have been possible!
Jeffrey

Jeffrey Jordan Kirkman

I want to thank all of my family and friends for supporting me during my college career.

Dalton Kiss


engineering=∫e^xy
engineering=∫e^xy
ASU

Thank you Mom, Dad & Lisa for your support!

Andrew John Klages

Thank you so much Mom, Dad, Elke and Scott for your support through these past 4 years. You're all amazing and I wouldn't have survived without you.

Madison Alexandria Klug

Thank you Mom & Dad for believing in me and helping me along the way. I couldn't have done it without you.

Jacob Thomas Korinko

ASU sure has taken me for a ride, but now it seems I have reached my destination. I will miss everyone but I am moving on to greater things!

Gary Steven Krainz

I just want to say thank you to my Mom and Dad for being the Ku-est parents I know.

Michael Jason Ku

Thank you to my Dad and Mom, Naresh and Amarjit, I love you guys, I could not have done it with you. Congrats to my Brother Karan your next up buddy!

Rohan Kumar

Thank you so much Mom and Dad, I couldn't have done it without you!

Tyler Matthew Kunce

I would like to express my deepest gratitude to my parents, girlfriend Aijana, brother, and to the Bolashak IS Org for their invaluable support!

Olzhas Kurenov

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering


xus of Lean and Green Construction
Kelsey Maris, Construction Management
Mentor: Kristen Parrish, Assistant Professor
of Sustainable Engineering and the Built Environment
RESULTS
The 110-word Word Cloud (top picture) was generated by scanning all of the interview transcripts and pulling out words that occurred more than 5 times, removing filler words and names of interviewees.
The Venn Diagram (bottom picture) compares the specific practices identified as Lean or Green through literature review and interview analysis. Through the interviews, these practices were discussed and the those in the middle of the Venn diagram are characteristics shared by Lean and Green.
"Green construction is a subset of sustainability ... We want to co-create buildings with our clients as environmentally responsible as possible" – Steve Clem, Skanska
DISCUSSION AND FUTURE WORK
project
building
together
think
waste
people
design
Lean
Green
Using Optimization Techniques in Prob
Motivation
This project was commissioned by the Federal Aviation Administration to improve engine safety on commercial jets and is a joint effort between Arizona State University and NASA.
Data Optimization
The process of optimization in
the best solution to a series
points; one simple exampl
the creation of a regres

Thank you so much to my mother, father, sisters, brother, niece and nephew. I couldn't have done it without your support.

Noor Lallmamode

Everyone, thank you for everything you have done and your support all these years.

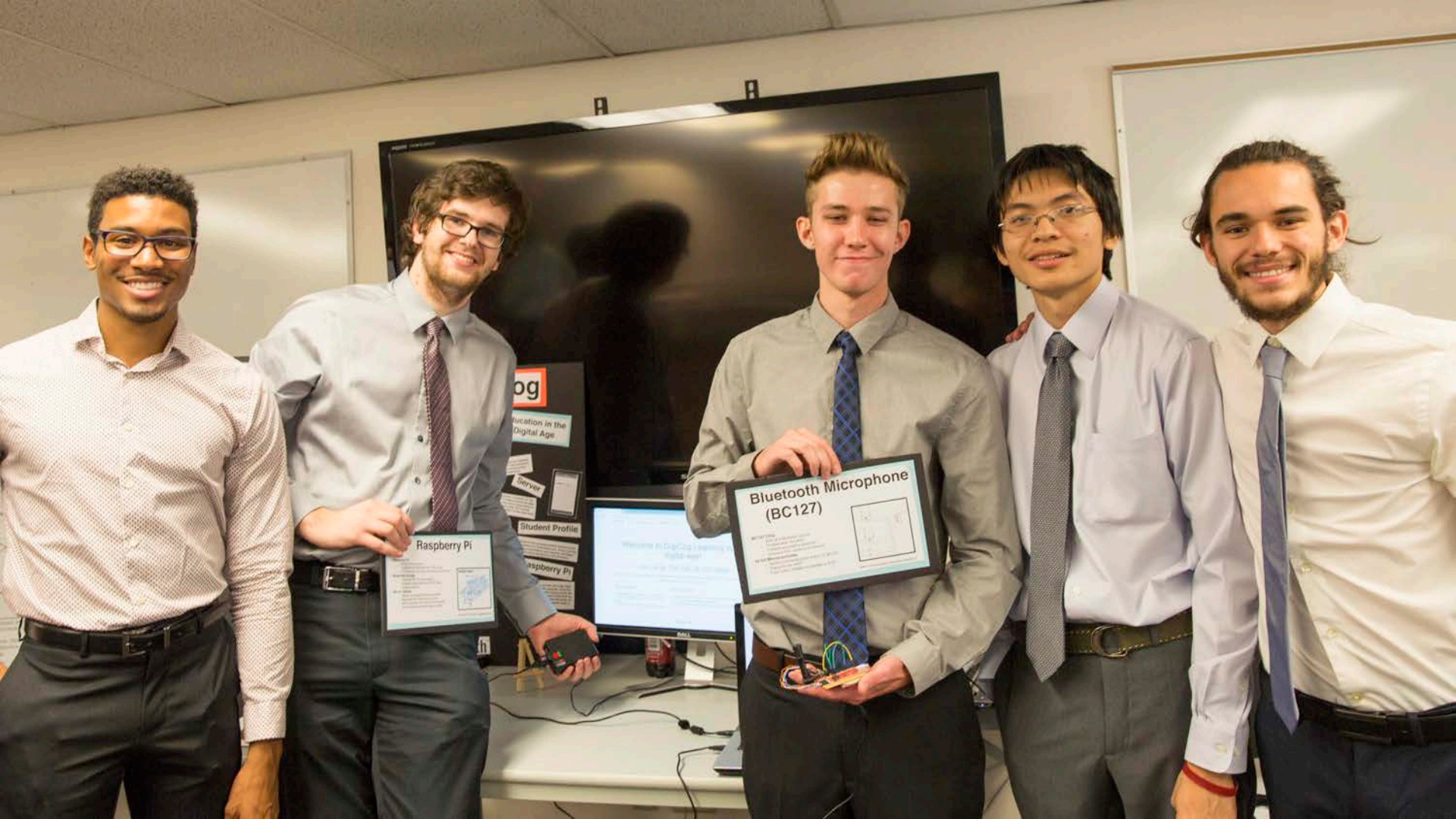
Cody Joseph Lane

Thank you Christy, mom and dad for your love and support!

Winnie Ching Yan Lau

Shout out and thank you to all of my family, my girlfriend, Sarah, and my friends, for being here to celebrate this moment of my life! I love you all!

Tyler Christian Lavineta


Raspberry Pi
Bluetooth Microphone
(BC127)

It's been fun. Dueces!

John Mark Lillyblad

What an adventure this has been. Thanks everyone for the support and memories!

Colten Ray Lindauer

Thanks and love to my family

Thomas Michael Linnen

Thank you to my family, friends, and especially the EE faculty for the last four years. Go Devils!

Shannon Dawn Lippincott

Nico, FffKyle, Mikey B, Andrew, Brett, Logan, James... you all made my Barrett experience so wonderful. I love you guys!!!

Rebecca Ann Little

I would like to thank my wife, mother, father, siblings and their families for the support throughout my College experience. Thank you all.

Brian Neal Locksa

Thank You Tamela, Without you I wouldn't Be here today! I Love You! Thank You GI Bill! Thank you Navy! Thank you to my family! Thank you USA!

Christopher Allan Loff

To Mom and Dad,

Team LAMBO for the win!!! :)

Love you guys.

Steven Francis Lombardi

A special I love you to my very caring Arizona family! And Dad, I love you to the moon and back! Thanks DEWSC faculty and students! GO DEVILS!

Keila Dawn Lombardozzi

Thank you for all of your support!

Channing Ludden

Thank you dad for all your help. Thank you Michelle for your support and love. And thank you Google for all the answers and free textbooks.

Eric James Luttenegger

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you for the support throughout the years. I greatly appreciate everything you've done.

Brandon Tyler Lyons

Thank you Jordan Paul, Mom and Dad! I couldn't have done this without your love and support. I love you Junior and Mia!

Juana Iriis Maes

There was a never a moment that I was without your support. Thank you for being my inspiration and my rock. -Gabby

Gabrielle Elise Maestas

It takes incredibly dedicated parents to support me for as long as you have. Thank you for the best gift one could give - an education!

Ryan Mahadocon

Thank you Mom and Dad for everything you have given me throughout all of my education!

Alexander Ryan Mallison

Improving Damage Detection and Localization in Complex Composites

Zach Barnes, Mechanical Engineering
Mentor: Aditi Chattopadhyay, Regents' Professor, Aerospace Engineering
School for Engineering of Matter, Transport, and Energy

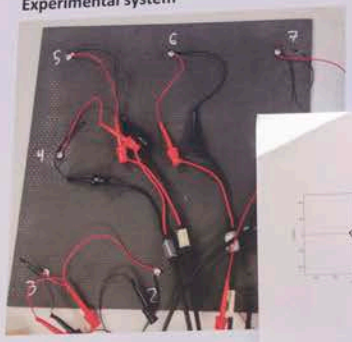
Goal

Improve damage detection techniques by using matching pursuit decomposition (MPD) on data collected using guided waves (GWs).

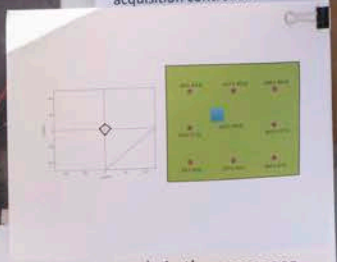
Method

A round-robin approach was used to collect GW data along each path between sensor. MPD analysis of the data provided the time of arrival of the first wave packet for each of these sensor paths. Paths with damage along them were found from discrepancies in the time of arrival along symmetric flight paths. The intersection of these paths reveals the region of delamination that was intentionally created during fabrication of the composite plates used for testing. The results of this method reveal a novel technique

Experimental system



One of the carbon fiber epoxy plates used for testing. The PZT sensors can be seen connected to alligator clips, which lead to the data acquisition controller.



