SEAONY x NCSEA

STRUCTURAL ENGINEERS DO *WHAT?*

Thurs. Feb 2nd | 5:30 PM, EST

CHRIS NOVERAL

SPECIALTY ENTERTAINMENT & THEME PARK RIDE DESIGN

TAIT TOWERS

Chris Noveral has worked as an engineer in the themed and live entertainment industry since graduating from Penn State with a B.S. and M.S. in Civil Engineering with a structural focus. He currently works for TAIT Towers, a market leader in live experience design and production, as a Mechanical Engineer. His work involves providing engineering support for projects ranging from large touring concerts, to permanent theatre equipment installation and show equipment for theme park rides. Before moving to TAIT, he worked for Walt Disney Parks and Resorts as a Senior Mechanical Engineer in the Ride and Show Engineering department. Working in the Design and Engineering group in Orlando, he provided engineering design, analysis, and testing support for various long term refurbishment projects, as well as commissioning of new ride, show, and transportation systems. His first full time job after graduating from Penn State was with ATA Engineering, where he worked as an Engineer and Project Engineer for analysis, testing, and design projects in the entertainment industry, specifically with a focus in structural dynamics and fatigue analysis. Before graduating college, his first work in the themed entertainment industry was as a ride operator on Space Mountain in Orlando.

Throughout his entire career, he has also volunteered as a member with the ASTM F24 committee on Amusement Rides and Devices; he currently acts as the Executive Membership Secretary for the committee, and also chairs the Loads & Strengths Task Group. He was awarded the James A. Thomas Presidential Leadership Award, which recognizes members early in their career who have significantly advanced ASTM's mission through accomplishment, example, and vision, for his work on student volunteer initiatives. ASTM F24 has had members volunteering for over 30 years across different companies and international borders to maintain safety within the themed entertainment industry worldwide.

During his time at Penn State, he co-founded the Penn State Theme Park Engineering Group, was a 4 year member of the Penn State Marching Blue Band, and President of the ASCE student chapter. His M.S. thesis work at Penn State was completed under Dr. Daniel Linzel, and his Schreyer Honors thesis adviser was Dr. Eric Donnell. After spending time living in San Diego and Orlando, he has moved back to his home state of Pennsylvania along with his wife, primarily to make sure his 1 year old grows up to be a Penn State fan.

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DANIEL MURPHY

STRUCTURAL DIVING INSPECTOR

MCLAREN

For his undergraduate degree, he attended Manhattan College in the Bronx, graduating in 2018 with a bachelor's degree in Civil Engineering. While working, he completed a master's degree program in Structural Engineering from University of Oklahoma. Following undergraduate graduation, he attended the Minnesota School of Commercial Diving, becoming a certified commercial diver. Immediately thereafter, he began working for McLaren Engineering Group as an Engineer Diver. This role encompassed performing structural inspections of waterfront facilities to assess and collect data necessary to develop rehabilitation or replacement design for aging infrastructure. He has worked within this role for the entirety of his career so far, working on a wide variety of structure types throughout the tristate area.

While in school, he anticipated working in the construction management industry as his internships were construction focused. Towards the end of his junior year his school ASCE board had a presentation by an individual who worked as an engineer diver for several decades, discussing the career path. Inspired by this talk, he searched for employment with firms that specialized in such work landing at McLaren Engineering Group. Today he works as a Project Engineer within the Marine Group at McLaren Engineering Group.

