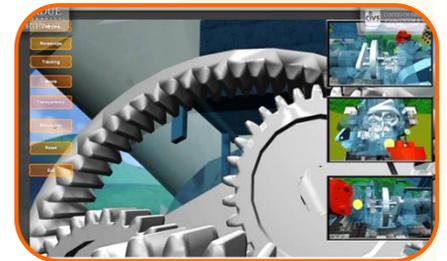


Wind Energy Virtual Training Attracts National Attention

VR Capability Propels CIVS Stature at NSF-ATE Conference

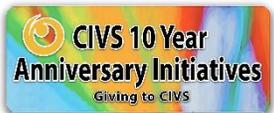
CVIS’s 10-year-long, continuous development of cutting-edge wind energy training simulators using virtual reality and augmented/mixed reality technologies was on prominent display in Washington, DC, during the National Science Foundation’s annual Advanced Technological Education (ATE) Principal Investigators’ Conference, held October 24-26, 2018, at the Omni Shoreham Hotel. Purdue Northwest was also among the very few institutions to site a pair of booths at the conference—and thanks to the projects showcased, CIVIS and PNW are expanding their national reputations for innovative development of virtual reality instructional systems.

“CIVIS has a long and continuous, uninterrupted history of wind energy projects,” CIVIS Director Dr. Chenn Zhou observed. “Using virtual, augmented, and mixed-reality technologies, CIVIS has developed numerous wind energy simulators through grants from the Department of Education and the National Science Foundation. Some have already been used for training, troubleshooting, design, maintenance, and safety.” [Read more ...](#)



CENTER FOR INNOVATION THROUGH VISUALIZATION & SIMULATION

PURDUE UNIVERSITY NORTHWEST



2200 169th Street
Hammond, IN 46323

219.989.2765
civs@pnw.edu
centers.pnw.edu/civs



“Steel Week” on Slate at PNW for April 8-12

Steel manufacturing achievements and fundamental region importance will be recognized April 8-12, 2019, with activities to include the AIST Midwest Chapter Dinner & Presentation (Tues – with invited speaker Tyamo Okosun), Site Field Trip (Wed), Steel Industry Career Feature (Thu), and Steel Industry Engineering Distinguished Speaker (Fri).



The week’s anchor event is the annual **Spring SMSVC Meeting**, crowned with a Wednesday Evening Dinner and Mystery Guest Speaker at PNW’s Room With a View. [Read more ...](#)

CIVIS to Celebrate 10-Year Anniversary

Please join us on **Wed., April 17**, as we toast a decade’s worth of research & educational advancements, student & collaborator successes, beneficial economic impacts, the innovative people and technologies that make such accomplishments possible, and the **real** refreshments and entertainment that will be on hand. Itinerary updates will be posted on our web News under [CIVIS Celebrates 10](#).



SMSVC/CIVS Research Tapped for Journal Special Issue

Research performed through PNW’s Steel Manufacturing Simulation and Visualization Consortium (SMSVC) and CIVS continues to “raise the bar” for steel manufacturing, as evidenced in an upcoming special issue of the journal *steel research international*.

The special “Steel Manufacturing Simulation and Visualization” issue is scheduled for publication in April 2019; includes five full-length research topic papers and one review paper written by CIVS students, faculty, and staff; and is introduced by the guest editors—CIVS and SMSVC Director Dr. Chenn Zhou, and SMSVC board member Rick Bodnar, Director of R&D at SSAB Americas. [Read more ...](#)



Senior Design Teams Secure Research Honors

“Continuous Casting” Team Wins Poster Award

The Senior Design II team of Anthony Sotello, Andie Wahlberg, and Salim Suleiman won a Best Poster award for their engineering project, “Design of a Slide Gate in a Continuous Caster,” at the PNW Senior Design 2018-19 Final Presentations & Poster Session, held Dec. 4, 2018. [Read more ...](#)



Zhou Presents at Peoria Chapter of ASM/AFS



CIVS Director Dr. Chenn Zhou gave an invited presentation, “Simulation and Visualization for Industrial Applications,” to around 30 collective members of the ASM – Peoria Chapter (Illinois) and AFS on Feb. 11, 2019. [Read more ...](#)

CIVS-Mentored Teams Awarded Research Grants

Nine teams of CIVS-mentored and affiliated undergraduate students (22 students total) have been awarded Fall 2018 PNW Undergraduate Research Grants (URGs). [Read more ...](#)

Die-Casting Collaborators Convene for R&D Reviews

Collaborators and metalcasting consortium members on the “High-Pressure Die-Casting Process Simulation Development for the Shop Floor” project gathered at Purdue Northwest’s CIVS and again at the Arlington Heights, Ill., NADCA R&D meeting on February 5 and 7, 2019, to survey evolution of die-casting machine simulator schematics and “interactivity,” examine aspects of the training scenarios likely to be of greatest benefit to operators in improving safety and overall operations, and discuss preferred output platforms—and dissemination—of the final product(s). [Read more ...](#)



Spotlight on Faculty: Dr. Ran Zhou



Ran Zhou joined Purdue University Northwest in 2018 and is an Assistant Professor in the Department of Mechanical and Civil Engineering. Dr. Ran Zhou’s current research at PNW focuses on modeling the transport and entrapment of inclusions during steelmaking processes, and is being performed in collaboration with CIVS and Dr. Chenn Zhou. The joint project “Understanding of Inclusion Formation and Removal Mechanisms in Steel Refining” was recently awarded a PNW Catalyst Grant. This project will help to enhance academic-industrial partnerships and advance knowledge and applications in steel refining. Her research interests also include the separation and focusing of microparticles by using microfluidic and microelectromechanical systems (MEMS), and lab-on-chip fabrication techniques.