Applications

Structural health monitoring plays an important role in the aerospace

Thank you mom and Jordan for being my greatest support throughout college! I love you both!

Love,

Eric William Malone

Gracias mamá y papá. Gracias familia por su apoyo todos estos años

Adrian Maranon

Thank you Ernie and Jackie for pushing me though the tough times. Thank you to the rest of my family and friends for all your support and help!

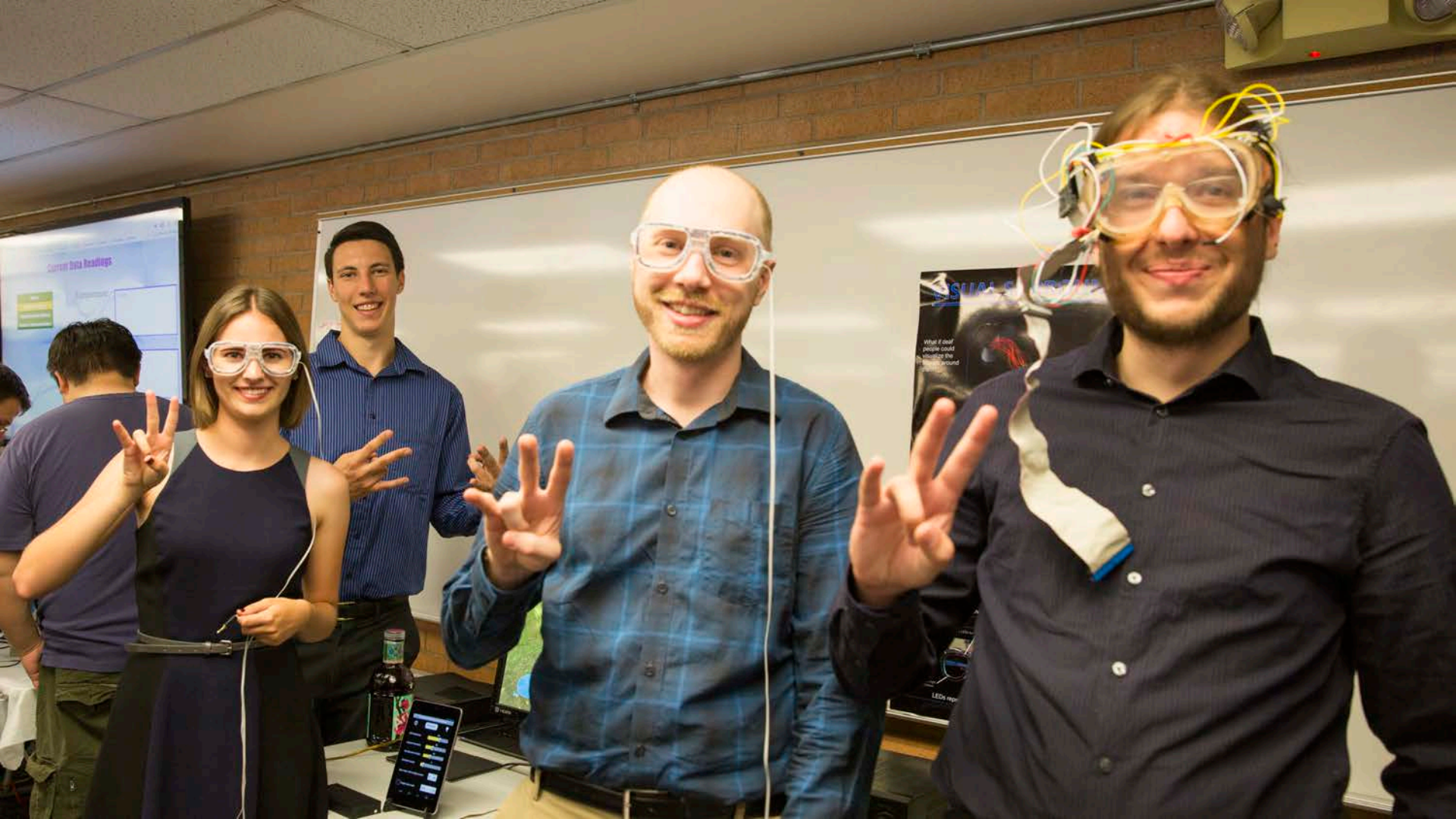
Timothy John Marfori

To my mom, for always being there.

Seth Tyler Marquez

Sincerest thanks to Kristen and my entire family. Your love and support helped me reach the finish line. I couldn't have done this without you. Tim

Timothy Roland Marshall


Current Data Readings

Thank you Mom, Dad, and Mariah for your unwavering support throughout my college career! I love you all! (even if one of you is a wildcat)

Cole Davis Martin

"I have fought the good fight, I have finished the race, I have kept the faith"-2 Timothy 4:7

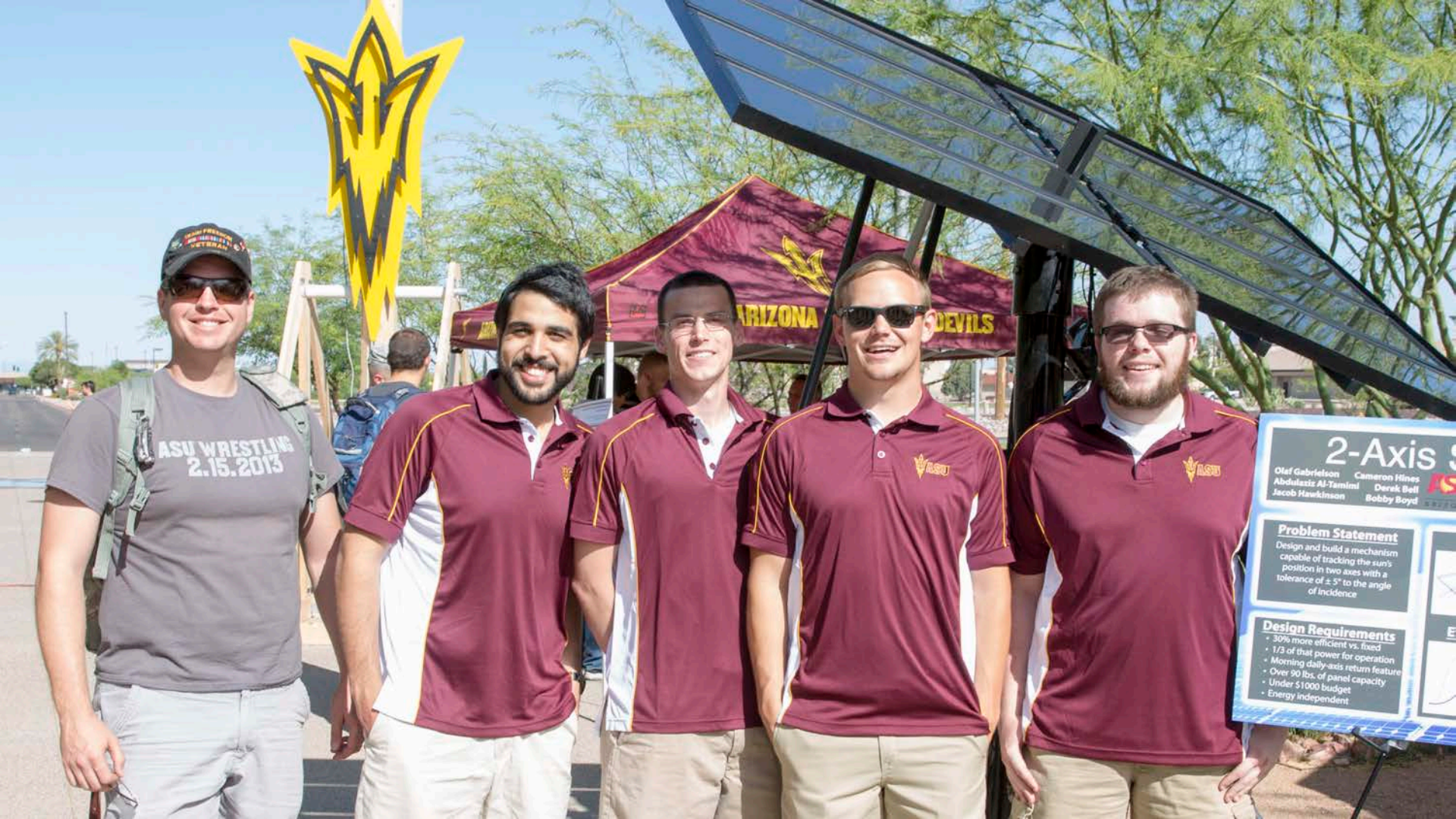
Marisa Lopez Martinez

I would like to thank my family & loved ones, for helping me throughout this journey. Your support and encouragement is what allowed me to reach goals

Kyanna Nicole Masick

I want to thank my entire family. I would not be here without your love and support.

Chelsey Denise Mcalpin


ASU WRESTLING
2.15.2013
2-Axis
Olaf Gabrielson
Abdulaziz Al-Tamimi
Jacob Hawkinson
Cameron Hines
Derek Bell
Bobby Boyd
Problem Statement
Design and build a mechanism capable of tracking the sun's position in two axes with a tolerance of ± 5° to the angle of incidence
Design Requirements
• 30% more efficient vs. fixed
• 1/3 of that power for operation
• Morning daily-axis return feature
• Over 90 lbs. of panel capacity
• Under $1000 budget
• Energy independent

I want to send a personal thank you to my mother. Without her help I would not be here today. I love you mom, thank you.