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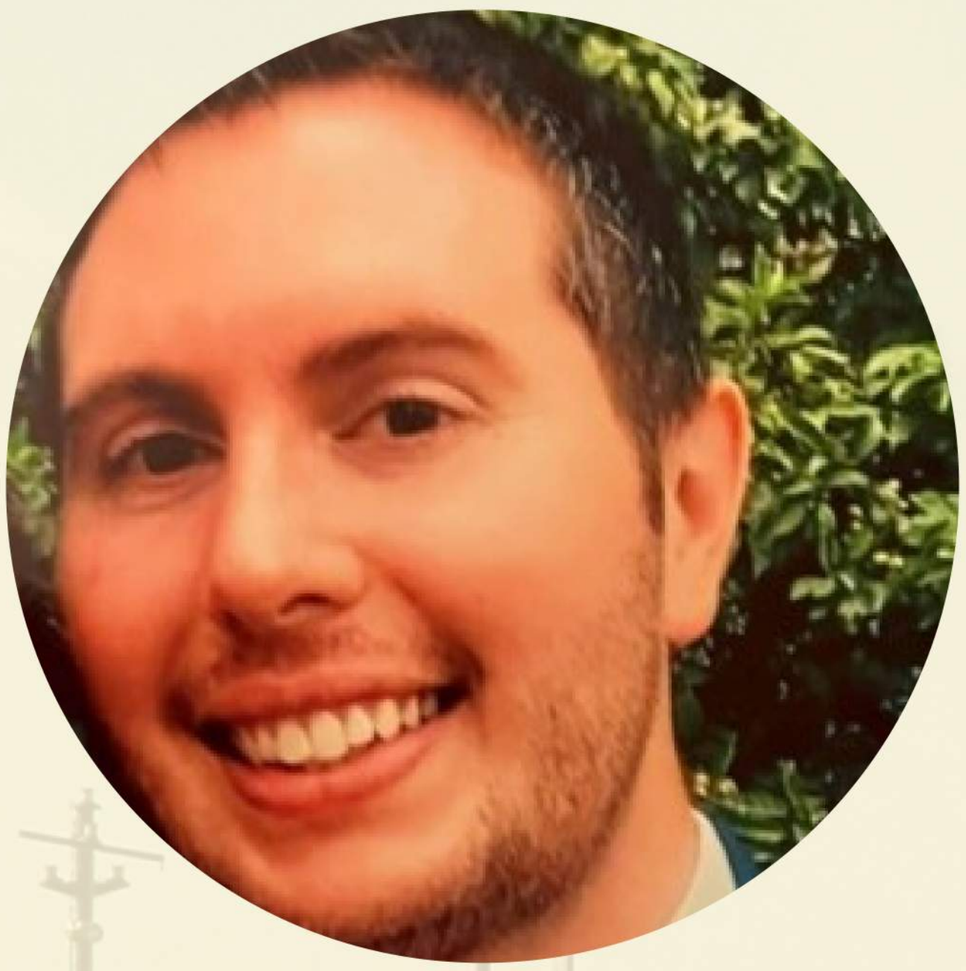

J.R. KIMBALL

MANAGER OF ENGINEERING, NAVAL SUBMARINE DESIGN

GENERAL DYNAMICS ELECTRIC BOAT

J.R. Kimball is currently a Manager of Welding & Non-Destructive Test (NDT) Engineering at General Dynamics Electric Boat in Groton, CT. Electric Boat is one of the world's premier submarine builders. Founded in 1899, Electric Boat has designed and delivered 17 of the U.S. Navy's 20 classes of nuclear submarines. Mr. Kimball began his career at Electric Boat in 2012 as a pressure hull structural engineer, supporting various new design evolutions for the Columbia Class ballistic-missile submarine program. J.R. earned roles of increasing technical responsibility as a senior hull structures engineer before being promoted to Project Lead within Electric Boat's Materials & Laboratory Services division in 2018. Mr. Kimball was subsequently promoted to his current Engineering Manager position in 2019. In his current role, J.R. is responsible for leading a staff of approximately 30 engineers and NDT Level III Examiners tasked with shipyard design and construction support, new technology research & development, and strategic management/oversight of the 600+ NDT inspectors in Electric Boat's NDT program. J.R. and his staff support design and construction projects on the Columbia Class and Virginia Class submarine programs in addition to various submarine overhaul & repair contracts (e.g. Los Angeles Class). Mr. Kimball graduated from Penn State University in 2012 with a B.S. degree in Civil Engineering. He earned an M.Eng. degree in Structural Engineering from the University of Connecticut in 2015 and an Executive Master of Business Administration degree from the Quantic School of Business & Technology in 2022. J.R. is also a graduate of General Dynamics Electric Boat's "Business Leader Group" (BLG) executive leadership development program.

