**Sessions/Workshops for 2019 CITEA Conference**

**Laney College**

*CDTC (Drafting, Engineering)*

**Allen Frederick: Industrial Technology Instructor, Benicia Middle School**

**Using TinkerCAD to Design for 3D Printing**

Attendees will establish a TinkerCAD account on line and design a chess pawn. Based on the size of the pawn other chess piece sizes will be designed appropriately. Due to printing time attendees will only be able to design their chess piece but they can access their TinkerCAD account from any computer, the beauty of Web Based programs, so if they have access to a 3D printer, they can print out their designs.

**Adam Balogh: Machine Technology Instructor**

**An Intuitive Approach to GD&T**

GD&T contains many useful concepts and tools which are unfortunately occluded by the obscure, legalistic language commonly used to describe it. Additionally, many GD&T concepts - like datum frameworks and tolerance zones - relate to virtual geometries which are difficult to explain, visualize and demonstrate. Students struggle to understand the basic concepts of GD&T and many machine technology programs simply gloss over the subject or teach an incomplete/inaccurate version of it. However, with a simple, intuitive, practical approach and high quality visual aids, student comprehension can be improved. Students will benefit from a deeper understanding of geometric relationships and the requirements for part fit and function. In this presentation, I will approach GD&T concepts using presentation slides, animations and videos produced by the faculty at Laney College. The focus will be on interpreting datum frameworks and tolerance zones to successfully manufacture and inspect part features. Attendees will receive GD&T pocket reference guides and will have access to all instructional materials developed for the presentation. The presentation will be designed so that attendees can easily modify it to use in their own curriculum. There is no cost.

*CACTE (Woods, Construction)*

**Russell Baldon: Director of Marketing and Workforce Development**

**Teaching Creativity in a Functional Field**

This lively presentation and discussion will address the challenges of fostering creativity in the functional realm of furniture design. Giving students the ability to express themselves creatively offers them greater career opportunities and insights into innovation. Being versed in a conceptual design methodology gives students a valuable competitive edge entering the competitive professional world no matter what the area of expertise.

**Tim Newby: Industrial Technology Instructor, Monache High School, Porterville**

**Clock Woodworking Project**

I have developed over the last 14 years a small clock project that all my sophomore students build. It is built using the same parts and techniques that you use to build cabinets. So, my students are exposed to Cabinetry without even knowing it. Then during their Junior and Senior years we expand into cabinetmaking. This is not a hands-on workshop. I will just share the project with examples, pictures, diagrams, drawings, cut lists, bill of materials, tools and equipment needed, etc. that teachers can take with them and use in their own classes.

**Adam Kessler: Education Manager, Association of Woodworking and Furnishings Suppliers**

**AWFS, Las Vegas 2019**

Opportunities for Woodworking Teachers at the AWFS Fair

**Brian Fuentes: Woodshop Rocks**

**Woodshop Rocks**

Woodshop Rocks is an advanced woodshop class where kids learn how to build electric guitars while applying steam principles. Attendees will learn about the program, the impact it has on the community and students as well as a demonstration of what the teachers will learn when they attend our training session.

**Tom Post: Woodworking Instructor, Golden Valley High School, Merced**

**Pen Turning**

Pen making is a fun engaging activity for all students. The pen project builds confidence by creating a beautiful useful product quickly. My students love to make pens. Attendees will have an opportunity to make their own pen on mini-lathes. No cost.

**Don Dupont: Woodworking Instructor, (Retired)**

**Safety in the Wood Shop**

This presentation covers several aspects of safety in a middle/high school wood shop, including environment, student behavior, equipment, training, diligence/awareness, first aid/readiness, and the use of QR Codes for machinery and procedures. This PowerPoint, safety documents, and links to safety videos will be shared with attendees.

**Marty Mangan: Woodworking/Construction Instructor, (Retired)**

**Building a model framed house**

Teach your students the basics of house construction through model building. This session is a two hour hands-on workshop that will cover the building of a framed wall in the first hour and the construction of the model house in the second hour.