Edward Ivor McCray

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

To my family and friends: I couldn't have done this without your love, support and encouragement. Thanks for making my dream come true! Love, Kymberli

Kimberly Frances McGuinness

McKeand Family,

Thank you for helping me achieve my goals. Without your support and motivation, I would not be the man that I am today.

Love,

Brady Lawrence Mckeand

Thanks mom, you da best.

Jessica Reyne McLean

Thank you Mom and Dad and My brother for all the support over the last 4 years. It's been a hard ride but you've helped me get to be where I am today!

Travis James McMahon

Big thanks to the MSE students for always helping me, big thanks to the MSE professors for forcing me to learn while not being overwhelming.

Kyle Jonathan Mcmullan

I want to thank everyone that has supported me through this amazing period in my life.

Adam David McNabb

Thank you to my wonderful parents and to my loving fiancee for always being by my side and supporting me!

Brandon Lee Mead


Inspiration
Project Scope and Definition

I want to thank my family for their encouragement and their support. I also want to thank my wife for sticking by me and believing in me.

Michael Edward Medina

Thank you Mommy, Damian, Jack, Mya, and Emma for supporting me! Daddy's coming home!

Timothy Alan Meier

Mom and Dad, thanks for making this possible. To my friends, neighbors and roommates who shared this time with me, welcome to the family.

Nikolas Emmanuel Meneakis

Thank you to all the people that supported me through this...Lilly, Jen, Howdy, Rose and my Mom and Dad! I couldn't have done it without you!

Justin Merritt


Introduction
Results

Thank you my amazing & beautiful wife Nicole! I love you so much, you deserve most of the credit for my success, I could not have made it without you!

Joshua Adam Michalak

To all the people who supported me through this THANK YOU!!!

Adam Saeed Midkiff

I started this magical journey 23 years ago...LOL!! Thank you Meghann for making me see that it normally takes 4.

Dean Todd Miller

Thanks Mom, Dad and Sterling, I couldn't have done it without your support. Love you all!

Jace Robert Moller


engineer
your best ideas
build
tomorrow's today
ASU engineering
ARIZONA STATE UNIVERSITY
tradition.

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

For the LORD gives wisdom: out of His mouth comes knowledge & understanding! Prov. 2:6
Thank You Jesus!

Thanks Mom & Dad
Steve, Beq, Zab, Es, Maasa!

Judah Heli Montenegro

All my family has been a great support throughout college and I am blessed to share this experience with them!

Brett Joseph Montgomery

Thanks Ma, Peanut, and Josh for your patience and support. Rhayne and Ashley, thank you for your encouragement and understanding. All my love to you.

Cheryl Elaine Moorcones

My years at ASU have been an amazing mix of learning, meeting great people, participating in incredible opportunities, and having fun! Thanks Devils!

Amanda Ray Moore


Introduction
Results
CFD Simulations
Laboratory for Energetic Flow and Turbulence
Phoenix Children's Hospital

SINGLE MOTHER GRADUATES IN TOP OF BME CLASS because you cared, helped, encouraged, believed, laughed, and loved.

YOU gave me meaning and purpose. <3

Laina Dean Moussallem

Thank you for everything, Dad. I couldn't have done it without your leading example. I love you!

Skylar Mowery

Thank you to my family and friends that helped me complete my college career. I would not have reached this without your guidance.

Maritza Mujica

I made it! I made it through because of all the support of my loving and supportive family and friends. I love you all! Thank you for all the support!

Kendra Niquelle Munns

I want to thank my family for pushing me to do my very best. You guys are amazing!

Timothy Alexander Munsil

Here comes another Muradvich Engineer! Thanks Mom and Dad for always believing in me! I could not have done it without your everlasting support <3

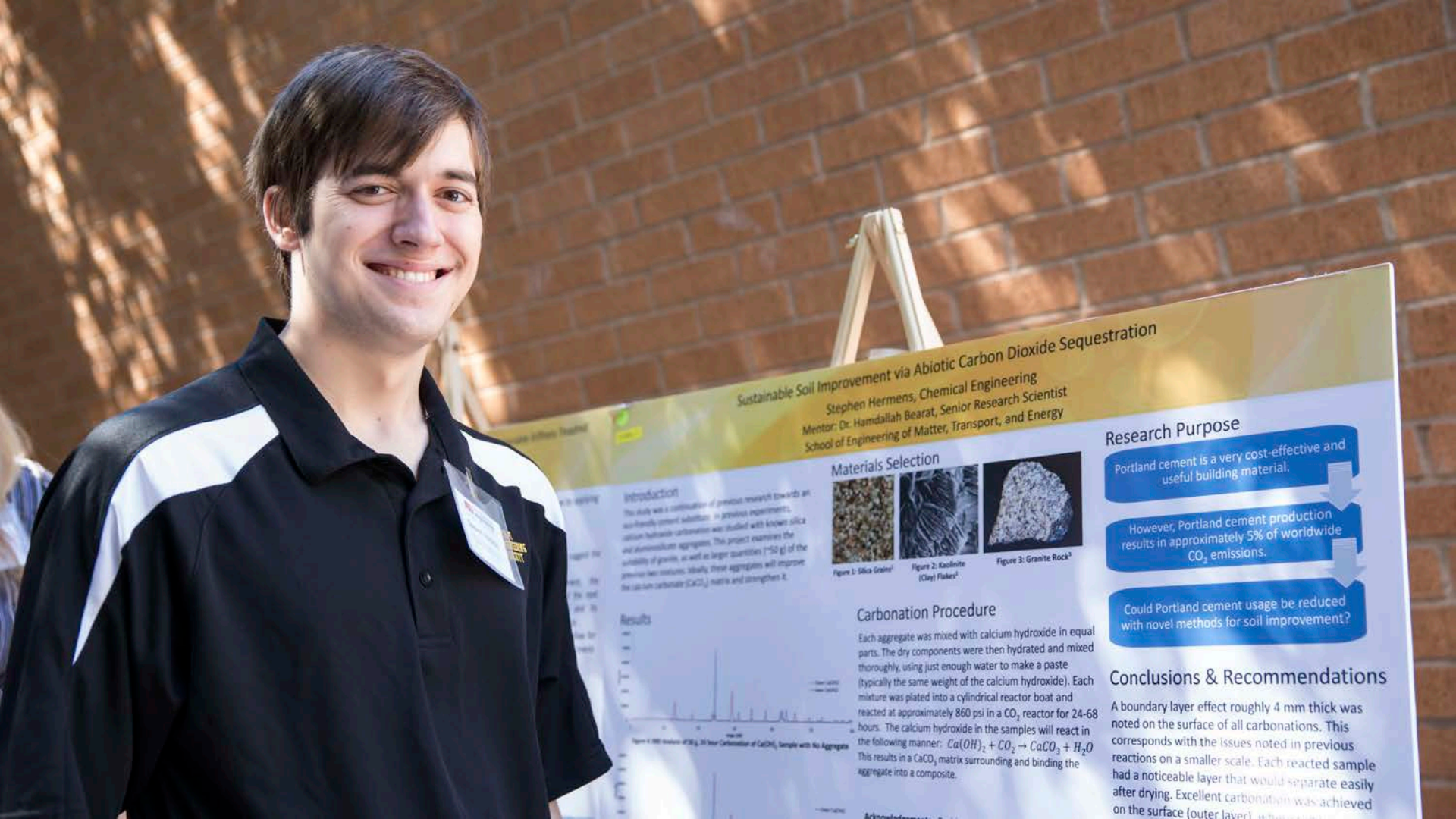
Meerna Muradvich

Thank you for supporting me, helping me, and making this possible. I love you all so very much!

Emily Ann Murphy

Would like to thank everyone that has stood by me over these years. I will never forget what each one of you have done for me to help get me here.

Devin Edwin Lee Murray


Sustainable Soil Improvement via Abiotic Carbon Dioxide Sequestration
Stephen Hermens, Chemical Engineering
Mentor: Dr. Hamdallah Bearat, Senior Research Scientist
School of Engineering of Matter, Transport, and Energy
Introduction
Materials Selection
Figure 1: Silica Grains[1]
Figure 2: Kaolinite (Clay) Flakes[2]
Figure 3: Granite Rock[3]
Results
Carbonation Procedure
Each aggregate was mixed with calcium hydroxide in equal parts. The dry components were then hydrated and mixed thoroughly, using just enough water to make a paste (typically the same weight of the calcium hydroxide). Each mixture was plated into a cylindrical reactor boat and reacted at approximately 860 psi in a CO_2 reactor for 24-68 hours. The calcium hydroxide in the samples will react in the following manner: $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$
This results in a $CaCO_3$ matrix surrounding and binding the aggregate into a composite.
Research Purpose
Portland cement is a very cost-effective and useful building material.
However, Portland cement production results in approximately 5% of worldwide CO_2 emissions.
Could Portland cement usage be reduced with novel methods for soil improvement?
Conclusions & Recommendations
A boundary layer effect roughly 4 mm thick was noted on the surface of all carbonations. This corresponds with the issues noted in previous reactions on a smaller scale. Each reacted sample had a noticeable layer that would separate easily after drying. Excellent carbonation was achieved on the surface (outer layer)

I would like to thank my friends and family for helping me along the way, especially my Mom! Without her this dream would have never been possible.

Trevor John Murray

To my family: For all of the advice and wise words you've provided me throughout my life.

Thomas Joseph Myzia

Special thanks to my husband Rachad and my kids Omar, Ayah, Hajj, Khaled, Adam & RJ for your support during my journey. I love you!