Virtual Education, CIVIS Innovations Showcased at Indiana Statehouse “Purdue Day 2019”

A four-member team from CIVIS, along with their display and virtual reality technologies and an entire digital portfolio of CIVIS projects, were among an elite set of Purdue Northwest research and educational units selected to host a booth and represent PNW at the annual “Purdue Day,” held this year on Monday, Feb. 18, in the South Atrium of the Indiana Statehouse. [Read more ...](#)

PNW Hands-On Learning Tour Features Forensic Science, CIVIS Demos

On October 10, 2018, the PNW Hammond campus hosted nearly 120 students from three regional Illinois high schools, walking the students through University Village, engaging them with the Dept. of Communications and Creative Arts broadcasting studio operations, and showcasing the nursing simulation labs. But the attention-getters of the day belonged to Charles Steele’s and CIVIS’s demonstrations of 3D visualization technologies, particularly the forensic science virtual crime scene environment and steelmaking blast furnace tours—from both the outside and within. [Read more ...](#)



Sargent & Lundy CEO Provides Perspectives on Career Engineering

Retired Sargent & Lundy President/CEO Alan “Bud” Wendorf’s presentation of November 16, 2018, might best be characterized as *relevant*. Relevant for any student considering a career in engineering, and relevant for any working professionals looking to positively “engineer” their own career. [Read more ...](#)



Engineering Distinguished Speaker Series Continues ... with a **Friday, March 29** scheduled presentation by Samir Ginde, “Finding One’s Feet in the Real World.” Drawing on 15+ years of experience in wireless chipset and smartphone development, Ginde will discuss transitioning from student to real-world engineer status. **3:00-4:00 pm, CIVIS Theater.**

Region Girl Scouts Fêted by CIVIS, School of Engineering

Nine members of a region Girl Scout troop and their adult attendants toured CIVIS facilities on Feb. 20, 2019, explored technology demonstrations and walk-throughs of virtual environments, and were treated to overviews on the roles of engineers and engineering education in our modern world. [Read more ...](#)



Student Event Experience: Komal Sharma – MIT Hackathon

Graduate Research Assistant Komal Sharma, who is enrolled in PNW’s Master’s program in Computer Science (2017 – present) and has contributed visualization-side development to numerous CIVIS projects, recently participated in the world-renowned **Reality Virtually Hackathon** at the MIT Media Lab in Cambridge, Mass., January 17 – 21, 2019. Reviewing the experience, she states without hesitation, “I want to go back—I want to go through that again, and build on it with everything I can possibly bring to bear.”

“The Reality Virtually Hackathon encompasses the kinds of activities you might normally find at a really open-ended and vast game development or virtual reality/augmented reality workshop—but ...” [Read more ...](#)

Steel Consortium Meeting Refines Research Gains

For the sixth time in three years, steel industry process professionals and engineers from across North America came together at Purdue Northwest's CIVS for two days of collaboration on technical research to broadly advance steel industry safety, process and energy efficiency, and product quality. The event was the Fall 2018 SMSVC Meeting, held Nov. 14-15, 2018, at the PNW Hammond campus and attended by nearly 40 representatives from the 11 Consortium member companies.



New highlights included a tour of ArcelorMittal's Riverdale plant, and an invited dinner talk by PNW Professor Harvey Abramowitz on "Visualizing the Ternary Phase Diagram." [Read more ...](#)

Test Audience Warms to Virtual Fire Extinguisher Training

CIVS Director Dr. Chenn Zhou and Senior Research Scientist John Moreland gained direct feedback on virtual fire extinguisher training in action at ArcelorMittal Burns Harbor's Deerfield Training Center on Friday, February 8, 2019, and user responses suggest a heightened engagement sparked by the "game-style" interactivity of the program and its environment. [Read more ...](#)



Contractors Association and CIVS Celebrate Common Ground



Senior Research Scientist John Moreland, CIVS's go-to person for integrating safety training and visualization technology, attended the Mechanical Contractors Association (MCA) of Chicago Open House on October 30, 2018, in Burr Ridge, IL, at the invitation of MCA Senior Vice President Dan Bulley, MCA's go-to person for technology, safety, service, sustainability, building codes, and engineering. [Read more ...](#)

STEELSIM 2019 Advanced Registration Now Open

Advanced, discounted registration for STEELSIM2019 at The Marriott Downtown at CF Toronto Eaton Centre in Toronto, Ontario, from August 13-15, is now open—but only until July 2, 2019. For further information about registration fees, student rates, and company discounts, please visit <https://www.aist.org/conference-expositions/steelsim/registration/>.



SMSVC NOTES

Spring 2019 Annual Meeting Scheduled for April 10-11, 2019

The April AIST Midwest Chapter Dinner will be on Tuesday, April 9, at Avalon Manor in Merrillville, IN.

For more information, please contact us at civs@pnw.edu

SMSVC Accepting New Members

SMSVC is accepting new members. If interested in becoming a member, contact us at civs@pnw.edu.

For information on the Consortium, visit steelconsortium.org.

Facts and Impact (Since 2009)

- \$40+ million savings for companies
- \$17,800,000+ in external grants and contracts
- 120+ external organizations collaborated with CIVS
- 350+ projects
- 440+ national and local news
- 1,510+ paid research positions (student, MS/PhD, etc)
- 10,000+ students used CIVS for virtual labs
- 120+ Purdue Northwest faculty and staff collaborators
- 137 student awards and grants (globally, since 2011)
- 32,700+ local and global visitors