*MTTA (Manufacturing)*

**Lance Gunnersen and Mike Dinubilo: Industrial Technology Instructors, El Dorado High School, Placerville**

**Metal Fab / Engineering Collaboration with Beginning and Advanced Projects**

Two veteran teachers will describe projects in manufacturing that work and projects that fail and why. Learn how to collaborate with other teachers to teach across the curriculum and make hands on projects from drawings to final product. Lance Gunnersen teaches Engineering. Mike Dinubilo teaches ROP Metal Fabrication and the two have come up with successful projects that include both programs working together. Attendees will take home hand-outs, project plans, and ready to go curriculum for the next day back in class. Learn innovative grading techniques and project collaboration strategies. Take your classes to the next level in the manufacturing world. This presentation will also discuss effective ways to work with the “new” CTE student in a roundtable format.

**Greg Hanger: Manufacturing and Construction Instructor, Monache High School, Porterville**

**Manufacturing a Hand Truck with the Universal Fabricator**

This presentation demonstrates how Manufacturing students can develop a process for collaboratively developing and fabricating a hand truck. Several parts of the hand truck can be formed using the "Universal Fabricator". The presentation will also include a demonstration of this tool bending the round tubing frame, handle and the flat steel axle supports. Discussion will center around assisting students to develop a fabrication procedure list and helping them to understand product management and setting tasks.

**John Chocholak: Industrial Technology Instructor (Retired)**

**Introduction to Manual lathe operation for first year students**

Participants will learn how to safely introduce students without shop experience to the basic operation of a manual lathe. Lathe safety, startup, shut down, facing, diameter turning, angle turning, securing stock in the chuck and making the first part will be presented. Participants will receive written instructions with presentation materials, they will also experience “hands on” introductory training on a manual lathe just like first year students. All materials and training aids will be furnished for participant's use without cost. Participants will be able to take finished training aids and presentation instructional materials back to their school for use on the next teaching day.

**John Chocholak: Industrial Technology Instructor (Retired)**

**Hands on Single Point Thread Machining on a Manual Lathe**

This will be the second half of the thread theory presentation made by Mr. Chocholak at the CITEA LA Pierce College conference last November 10, 2018. Participants will turn a blank and machine a thread with a single point tool on a manual lathe. All materials and training aids will be furnished for participant's use without cost. Instructors will be able to take finished training aids and instructional materials back to their school for use on the next teaching day

**Mark Feuerbach: Metal Manufacturing Instructor, Liberty Ranch High School, Galt**

**Welding Fundamentals**

This will be a workshop on the Fundamentals of Welding for a Beginning and Advanced high school welding class. Ready to use lesson plans will be distributed to all teachers attending. Free to all attendees.

**Dave Fuller: Omax Corporation, Abrasive Waterjet Cutting Systems**

**Preparing Students of Tomorrow with a Personal AWJ Today**

OMAX Corporation, manufacturers and marketers of Abrasive Waterjet Cutting systems, introduced an affordable, personal, system called ProtoMAX in September 2017. With a footprint of 40" by 42", cutting pressure of 30,000 PSI, and material cut thickness up to 1", controlled by our industrial grade CAD/CAM system, ProtoMAX has quickly evolved into the platform of choice for educating students at the High School, Community College and University level to design for utilization of, and operate, industrial platforms after graduation.

**Ray Elledge: Verisurf 3D Measurement Solutions**

**Metrology and NIMS inspection**

How-to workshop using Verisurf Software to inspect parts and generate report.

*CAT (Automotive)*

**Julia Johnson: Automotive Technology Instructor, San Francisco State University**

**Creating an Automotive Internship Program**

Lecture on creating internships for your students. I will share my Powerpoint presentation with attendees.

*STEM*

**Tor Allen: Solar Schoolhouse - The Rahus Institute**

**Engineering Solar Solutions**

Student excitement soars when invited to engineer solar solutions. From whimsical solar carnival creations to real-world small solar powered battery- charging systems for emergency situations or solar ovens, a variety of accessible projects for middle and high school will be shared in this presentation. You'll design your own variation that maximizes use of tools that you already have in your classroom. (no cost. not make & take. design focused)

**Mauricio Castillo: Associate Professor at California State University, Los Angeles**

**Makerspaces, Fab Labs, and STEM Labs safety**

This presentation is intended as an aid for improving makerspaces and laboratory safety.

*Partnering*

**Emiliano Sanchez: Director of CTE Trades and Apprenticeships**

**High School CTE Skilled Trades Programs: Bringing Back Technical Education Options**

Over twenty-five years ago, OUSD did away with vocational education and the infrastructure that supported shop classes. Attendees will learn how OUSD has used partnerships with trades pre-apprenticeship programs, union apprenticeship programs, general contractors, Peralta Community College District and funding from the California Apprenticeship Initiative to bring skilled trades and advanced manufacturing back into the educational curriculum.