Zakieh Nafeh

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Because of these professors I am crossing this stage tonight. Abramson, Brewer, Liao, Chmouni, Patel, Calhoun, Berman, Solanki, Reddy, Grewal, Trimble

James Robert Nelson


Machine
10

Mom, Dad, Rob, Daniela:
Thank you for helping me to find my way,
to excel, to be respectful and loving.
Thank you for your love and care.
LOVE NICKY

Nicolas Neve

Thanks for the memories.

Nicholas James Newberry

Life is never a journey alone. Thank you to my friends, family, professors, mentors, and girlfriend for helping me become who I am today.

Jeffrey Quang Nguyen

Thanks Mom and Dad For always supporting me. I could not have made it this far without you guys.

Zack Niemeyer


High Efficiency Electronics for Space Applications
Introduction
ASU engineering
ARIZONA STATE UNIVERSITY

Thank you to all of my friends, family, and professors for your support. It's been fun. Peace out y'all!

Sean Kelly Noel

Thank you for always supporting me!

Nicolas javier Nogales

Love and thank you friends, family, Valerie (mom), Miguel (dad) and Vanessa (GF)! Especially my mom and dad for the unconditional love and support.

Miguel Angel Noriega

I'm grateful for my wife for supporting me in my dream;she & our kids have been an inspiration.Thanks to Mom & babysitters.Above all,thanks to my God

JOSE NUNEZ


ARIZONA STATE SUN DEVILS

Thank you to everyone for coming today and supporting me for the last four years. It has meant a lot to me! I love you all!

Alyssa Gillian Oberman

I have had a great four years at ASU. I am also thankful to my family for all the support and love throughout this time.

Grant Kiyoshi Ogawa

When good ideas come together,
anything is possible!
Thank you to my family and friends
for their support and encouragement!

Scott Douglas Olson

Thank you to my family and friends who have been with me through this wild ride!

James Logan Oplinger

Thanks to all my friends and family that supported me through this amazing journey! Especially, my mom. Love you mom!

Blake Kelly Ortiz


Social Networking and Bias in the Recruitment Process
Shinya Ishizaki
PSY 477 Applied Psychology Capstone Experience
Abstract
Party photo
Scenery Photo (Control)
Results
Conclusion
IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY
Effects of Music type on Attentional
HANDOUT FOR
DITIONAL FINDINGS

Thank you mom and dad for all your support throughout my college career. Without you, I would not be where I am today. I love you!

Brittany Renee Ortiz

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you friends and family for all of the support. I couldn't had done it without you.

Diego Noe Ortiz

I want to thank my friends and family for helping me accomplish my dreams of becoming an engineer!

Gisela Ortiz


ASU
IRA A. FULTON SCHOOLS OF
engineering
ARIZONA STATE UNIVERSITY
Eric Chang, Air Devils
I Made An Impact!

Thanks, Mom and Dad! I'm finally done!

Joseph William Palaski

Thank you so much for all your help and support!

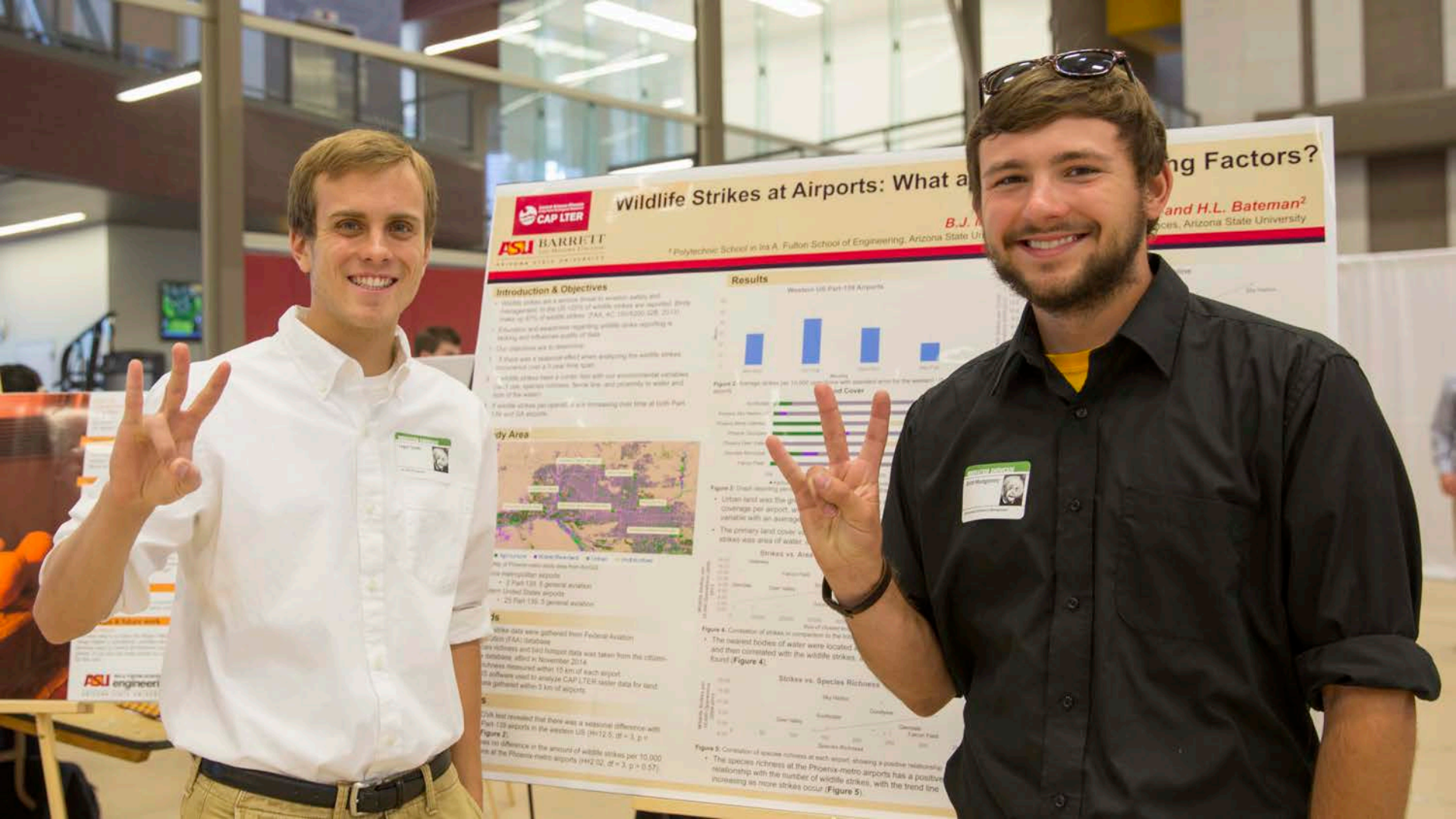
Ryan Michael Palma

Thank you to my dad and brother for always supporting me and encouraging me to continuously strive for self-improvement.

Andrew James Palmowski

thank you, my family!

Ethan Pan


Wildlife Strikes at Airports: What a
ng Factors?
and H.L. Bateman²
CAP LTER
ASU BARRETT
Introduction & Objectives
Results
Study Area
Strikes vs. Species Richness

Thank you family for the help and support you have given me over the years to bring me to this point.

David Jose Pardo

Thank you to all my friends and family for supporting me through these formative educational years, and a special thanks to the Montgomery GI Bill.

Travis Luke Parker

Thank you Mom & Dad, I love you both!

Michael Parra

Thanks family/friends! You were by far the best support for whenever i needed help. "yahoo for school, yahoo for me! Peace! I'm outta here!"

Sean Thomas Penkert

I want to thank God, my wife Ann, my kids Davina, Matthew and Lorraine. My mom, dad, brothers, family and friends who believed in me. This is for you!

Angel Perez


One-Step Pickering Emulsion Polyme
Background

I would like to give a special thanks to my lovely parents, sisters, and friends. Los quiero mucho. Y el shop Los G's.

Antonio Perez-Diaz

Thank you friends and family for everything!

Joshua Perkins

Thank you to my family for all your support. I did it! Ayóó Áníínínshní.

JoAnne Pete-Deschenie

Thank you Mom and Dad for supporting me through all my years of schooling. I love you.

Timothy Daniel Peterson


ARIZONA STATE UNIVERSITY
go
engineering
1

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

I have finished a major section of my life and am on my way to the rest of my life. Thank you.

Jacob Mccallister Phillips

Look I made it in one piece!

Thomas Perignon Picciano

I would like to thank my parents for their support in my dreams and aspirations. They helped make all of this possible.

Trevor Charles Pickrell


STERILITY
EASE-

Thank you to all my family and friends for all the love and support!

Kory Ray Pottorff

Thanks for all the love and support over the years
Prinsen family - Ryan

Ryan Thomas Prinsen

I'd like to thank my family and my friends for all their support over the years. I could not have done it without guys. I love all of you.

Connor Timothy Pyle

Thank you everyone for believing in me and constantly encouraging me to be the best person I can. I am glad you were by my side.

Andre Esteban Reynoso Quihuis

To all my family and friends, I love you guys so much! Thank you for being supportive and positive.

