

Hosted by California Polytechnic State University (Cal Poly) in San Luis Obispo, California April 10-13, 2013

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Welcome to Proceedings of the **49th ASC Annual International Conference**

Hosted by California Polytechnic State University (Cal Poly) in San Luis Obispo, California April 10-13, 2013

> Edited by: Tulio Sulbaran. Ph.D The University of Southern Mississippi

The ASC International Proceedings of the Annual Conference provides a way of disseminating information that contribute to the understanding of the issues, problems, and research associated with the construction industry and construction education.

The full papers that are published in the ASC Proceedings have passed through a rigorous peer review process. Publication in the ASC proceedings represents an important milestone of accomplishment for the authors, due to the rigorous review process as well as the diverse and challenging configuration of the ASC Board of Reviewers.

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Paper Presentations

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			ons Per		o 4 Papers Per Session - 25 Minutes Per Paper Including Q & A - Total Papers 73
DATE	TIME/PLACE	SESSION		NAME	TITLE
		MODERATOR	Troy	Hart	3 Papers
	3:45 - 5:00 pm		Kelly	Strong	Improving Communication Skills of Construction Students by Linking English Courses in an Integrated First-Year Curriculum
	Beaujolais Room	1	Tom	Leathem	Course or Class Topic: An Evaluation on Implementing LEAN Construction into University Curriculum
AΥ		MODERATOR	Matthew	Reyes	Involving Construction Students in Research through Collaboration and the EPA-P3 Competition
SD	3:45 - 5:00 pm	MODERATOR	Greg Salman	Starzyk Azhar	2 Papers A BIM-based Approach for Communicating and Implementing a Construction Site Safety Plan
NE	Cabernet Room	2	PAPER WITHE		A provide a provide the communicating and implementing a construction are safety rian PAPER WITHORAWN PAPER WI
ED	cabernet Noom	2	Niraj	Thurairajah	Advantages and Challenges of Using BIM: a Cost Consultant's Perspective
N N		MODERATOR	Rebecca	Mirsky	3 Papers
APRIL 10 - WEDNESDAY	3:45 - 5:00 pm		Darren	Olsen	Utilizing Prefabrication in Lean Construction: A Reasoned Decision or an Educated Guess?
E C	Pinot Noir Room	3	Justin	Reginato	The Costs Associated with Restricting Portability
PR			Mehmet	Ozbek	Review of Sustainability Rating Systems used for Infrastructure Projects
<		MODERATOR	Francois	Jacobs	2 Papers
	3:45 - 5:00 pm		Tariq	Shehab	Tracking Systems in Construction: Applications and Comparisons
	Sauvignon Room	4	Anthony PAPER WITHE	Mills	Developing and Assessing Work Readiness using Reflective Practice PAPER WITHDRAWN
		MODERATOR	Joseph	Wright	PAPER WITHDRAWN 3 Papers
	3:30 - 4:45 pm	MODERATOR	Thomas	Rogers	Blended Learning and "Flipping" the Construction Management Classroom for Improved Teaching and Learning
	Beaujolais Room	1	Thomas	Korman	Design and Implementation of an Experiential Learning Exercise for a Commercial Building Construction Management Course
		-	Brian	Lines	Barriers to Implementing New AEC Project Delivery Methods within Owner Organizations: Development of a Process Tracking Tool
- THURSDAY		MODERATOR	James	Pocock	3 Papers