**David Goodreau: Small Manufacturers Institute**

**Saving CTE from the inside out - How a local stakeholder framework and collaboration is critical**

There’s no denying that Career and Technical Education has been sacrificed at the altar of “College for All” policies. The impact on the statewide CTE program infrastructure of classes, qualified teachers and institutional CTE teaching degrees has been quantifiably tragic. While there is a current wave of public support for CTE, that welcome relief is only helping improve the existing conditions of a neglected infrastructure. Long term respect, sustainable funding and CTE curriculum inclusion in California graduation requirements are critical areas we must continue to pursue while concurrently demonstrating the significance of CTE career paths. Collectively, we have to do better! Our view is that both CTE stakeholders and employers must create long-term sustainability. Success is achieved by practicing local collaborative processes that are manageable. Processes that realize the overwhelming demands currently expected of stakeholders. CTE Teachers and employers share common management shortcomings, they are too busy working “in” their shops and don’t have time to work “on” their shops. It is time to apply a lean framework to our strategies of developing human capital. SMI has created a model where we can “support our own” and sustain improved outcomes as our policymakers continue to figure out the best way to improve public education. In our conference session, attendees will learn and participate in a roundtable discussion on a regional framework and its activities that drive sustainable change. The discussion will focus on two root problems: People and Participation. SMI Regional Networks create overwhelming value to willing public and private stakeholders.

**Robin Bartholow: Northern California Builders Exchange**

**Construction Skills for High School Seniors**

The North Bay Construction Corps is a 5-month training program that introduces high school seniors to careers in construction and the trades. Classes are taught by local industry people so that students get exposure to multiple employers and get a sampling of what it’s like to work in a variety of trades - from tool handling and personal safety to fundamentals of electrical, plumbing, carpentry, and solar, to name a few.

Now in its third year, the North Coast Builders Exchange manages the expansion of the program.  This year there are three chapters in Sonoma County with 82 students. In its second year, Mendocino County boasts a class of 29 students.  Lake and Napa County Chapters launched this year and boast a total of 34 students between them.  Marin County has also started up a North Bay Construction Corps program through the Marin Builders Association and our Builders Exchange is helping MBA in any way we can. They are off to a very good first year with over 25 Corps members taking part.

*Pedagogy/Classroom Management*

**Loretta Cabuyadao and David Tayco: SkillsUSA**

**GenerationT & SkillsUSA Career Essentials - What EVERY CTE Program Needs for Student Success**

Attendees will learn about the Lowe's GenerationT (GenT) initiative and the Career Essentials assessments and instructional materials and how they will help your classroom instruction align to current and future state and national requirements. SkillsUSA California is leading the nation in support and improving classroom instruction and assessment for CTE programs and students. Loretta Cabuyadao is an alumni of the SkillsUSA California organization, successful small business owner and is now responsible for the GenT initiative and SkillsUSA California Chapter & Membership Development. David Tayco is a CTE 30-plus year CTE classroom teacher, SkillsUSA California advisor, State Officer Trainer and uses the Career Essentials materials to support his classroom instruction and increase student engagement and success.

**Don Dupont: Woodworking Instructor, (Retired)**

**Follow the Leader: Discrimination, Abuse, and Bullying in the Age of Trump**

The information presented in this session comes out of a California Department of Education sponsored work group on student mental health sub-committee which examined trends in student willingness to engage in racial, gender, religious, and immigration status abuse of peers. Increases in these incidents are based on hard evidence, and multiple strategies to mitigate these anti-social student behaviors will be presented.

*Career Counseling & Guidance*

**Windy Martinez: Ph.D., CRC**

**Counseling for Equity: Supporting CTE Students from Perkins’ Special Populations**

Historically, the majority of K-12 students have not been steered to the CTE pathways, nor have they received much guidance (other than from their CTE instructors) on how to reach their occupational goals. This is especially true for those students who are members of Perkins' identified Special Populations, many of whom need additional supports to stay on the pathway to success. This presentation will share with counselors, faculty, and administrators’ strategies designed to effectively address the needs of these students as they explore and navigate their career education. Attendees will also hear firsthand the experiences of a successful Laney College CTE graduate who meets several of the Perkins Special Populations categories. The presentation will include time for question and answer. PowerPoint will be the primary method used for informing the audience.