Devinne Ramirez

Inorganic Coated Polypropylene Separators for Lithium Ion Batteries

Paul McAfee, Chemical Engineering
Mentor: Dr. Jerry Y.S. Lin, Regents Professor
School for Engineering of Matter, Transport and Energy

Research Objective: To improve the durability of lithium ion battery separator membranes while maintaining or improving cycle performance

Li-Ion Battery Background

- Higher energy density and operating voltage than other secondary batteries
- Significantly lower self-discharge rate (3% / month)
- $30 billion growing industry: personal electronics and electric / hybrid cars

Industry Standard: Polypropylene (PP) Separators

Pros:
Adequate cycle performance

My Work

Dip – Coated PP Separators in 2 Inorganic Membranes

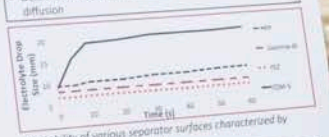
- #1: Mesoporous gamma-alumina (Al1 , Al2, Al3)
- #2: Macroporous yttria-stabilized zirconia (YSZ1, YSZ2, YSZ3)
- Control: 2 Pure-PP separators (PP1, PP2)

Built and Evaluated Batteries

- Assembled separators in coin cell with anode, cathode and electrolyte
- Performed constant current/constant voltage cycle test
- Determined discharge capacity over multiple cycles

Interpretation of Results

- Poor wettability of inorganic membrane layers hindered electrolyte diffusion
- Low porosity of YSZ provided additional resistance
- Delamination of gamma alumina caused slow/uneven diffusion



Wettability of various separator surfaces characterized by increase of drop size over time.

Dear Mom & Dad,
I want to thank you for your continued support and encouragement during my time here at ASU. I could not have done this without you!

Mounica Rao

Thank you to my family for supporting me throughout my college education and thank you to all the people who helped along the way.

Christopher Raupp

Thank you mom and dad for trusting me and sending me to America. Today I am an engineer.Thank you to all my friends for making my ASU life memorable.

Naga Vamsi Rayaprolu

Dear Family-You are the reason I am here. This degree is partially yours and with that in mind, LET'S CELEBRATE!!! Thank you. It took a village. - JuJu

Julian Demetric Re'


peer mentor

Mom, Dad, thanks for the free room and board. -Jake

Jacob Andrew Reber

Thanks to all my friends and family!

Christopher Edward Recher

I appreciate the support of my family for my twenty years of schooling. Thank you to Mom, Dad, and Michael

Tyler Joseph Reeves

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering


engineer
your best ideas
build
tomorrow's today
Order of the
Engineer

I wouldn't be here without you. Thank you for everything!

Kyle McClure Reilly

Thank you to all of my family, friends and colleagues for your support during my college career. I couldn't have done it without you! Love you all!

Dominick Nathaniel Renteria

Special thanks to my parents for letting me bring my dirty laundry home on weekends.

Q. How do CS students not drown?
A. They use floats.

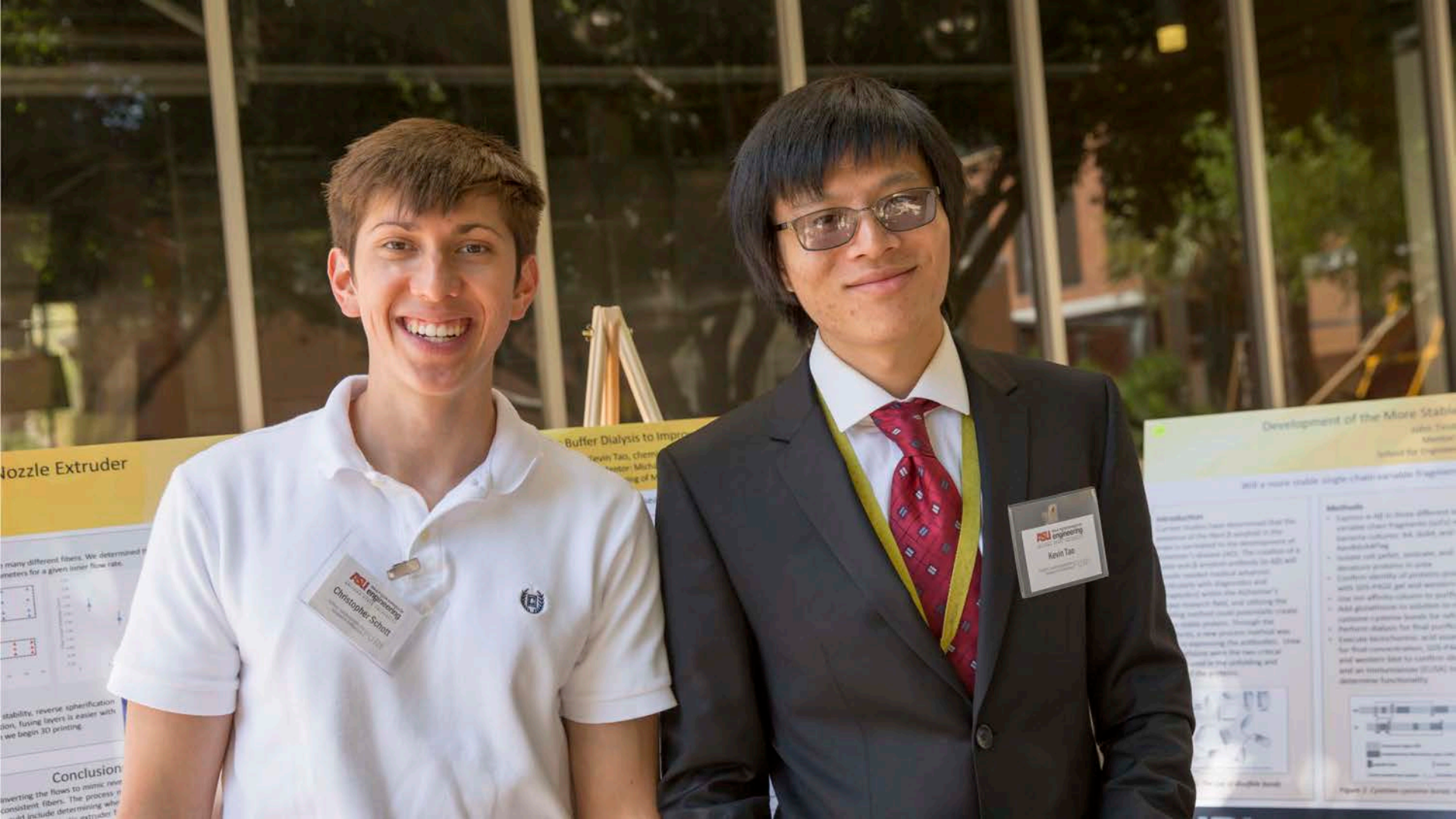
Josiah James Rentschler

It took me a while, but I finally made it. Thank you to every single person that helped me through this journey. Gracias familia y amigos. Por fin!

Mariela Resendez

Thank you to Julie and my children for allowing me to complete my degree after many years!

Brandon Kyle Rickman


Nozzle Extruder
Christopher Schott
Kevin Tao

I have had a great experience at ASU. I want to thank my family and friends for helping me on this journey. Go DEVILS!

Frank Rivera

I want to thank my parents for all the support they have given me over the years. My graduation would not have been possible without them.

Zachary Michael Robbins

Thanks to everyone who supported me throughout my college journey! I wouldn't have been able to succeed without you!

Armand Karel Roelens

Thank you so much for helping me and guiding me on my way through college. It has been a rough ride but I did it!

Timothy Adam Ros


Center for
Environmental
Biotechnology

Thank you mom and dad for believing in me and giving me the opportunity to further my education and always pushing me to strive to be the best.

Michael Paul Ruiz

I wish to thank my family for their support and my friends for their help in studying for classes. I couldn't have made it without all of you!

Phillip Rex Sabin

God has given me an awesome family and group of friends that helped me so much these past four years. Thank you all for being there for me!

Logan Salaki

I am truly thankful for your support and love the past four years. Always pushing me to do my best, I love you!

James Edward Salazar


H7
Abstract
Resources
Final Product
NPV and Business
H8
Abstract
Motivation of Product Design
Technological Innovation
House of Quality

Thanks to my Brenda as well as my family Paz and Salazar for all there support, they were there in the toughest times through out my academic career!

Johnathan Salazar

Mom, thanks for putting up with me for so long. Couldn't have gotten here with out you, love you!

Matthew T. Salazar

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Gracias a todos mis amigos, familia y Bianca. Gracias Mama y Papa. No fue facil pero ya finalmente estamos aqui. Yeahhhhh!

Ivan Ginez Sanchez

Mama y Ruben: Mil gracias por todo el apoyo y el amor que me dieron desde que llegue de Argentina. Gracias Che!

Joaquin Santecchia


ASU

Thank you mom and dad for your endless support through this journey and thank you Leslie and Sara for all the laughs couldn't have done it without you

Orlando Marcony Santos

Dad, Mom, Laurie, Allan, Jessica, Anthony, Papa Nanny, Kaley! Finally made it 6 years later! Hope you're not sweating bad in those seats love you all.

Robert Michael Scarsella

I am so grateful for my parents supporting me as I found avenues I never saw myself going.

Jessica Hammitt Schiltz

I am grateful and appreciative of my family members, friends, and fellow students who have helped me to graduate. Thank you all.

Brian Matthew Schrock


ASU
the R.H.O. project
A myoelectri
Project Overview
ASU engineering
Infrared Vasoc
Variable Frequency Mechani

I would like to thank my family and also my beautiful and incredibly supportive fiance. I could not have done this without you. :)

Brandon Richard Schwartz

Thank you, Dad, for 28 years of loving support. I know you're looking down on me, proud, and I wish you could be here so I could hug you one last time

Carl William Scott

Thank you Mom and Dad for your love and support! And thank you to my lovely fiancee! I can't wait for what the future holds! Hooyah Navy!

Christopher Michael Scott

Thank You to my beautiful wife Suzanne for loving and supporting me through this journey. I love you always and forever. Love

Tim Scripture

Mom & Dad - Thank you for making this all possible

Benjamin Joseph Sears

I would like to thank sidewalks for keeping me off the streets.

Greg Eric Selby

I just want to thank God, my family, TBM, and my friends for all the support over the years.

Jonathan Shahani

Ake, Ana, Saule tate Rakhmet! I never thought tonight could ever be this close to me. We made it!