SD	3:30 - 4:45 pm Cabernet Room		Paul	Holley	Efficacy of Improved Gang-Box Prototypes: A Qualitative Case Study
IJ.		2	Blake	Dulin	Effect of Data Collection Period Length on Marginal Cost Models for Heavy Equipment
É			David	Batie	Reducing Human Errors in the Pipeline Construction Industry
	2.20 4.45	MODERATOR	Mark Michael	Terrill	2 Papers
IL 1	3:30 - 4:45 pm Pinot Noir Room	3	Lloyd	Hein Scott	Collaborative Experiential Learning: Building a Pervious Concrete Parking Lot Integrated Project Delivery Challenges: A Case Study Approach to Investigating the Inclusion in Small Scale Construction Projects
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A		MODERATOR	Justin	Reginato	3 Papers
	3:30 - 4:45 pm		Joseph	Burgett	Reducing Residential Miscellaneous Electrical Loads with a Whole-House Switch
	Sauvignon Room	4	Bruce	Smith	Ground Source Heat Pumps: Testing three mediums surrounding the piping in geothermal field beds to evaluate performance
			Panagiotis	Mitropoulos	Improving Productivity and Ergonomics in HVAC Installation
		MODERATOR	Johgchul	Song	4 Papers
	8:30 - 10:10 am		Jeong Justin	Woo	Integration of IT Platforms to Improve Change Order Efficiency in Construction Using the Forward Thinking Index to Measure Request for Information Submission Effectiveness
	Beaujolais Room	1	Justin Jake	Reginato Smithwick	Using the ForWard initiating moet to Measure Request for information Submission Effectiveness Application of a Risk Management Structure to Minimize Schedule Deviations Under a Commodities Contract
			Caroline	Clevenger	Apprication of a risk Management structure to Minimize Science between a common series of a risk Management structure to Minimize Science between a risk Management structure of Latinos across Residential, Commercial, and Heavy Civil Construction
		MODERATOR	Samuel	Oteng	4 Papers
~	0.20 40.40		Michele	Herrmann	An Industry-Sponsored Competition to Explore Integrated Project Delivery in an Educational Setting
FRIDAY	8:30 - 10:10 am Cabernet Room	2	Arundhati	Ghosh	Industry and Academia: A partnership to VDC Curriculum
RIL	Cabernet Room	2	Euysup	Shim	A Simulation Game for Construction Scheduling
1.00			Thomas	Mills	Teaching First-Year Students in the Second Millennium Part 1
. 12		MODERATOR	Sonya	Meekel	4 Papers
APRIL	8:30 - 10:10 am		Mark	Tatum	Zero Carbon Buildings: Implementation Strategies Utilized in Europe and the United States
AP	Pinot Noir Room	3	Kamalesh Sangwook	Panthi Lee	Environmental Regulations Generated Market Opportunities for Engineering and Construction Companies Evaluation of Life-Cycle Cost Analysis Programs for Bridge Pile Repair Projects
			Sangwook Russell	Walters	Evaluation of Life-Youe Cost Analysis of Targams for Broge Pile Repair Projects Life Cycle Cost Analysis of Tankless Water Heaters
		MODERATOR	Nesli	Alp	Life cycle Cost Attailysis of railiness water heaters 4 Papers
		modelianon	Jacqueline	Stephens	LEED Rating Systems for Historical Restorations
	8:30 - 10:10 am		Rahman	Azari	Exclusion of the second of the
	Sauvignon Room	4	Qian	Chen	An Investigation of Current Status of "Green" Concrete in the Construction Industry
			Jason	Lucas	Future Directions for a Healthcare Facility Information Management System