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JENNIFER ANNA PAZDON

CASTED STEEL CONNECTION DESIGN EXPERT

CAST CONNEX

As the Vice President of CAST CONNEX, Jennifer leverages experience in the design of structures and construction to support engineers, architects, and contractors in the use of cast steel connections to optimize performance, economy, aesthetics, and constructibility for projects in the built environment. She provides design exploration support for architects and engineers for projects utilizing structural cast steel and she is also a key point of contact to the contractors, owners, and other stakeholders who work with CAST CONNEX. She educates users on the advantages and opportunities offered by cast steel technology, including all technical concerns such as: design methods and code compliance, specification writing, value engineering, and construction administration. She acts as Technical Project Manager for custom component design and engineering, provides Executive Oversight for all Marketing and Business Development activities at CAST CONNEX, and has championed and realized numerous HR and Administrative projects since joining the firm.

Prior to CAST CONNEX, at Build Change, Jennifer provided technical support and management while based in Indonesia, Nepal, and the Philippines. She worked with government agencies and international organizations (World Bank, USAID, UNESCO), and several Southeast Asian academic institutions on projects to save lives in earthquakes and typhoons by providing safe homes and schools, and a framework for their maintenance and proliferation through builder- and owner-training. She engineered and developed structural drawings for new construction and retrofits; provided technical expertise to develop builder training modules emphasizing disaster-resistant construction techniques for indigenous construction typologies; conducted post-disaster reconnaissance; and supported the Country Director and the Global Director of Engineering in the development of project proposals and partnerships.

Since 2005, Jennifer has been an active member of the Structural Engineers Association of New York (SEAoNY), serving on the Programs (multi-year Chair) and Publications Committee (frequent contributing author, past member of editorial board). Since 2018 she has been Director of the Board. In 2016, Jennifer founded the SEAoNY Diversity Committee, with the mission to advocate for the inclusion and advancement of marginalized and underrepresented groups in the structural engineering community. She was also an inaugural member of the National Council of Structural Engineers Associations (NCSEA) SE3 Committee. The Structural Engineering Engagement and Equity (SE3) Project was established with the mission of improving engagement and equity in the structural engineering profession. In 2020, Jennifer became the inaugural chair of the AASHTO/NSBA Collaboration Task Group 17: Steel Castings. The mission of TG17 is to develop and disseminate resources specific to the US steel bridge community to support the increased and effective incorporation of castings into steel bridge structures. As a member of the Princeton University CEE Advisory Council, Jennifer is among the invited experts and leaders in the CEE field providing input and guidance to Princeton's CEE department for strategic advancements in education and research. From 2006-2011 Jennifer served as an active member of ASCE SEI's Sustainability Committee, which was formed to advance the understanding of sustainability in the structural engineering community and promote the use of sustainable strategies in practice. Contributing author of Sustainability Guidelines for the Structural Engineer, ASCE Press, 2010. With such a long list of accolades and fervent devotion to leadership in the structural engineering industry, it's easy to see why Jennifer was named one of ENR's Top 20 under 40 professionals for 2022

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ZAK KOSTURA

PARAMETRIC-AI TOOL INTEGRATION & DIGITAL INNOVATION

ARUP

Zak graduated with a Masters of Engineering from MIT in 2003. He was hired by Arup in the fall of that year as part of a staffing build-up for the Fulton Center project, which had kicked off a few months prior. Zak served as a structural engineer, and later as a project manager, during the 11-year course of that project. He was the lead engineer for the cable net and oculus skylight, and worked closely with Grimshaw Architects and Jamie Carpenter on the integrated design of those signature components. Design of the cable net offered an opportunity to experiment with new digital approaches such as Rhino and Grasshopper, Visual Basic Scripting, CATIA and Generative Components. Following the conclusion of that project in 2014, Zak took on the role of lead engineer for the roof of the New International Airport for Mexico City. The scale and pace of that project required innovative approaches, including the design of software that could in turn design the roof. This was the only way to keep up with evolving architectural design decisions and environmental hazards.

That project concluded in 2018, and Zak was invited to take on the leadership of a regional digital team, ostensibly to enable broader use of the kind of digitally-led approaches piloted on Fulton Center and Mexico City Airport. Since then, Zak has helped the team grow to include more than 25 software developers, data scientists, user experience designers, product managers and geospatial analysts around the U.S. and Canada. They work across all of Arup's markets and disciplines to incubate new digital services and transform the way that Arup delivers for its clients.