Abylay Sharip

Thank you Mummy and Papa for all you have done for me! I would not be here without you!
Also, a thank you to Swaran Bua and Kenneth, and my family!

Aman Sharma

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you for all of your support!

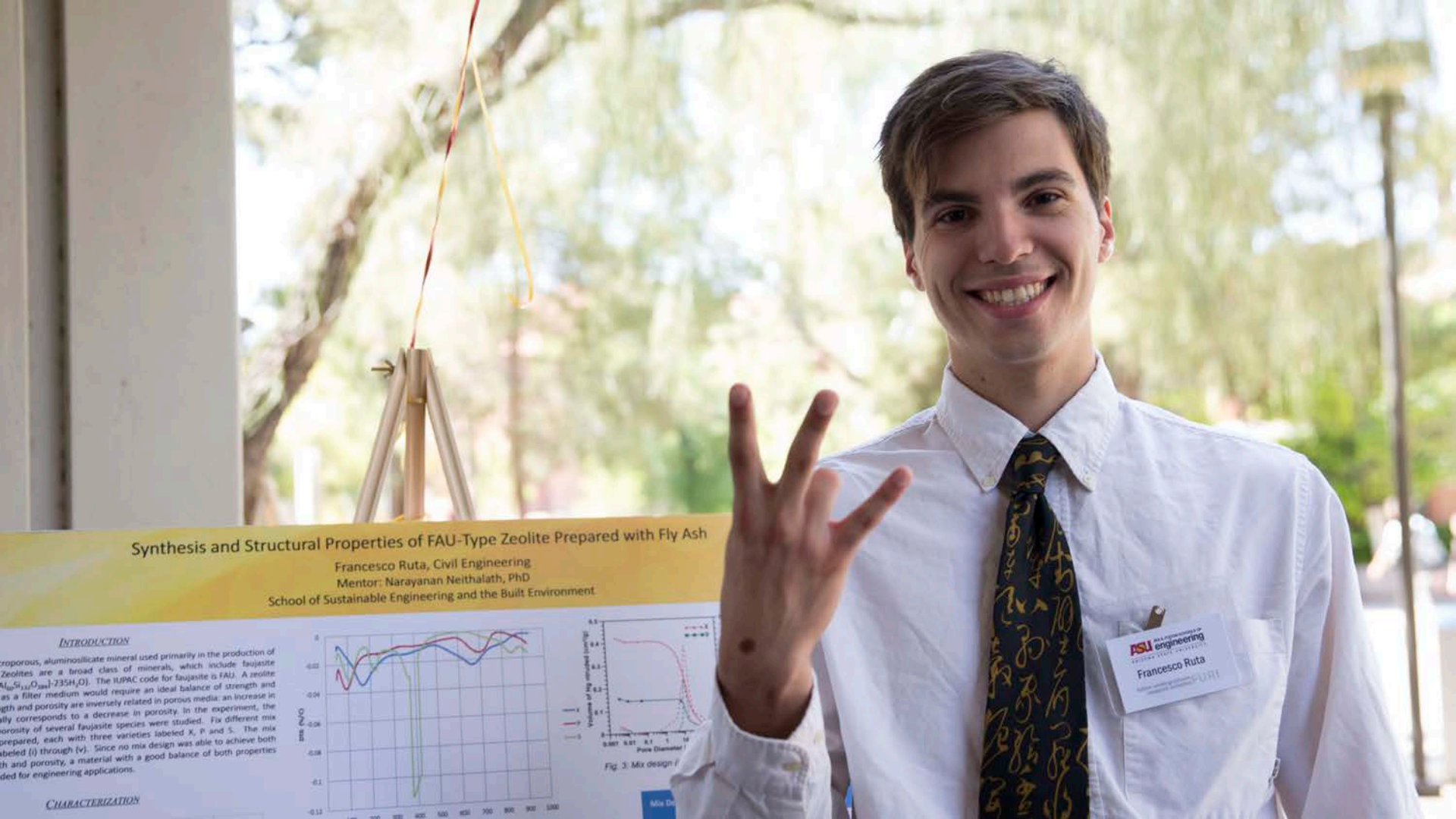
Zachary Tyler Sherwin

Thank you for your support AniSangBhai!

Shemal Shukla

Special thank you to my family for all their help and support during college.

Aaron S. Sidhu


Synthesis and Structural Properties of FAU-Type Zeolite Prepared with Fly Ash
Francesco Ruta, Civil Engineering
Mentor: Narayanan Neithalath, PhD
School of Sustainable Engineering and the Built Environment
INTRODUCTION
CHARACTERIZATION
Francesco Ruta

Thank you Mom and Dad for the love and support, and for making me into the man I am today. I love you and will miss you very much!
Love,
Chris

Christopher Patrick Silvia

Words can't explain enough how thankful I am to you MAMAN & BABA. Many thanks to all my friends too, Especially Thomas. Love you all !!!

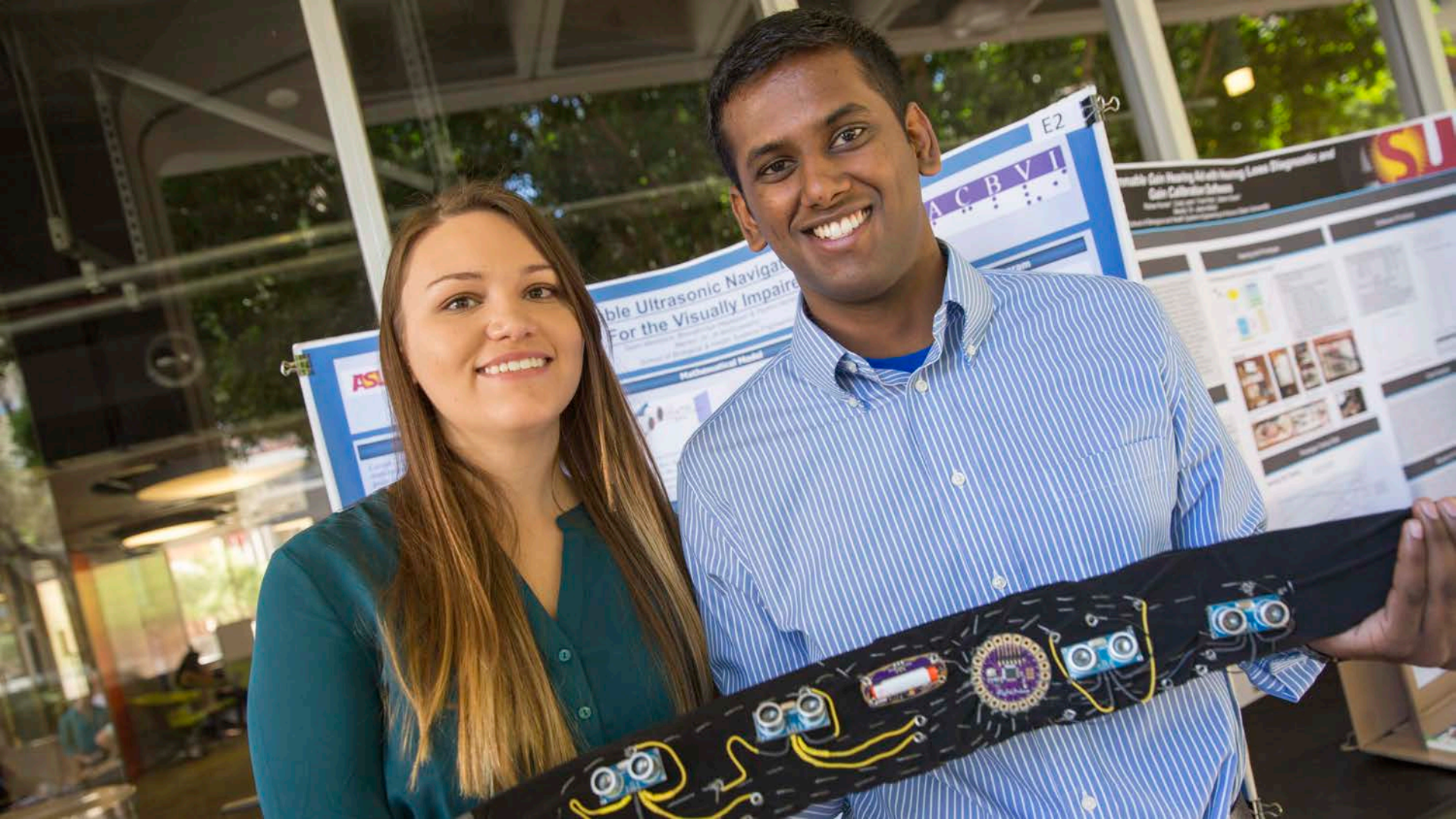
Salar Simaie

Since I was a child I wanted to be a Sun Devil. I want to thank my family for helping my dream come true.

Evan Ian Slade

I would just like to say thank you to all my family and friends that supported me through my college experience. I love you all

Alexander Arlington Smith


E2
ble Ultrasonic Navigat
For the Visually Impaire

Thanks to family and friends who stuck it out. I finally did it!

Dominic Lopez Smith

Thanks for believing in me, friends and family! I did it!

Kristopher Jorge Smith

Thank you for my family for all the support during this journey!

Marc Christian Smith

I have loved my experience at the Fulton School. The professors and students are great, and I feel ready to take on the world.

Allison Marie Snodgrass

We did it!

Daniel Solis


ASU
engineering
SRP

Thank you to all of my family and friends for their love and support! Especially my wife! Love you baby!

Vicente Solis

Thank You to all of you that have made me who I am and instilled the core beliefs that have helped me get to this very point in my life.
Love You All

Eric Andrew Soriano

My sincerest gratitude to Dr. Douglas Cochran, my mother and father, the sake boys, and my brothers in Pi Kappa Phi.