		MODERATOR	Bill	Bender	3 Papers
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	Beaujolais Room	1	Michael	Emmer	Labe addy on the detendment and imperiation of a construction management programs
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		1100501500	Bradley	Hyatt	Leadership Development in Undergraduate Construction Management Curriculum
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	10:30 - 11:45 am		Seyed Mohsen	Shahandashti	Forecasting Construction Cost Index using Energy Price as an Explanatory Variable
	Cabernet Room	2	Gulbin	Ozcan-Deniz	Application of Formal Concept Analysis in Estimating the Cost of Green Buildings
			Pardis	Pishdad-Bozorgi	Advancing Target Price and Target Value Design Process in IPD Using BIM and Risk Sharing Approaches
12		MODERATOR	Somik	Ghosh	3 Papers
=	10:30 - 11:45 am		Namhun	Lee	Probing BIM Education in Construction Engineering and Management Programs Using Industry Perceptions
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			Pavan	Meadati	Teaching Using 3D Laser Scans
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	Sauvignon Room	4	Angela	Guggemos	Risk Response for Asphalt Road Construction Under Performance Based Contracts
			James	Cox	On the Variability of results from the Hamburg Wheel Tracker Device
		MODERATOR	Pardis	Pishdad-Bozorgi	3 Papers
	2:00 - 3:15 pm		Scott	Kramer	Public-Private Partnerships: What Can The United States Learn From Europe?
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		-	Lloyd	Scott	Developments in Closed Panel Timber Frame Connection – An Irish Case Study
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₽	Cabernet Room	2	Anthony	Mills	Pathways to University: Enabling Factors in Construction Management Education in Australia
Ë,			Denise	Gravitt	A study of ASC Construction Management Programs' Curricula Content as of December 2011
5		MODERATOR	Mohamed	Diab	3 Papers
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ΑF		5	Sonya	Meekel	Work Placement as an effective learning experience for undergraduate students; Work-Based Learning & Professional Competencies; a Reflection by Case Study
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	Beaujolais Room	1	David	Gunderson	An Audplaule Approach to steady state seturations for imma opgraue wronin existing residentian Housing in relation Subcontractor Perspectives: Factors that Most Affect Their Relationships with General Contractors - A Location
	beaujoiais nooni	Т	Rodolfo	Valdes-Vasquez	Subcontractor retspectives, ractions that work Artex Their nethationisings with General Contractors - A Decadon Management Education Practices as a Tool to Increase Energy Efficiency in Low-Income Housing
		MODERATOR	Salman	Azhar	management coucation Practices as a found microase chergy Endency in Common moder moderning
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FRIDAY	Cabernet Room	2	Pramen	Shrestha	A study on the innerice of Construction workers Physiological status and busite Environment on Behavior and Penormance Fall Prevention Training To Hispanic Construction Workers of Southern Nevada.
FR	Cabernet Room	Z	Shima	Clarke	rain Prevention Training To hispanic Construction workers or southern reveada. A Survey of the Succession Planning Practices for Superintendents in the Industrial Construction Sector
2 -			Richard	Boser	A Survey of the succession Planning Plactices for Superintendents in the industrial Construction sector 3 Papers 3 Papers
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	2.45 5.00 -	MODERATOR			
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APRII	Pinot Noir Room	3	Somik Gregory Chris Amine	Ghosh Starzyk Monson Ghanem	A Systematic Review of Research Papers on Construction Education and Research: 2000-2011 A Methodology for Selecting Program Outcomes Assessment Methods Rethinking Construction Education: Lessons Learned from Industry Innovations 3 Papers