Gregory Paul Spell

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering


ECEE
Thomas Fou

I want to thank my wonderful fiance, Alex Links, and my friends and family for supporting me throughout my time at ASU!

Mikaela Johanna Stadie

Thank you mom for all the sacrifice and love that you given me. Thank you Chetan for all the love and generosity that you have bestowed.

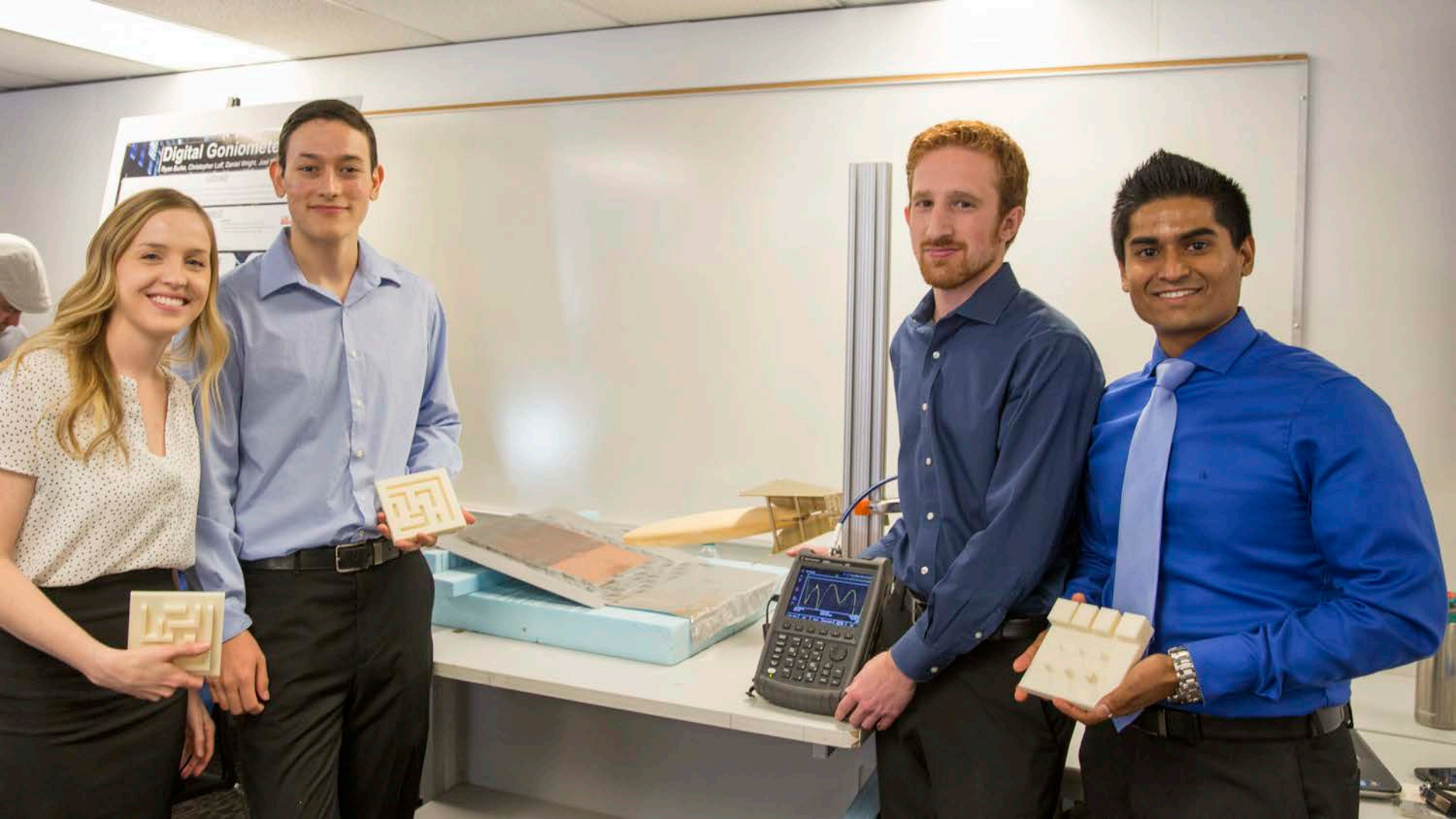
Dennis K. Stephen

Mom, Dad, Lindsey, Seth, Dekota, and Family,
Thank you for all your support and encouragment!
Love,

Lincoln Everette Stewart

Thank you Mom, Dad, Courtney, Brittany and Kyle for all the support you guys have given me throughout the past years! I love you all, GO DEVILS!!!

Jake Louis Stiak


Digital Goniomete

Thank you so much for all of the love and support over the years! I am now an official "Enginerd"!

Lynne Margaret Stocker

Thank you to ASU for sparking my interest in technology, and thank you mom and dad for helping me achieve my dreams.

Joseph S Stratton

Thank you for the help and support peeps

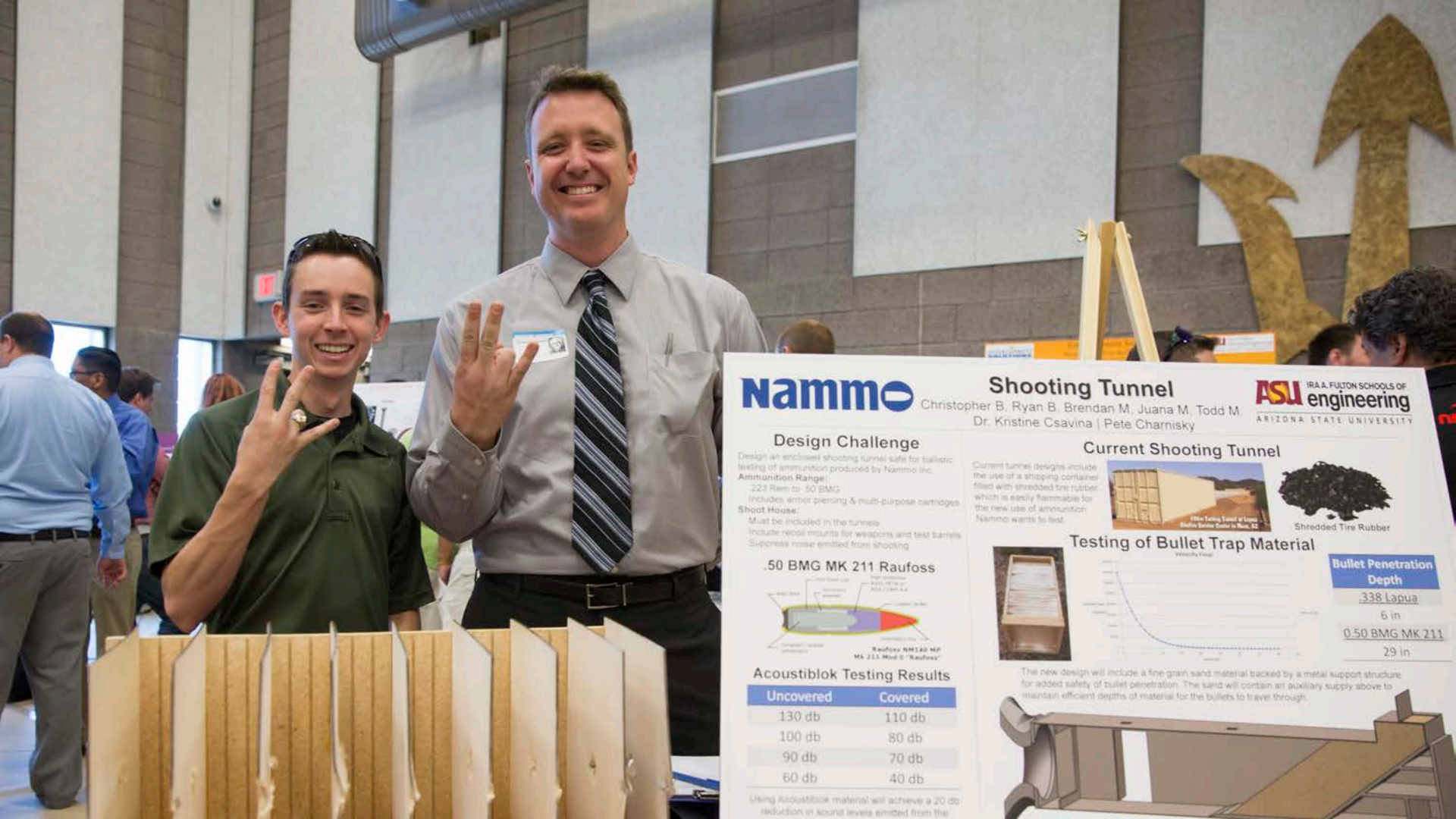
Ross Holiday Stuckert

Big thank you to my immediate and extended family, friends and neighbors. I would not have completed this accomplishment without your support.

John Joseph Swodeck

Thank you Mom, Dad, and Noel for believing in me.

Timothy Daniel Szuberla


Nammo
Shooting Tunnel
Christopher B, Ryan B, Brendan M, Juana M, Todd M
Dr. Kristine Csavina | Pete Charnisky
ASU IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY
Design Challenge
Design an enclosed shooting tunnel safe for ballistic testing of ammunition produced by Nammo Inc.
Ammunition Range:
.223 Rem to .50 BMG
Includes armor piercing & multi-purpose cartridges
Shoot House:
Must be included in the tunnels
Include recoil mounts for weapons and test barrels
Suppress noise emitted from shooting
.50 BMG MK 211 Raufoss
Acoustiblok Testing Results
Uncovered
Covered
130 db
110 db
100 db
80 db
90 db
70 db
60 db
40 db
Current Shooting Tunnel
Current tunnel designs include the use of a shipping container filled with shredded tire rubber which is easily flammable for the new use of ammunition Nammo wants to test.
Shredded Tire Rubber
Testing of Bullet Trap Material
Bullet Penetration Depth
.338 Lapua
6 in
0.50 BMG MK 211
29 in
The new design will include a fine grain sand material backed by a metal support structure for added safety of bullet penetration. The sand will contain an auxiliary supply above to maintain efficient depths of material for the bullets to travel through.

I would like to thank my family (those present as well as those back in Cuba, who are with me in spirit) for their support, patience, n encouragement!

Rodolfo Tamayo

I would like to thank my parents for their love and support.

Kevin Tao

I would like to say thank you to all my loved ones who helped me get through everything these past four years. I love you.

Alysyia Tarin

This is as much your accomplishment as it is mine. Thank you for sacrificing your time and energy to make sure that I was successful.

Randi Michelle Taylor


Jessica
Schilz

Dad, Mom, Schniz, Displet, Laura and Kaitlan, thank you for all your love & support! Tim Markison, thanks for being my role model. Love you all!

Timothy Douglas Taylor

I would like to thank my family for their continual support through the journey of engineering at ASU! I love you so much!

Love,
Logan Taysom

Logan Rex Taysom

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thanks Mama and Papa T for everything you've done for me! LN, you know whats up! Love you all!
Love,
John "BN"

John Michael Templeton


Backyard Brew Labs
The Brewhouse
Cooling
Storage
Design Drawings
Final Prototype
The Brewing Process
Future Prototype Considerations

I would like to thank all God, my family, my fraternity brothers and all my friends for helping achieve this goal. I love you all.

Abeal Bealem Tezera

Thanks to my family for all the support!

Logan Kyle Thompson

Mom, dad, my sisters Linda and Savannha, and my love Jungbin, I couldn't have gotten this far without you! LOVE YOU and THANK YOU! <3

Juhui Thorn

Thank you for all your support and motivation, I honestly could not of done this without your help.

Thomas Keating Thurber

Thanks to my family for always supporting me through the last four years of school! I never would have made it through without you!

Sarah Elizabeth Toews

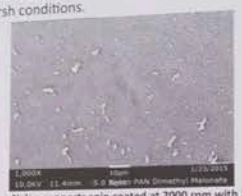
Solution-Cast Membranes for Wastewater Recovery: A New Chemical Resistant Nanocompos

Sofia Herrera, Chemical Engineering
Mentor: Dr. Mary Laura Lind, Assistant Professor
School of Engineering of Matter, Transport and Energy

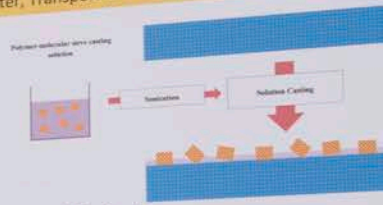
Abstract

The research goal is to create a membrane with an impermeable polymer layer that can withstand very acidic environments but still be used to purify water. Nanoparticles called zeolites act as a water selective pathway through this impermeable layer and allow water to flow through the membrane. If this research is successful, many more water sources can be tapped since the membranes will be able to withstand harsh conditions.

Polypropylene supports spin coated at 4000 rpm with 2 grams with Silicalite 1



Nylon supports spin coated at 2000 rpm with 2 grams using dimethyl as the filler material.



Research Methods

The research has been focused on the bottom hyd
research, spin coating at 4000 rpm with polyacrylon
proved to make the most permeable and thinnest f
was applied to new supports to try to make a more c

Results

- The larger pores of new supports (nylon and po
form consistent films
- An increase in polymer and lower spinning rate
coverage of the support as well as the use of a fill
- The zeolite components were well anchored to
as the amount of polymer used increased

Future Plans

Gracias Mommy, Dad, &
Big brother I love you!

Perla Verdugo Torres

I want to thank my family for helping to guide me through college. I appreciate your continuous support in my educational pursuits. It was invaluable.

Samuel Joshua Turner

I would like to thank my parents, friends, and family for all their help and support the past 4yrs even though I didn't visit that often.

Samantha Ann Twet

THANKS TO MY FAMILY AND FRIENDS FOR ALWAYS PUSHING ME EVEN WHEN YOU FRUSTRATED ME DOING SO. I LOVE YOU AND I DID IT :) ASU CLASS OF 2015

Alexis Danielle Valencia


ASU IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY
make your future happen
engineer your best ideas
build tomorrow's today

Thank you for all of the support from my family, friends and brothers. Phi Alpha.

Robert Valenza

Thank you for all your support!

Anthony Vargas

Only took 7 years to get here...Thanks to all for the support!

Todd Vargas

Thank you so very much to my family and friends for putting up with everything my degree and I have put you through, I couldn't have done this alone.

Rebecca Lee Veerman

To Big Red, Quint, Mr. Prime and the Rhino family: Thank you for everything. I'm here because of you.

Lina Melissa Villa

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you Mom and Dad for the love and support the past four years. I couldn't have done it without you guys!

Andrew Joseph Villareal

Thank you for all your support.

Sandeep Gautam Vora

I couldn't have done it without your constant support. Love Adri

Adri Shelton Walker


ASU

Mom, Dad and Marley, thank you for all of your love and support! I couldn't have done it without you.

Dylan Chase Walker

My time at ASU was filled with memorable experiences. I acquired friendships and valuable skills during my time here. I am appreciative to everyone!

Christopher James Walmsley

Thank you everyone for your love and support, especially my wife Cassie, who worked her butt of so I could go to school! I love you all!

Connor Jeffrey Walther

Thanks mom and dad for the support system you've built for me, I love you!

Nader Warrayat

The hands on work done was exhilarating. I will miss the late night studies most of all, and my parents worrying that I have not rested properly.

Reda Warrayat

Without my family, I wouldn't be the man I am today. By supporting me and giving me the freedom to chase my dreams, I am forever thankful.

Drew James Watkins

Thank you to my family for supporting me in my education!

Kyle Wade Weeks

Kaitlin,
You are my rock, my sure footing, and my guiding star. Because of you I am here today; thank you. "You have stolen my heart" now and always.

Brian Robert Welty


Digital Goni
Ryan Burke, Christopher Loff, Dan
Concept
Research
User Interface

Thank you to everyone who helped baby me through this degree! I couldn't have done it without you :)

James Brant Werra

Thank you Mom and Dad!

Matthew Lee West

I would like to thank my Family and Friends for all of their unending support and motivation! Thanks!

Kevin Westgard

ASU has provided the best 4 years of my life. Thank you Mom, Dad, Jim & Jill for your unconditional love and support! I DID IT!

Erika Marie White

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering


Chase Fauer[1] and John Templeton[1]
Mentor: Dr. Thurmon Lockhart[1]
[1]School of Biological and Health Systems Engineering
Functional Diagrams and Mathematical Mode
Application Design
Sensor Imp
engineering
ARIZONA STATE UNIVERSITY
G1

To my mother: thank you for helping me persevere through illnesses and failures. I hope you're as proud as I am grateful.

James Phillip White

Thanks Ed, Mom, Karol and Lilly for your support these past few years!

Dominika Wilk

This is for you Morgan, Ian, and Zack! You were my motivation through this whole journey. I did it and one day you will too!

Angela Marie Williams

Thank you to my wonderful family for your love and support! Without you, this wouldn't be possible.
Love,

Micah Teresa Windsor


Developing a Flexible
gnetic Field Imaging Array
Other Potential Applications

Finally done. Thank you God and thank you everyone who has been there for me.

Jang Hoon Won

The past 4 years here at ASU have been incredible. Thanks to my family for all the support!

Thomas Joel Wong

Aero Pirates Abroad! Keep the cider flowing!

Donald Leland Wood

Thank you to my entire family and friends for your support and love throughout my college career. Thank you also to my professors. Thank you Steph.

Miriam Arna Woolley


EFFECT OF SPUTTERING CONDITIONS ON THE MICROSTRUCTURE OF TITANIUM THIN
Cole Snider, Mechanical Engineering
Mentor: Dr. Jagannathan Rajagopalan, assistant professor
School for Engineering of Matter, Transport and Energy
How does the grain size, distribution and orientation of titanium films vary with
This is the sputtering machine used to build titanium films. The experiments were conducted on (100) and (111) Silicon wafers. The sputtering parameters included: heating
Top: Titanium on HF etched silicon
Middle: TEM data for the same
Bottom: Stress/Strain Curve for
ASU engineering
Cole Snider

Thank you to everyone who has ever supported me in this long journey. I'll devote my accomplishment to helping others in positive and supportive way.

Daniel Mead Wright

Personal thanks to my parents for their loving support throughout school.

Tanner Lee Wright

Thanks to ASU, my friends and family, and most importantly my Mom and Dad. Couldn't have done this without their incredible support! Go Devils!

Brian James Wyatt

Thank you mom!

Weidong Ye

Thank you to everyone for helping me get even this far.

Stephen Michael Yonts


NDI
NDI
DELL
DELL

Thanks mom,dad,Cindy, all my family for ur love n support.I did it,its been worth it.To JCs this is proof u can do anything u set ur mind 2.love u all

Julio Cesar Zavala

Thank you Alyssa for being there for me even on those late homework nights. Thank you family for your encouragement.

Christopher Thomas Zeigler

share your victory 

#ASUGrad

#FultonGrad

#ASUengineering

Thank you to my amazing wife, Angela, my beautiful son, Ashton and the greatest parents, William & Lana.Would not be here without U! I Love you all!!

William Anthony Zibert


Pool Aware System Data
tables:
5
5
5
6

To everyone who has stuck by me through the rough times. I could have never come this far w/o your patience, love, and support.

-WE DID IT!

Jeremy Michael Zinkofsky