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- Developing and Assessing Work Readiness using Reflective Practice

- Improving Communication Skills of Construction Students by Linking English Courses in an Integrated First-Year Curriculum
- Industry and Academia: A partnership to VDC CUrriculum
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- <u>Deciding What to Teach in a Specialty Contracting Field An Industry</u> <u>Survey</u>
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- Applying Structure, Behaviour and Function (SBF) and Discrete Event Modelling to Construction Education: a Pilot Study
- <u>Course or Class Topic: An Evaluation on Implementing LEAN</u> <u>Construction into University Curriculum</u>
- <u>Influence of Industry Advisory Boards on Construction Management</u>
 <u>Programs' Curriculum and Content</u>
- <u>Involving Construction Students in Research through Collaboration</u> and a National Sustainability Competition
- <u>On the Variability of results from the Hamburg Wheel Tracker Device</u>
- <u>Retrofitting Thermal Mass into New Zealand Houses: What are the</u> potential benefits?

CONSTRUCTION PRACTICE

PAPERS PRESENTED ON GENERAL TOPICS

- <u>A Survey of the Succession Planning Practices for Superintendents in</u> <u>the Industrial Construction Sector</u>
- <u>Children's Perception of Women in Construction</u>
- <u>Efficacy of Improved Gang-Box Prototypes: A Qualitative Case Study</u>
- Financing Construction Projects Using the EB-5 Program
- Frequency and Timeline of Leadership Transitions within Construction
 Companies
- Integration of IT Platforms to Improve Change Order Efficiency in <u>Construction</u>
- LEED Rating Systems for Historical Restorations
- <u>Public-Private Partnerships: What Can The United States Learn From</u> <u>Europe?</u>
- <u>Reducing Human Errors in the Pipeline Construction Industry</u>
- <u>Rethinking Construction Education: Lessons Learned from Industry</u> <u>Innovations</u>
- <u>Sustainable Design Strategies</u>
- <u>Tracking Systems in Construction: Applications and Comparisons</u>
- <u>Utilizing Prefabrication in Lean Construction: A Reasoned Decision or</u> <u>an Educated Guess?</u>
- Zero Carbon Buildings: Implementation Strategies Utilized in Europe

PAPERS PRESENTED ON RESEARCH TOPICS

- <u>A BIM-based Approach for Communicating and Implementing a</u> <u>Construction Site Safety Plan</u>
- <u>A Study on the Influence of Construction Workers' Physiological</u> <u>Status and Jobsite Environment on Behavior and Performance</u>
- Advancing Target Price and Target Value Design Process in IPD Using BIM and Risk Sharing Approaches
- <u>Advantages and Challenges of Using BIM: a Cost Consultant's</u> <u>Perspective</u>
- <u>An Adaptable Approach to Steady State Calculations for Thermal</u> <u>Upgrade within Existing Residential Housing in Ireland</u>
- <u>An Investigation of Current Status of "Green" Concrete in the</u> <u>Construction Industry</u>
- <u>Application of a Risk Management Structure to Minimize Schedule</u> <u>Deviations Under a Commodities Contract</u>
- <u>Barriers to Implementing New AEC Project Delivery Methods within</u> <u>Owner Organizations: Development of a Process Training Tool</u>
- <u>Developments in Closed Panel Timber Frame Connection An Irish</u>
 <u>Case Study</u>
- Effect of Data Collection Period Length on Marginal Cost Models for Heavy Equipment
- <u>Effective Selection of Renewable Energy Projects in Constructed</u>

Facilities

- Environmental Regulations Generated Market Opportunities for Engineering and Construction Companies- A Case Study of Petroleum Refineries
- Evaluating Integrated Design Process of High-Performance Green
 Buildings
- Evaluation of Life-Cycle Cost Analysis Programs for Bridge Pile Repair Projects
- <u>Fall Prevention Training To Hispanic Construction Workers of</u> <u>Southern Nevada.</u>
- <u>Forecasting Construction Cost Index using Energy Price as an</u> <u>Explanatory Variable</u>
- <u>Framework for Sustainability Challenges within the Building Industry</u>
- <u>Future Directions for a Healthcare Facility Information Management</u> <u>System</u>
- <u>Ground Source Heat Pumps: Testing three mediums surrounding the</u> <u>piping in geothermal field beds to evaluate performance</u>
- Improving Productivity and Ergonomics in HVAC Installation
- Integrated Project Delivery for Construction
- Life Cycle Cost Analysis of Tankless Water Heaters
- <u>Management Education Practices as a Tool to Increase Energy</u> <u>Efficiency in Low-Income Housing</u>
- <u>Prevention of Transverse Bumps Over Crack Sealant During Asphalt</u>

Overlay Construction

- <u>Reducing Residential Miscellaneous Electrical Loads with a Whole-</u> <u>House Switch</u>
- <u>Review of Sustainability Rating Systems used for Infrastructure</u> <u>Projects</u>
- <u>Risk Perception and Cultural Differences of Latinos across</u> <u>Residential, Commercial, and Heavy Civil Construction</u>
- <u>Risk Response for Asphalt Road Construction Under Performance</u> <u>Based Contracts</u>
- <u>Subcontractor Perspectives: Factors that Most Affect Their</u> <u>Relationships with General Contractors - A Pacific Northwest Study</u>
- <u>The Costs Associated with Restricting Portability</u>

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