

District Northern California  
Master Brewers Association of America



Annual Spring Technical Session  
Friday, June 7, 2013  
Sierra Nevada Brewing Company



# Annual Spring Technical Session Schedule

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<b>Time:</b>	<b>Speaker:</b>	<b>Company:</b>	<b>Topic:</b>
8:00-9:00 am	<b>Coffee &amp; Continental Breakfast</b> <i>Sponsored by Brewers Supply Group</i>		
	<b>Morning Technical Session</b> <i>Sponsored by Perkin Elmer</i>		
9:00-9:45 am	Adam Shy	Sierra Nevada Brewing Company	Waste Water Treatment
9:45-10:30 am	Dr. Charlie Bamforth	University of California, Davis	Papal Bull: Recent work on Beer Bubbles
10:30-10:45 am	<b>Break</b>		
10:45 am-12:00 pm	Mark Fisher	New Belgium Brewing Company	5S Organizational System, Implementation, and what it can do for your brewery
	Rob Fraser	Sierra Nevada Brewing Company	
	Jonathan Jay	AB-InBev (Fairfield)	
12:00 pm-1:00pm	<b>Lunch</b> <i>Sponsored by Perkin Elmer</i>		
	<b>Afternoon Technical Session</b> <i>Sponsored by GEA</i>		
1:00- 1:45 pm	Dr. H. Heymann	University of California, Davis	"Faster" Sensory Analysis Techniques
1:45- 2:45 pm	Tim Hall	Boulevard Brewing Company	iPad Sensory Application
	Elizabeth Belden		Sensory Panel Discussion
2:45- 3:00 pm	<b>Break</b>		
3:00- 4:00 pm	David Llodrá	Independent Stave Company	Oak 101
4:00 - 4:30 pm	Northern California scholarship recipients announced Raffle benefitting District Northern California Scholarship Fund		
Tours@ 5:00 PM	Beer Reception/ Tours of Sierra Nevada brewery or waste water treatment		

- **8:00 am – 9:00 am:** *Continental Breakfast; sponsored by Brewers Supply Group*



## Morning Technical Session

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Morning Moderator: Ruth Martin, Sierra Nevada Brewing Company

*Morning Session sponsored by Country Malt/ Great Western Malting*



- **9:00 am – 9:45 am:** ***Water Treatment***  
Adam Shy, Sierra Nevada Brewing Co.

This presentation will cover an overview of Sierra Nevada's wastewater treatment system, as well as challenges and solutions unique to brewery effluent.

Adam Shy has a dual B.S. in Biology & Ecology from University of Georgia. He also received a Professional Certificate in Water Resources from University of Georgia. Before joining Sierra Nevada Brewing Co in January 2012, Shy had previous experience at Agricultural Services Lab at University of Georgia and an environmental services firm in Waynesville, NC. He is a homebrewer and longtime beer geek.

- **9:45 am – 10:30 am:** ***Papal Bull: Recent work on beer bubbles***  
Dr. Charlie Bamforth, University of California, Davis

The "Pope of Foam" will issue his latest Bull, though not in Latin and hopefully not Double Dutch either. Issues will include a finding that goes against received wisdom, namely that some specialty malts are decidedly foam-negative.

Dr. Charlie Bamforth is Anheuser-Busch Endowed Professor of Malting & Brewing Sciences at UC Davis. He has been part of the brewing industry for over 34 years. He is formerly Deputy Director-General of Brewing Research International and Research Manager and Quality Assurance Manager of Bass Brewers. Bamforth is Editor in Chief of the *Journal of the American Society of Brewing Chemists*, is on the editorial boards of several other journals and has published innumerable papers, articles and books on beer and brewing – and also written prolifically on soccer. In 2011 Charlie was honored by the Award of Distinction from the American Society of Brewing Chemists for “exceptional contributions and long diligent service to brewing science and the brewing industry”.

- **10:30 am – 10:45 am:**            *Break*
- **10:45 am – 12:00 pm:**            *5S Organization System, Implementation, And what it can do for your brewery*  
Mark Fisher, New Belgium Brewing Co.  
Rob Fraser, Sierra Nevada Brewing Co.  
Jonathan Jay, Anheuser-Busch-InBev

5S is a method to improve and sustain workplace organization. The 5 S's represent 5 Japanese words that describe the 5 steps of the method. This is a foundational step in all 'World Class Manufacturing', 'Lean Manufacturing' and other continuous improvement methodologies.

Mark Fisher received a Bachelor of Mechanical Engineering at Carleton University in Ottawa, Ontario, Canada and an MBA from Wichita State University in Wichita, Kansas. He spent 20 years in management positions in the food ingredient industry in Canada and the USA. In 2002 he joined the New Belgium Brewing Company in Fort Collins, Colorado to lead their Production groups and sit on the company's Compass Management team. In 2004, he moved into Director of Operations for the brewery and part of their Compass management group. In 2011 he moved into the Engineering Design group at New Belgium. He has been a member of the MBAA for the past 10 years.

Rob Fraser received his honors B.S. in Biology from University of Waterloo. He worked for Labatt Brewing Co. in Canada for 15 years in Quality and Production Capacity. Rob is a certified HACCP auditor. He has worked as Quality Manager at Sierra Nevada Brewing Co. for the past 6 years.

Jonathan Jay holds the position of Engineering Manager for Anheuser Busch in the Fairfield, CA Brewery. He holds a BS in Chemical Engineering with a minor in Economics from Northeastern University. In his 12 years with AB, Jonathan has held various positions of increasing responsibility in Brewing, Packaging, and Utilities. His current focus in Fairfield is on Capital Project Management and Execution. Based on his previous roles, Jonathan has in-depth experience on training and implementing 5S methodologies throughout the organization and developed and implemented a "Visual Management" program in AB's Merrimack Brewery to help increase employee involvement in process issue identification and resolution.

- **12:00 pm – 1:00 pm:**            *Lunch; sponsored by Perkin Elmer*



# Afternoon Technical Session

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Afternoon Moderator: Jeff Eaton Jr, Trumer Brauerei

*Afternoon Session sponsored by GEA*



➤ **1:00 pm – 1:45 pm: “Faster” Sensory Analysis Techniques**

Dr. Hildegard Heymann, University of California, Davis

Beer Sensory Evaluation: Descriptive Analysis, vocabulary, reference standards and rapid sensory data analysis techniques

Sensory scientist Dr. Hildegard Heymann joined the Department of Viticulture and Enology in January 2003. Formerly a Professor at the University of Missouri, Dr. Heymann has worked in all areas of sensory science and has evaluated numerous food and non-food products including wine, meat, ice cream, cereals, juices, cat litter, soap, and toothpaste. At UC Davis Dr. Heymann has continued her work with descriptive analysis methodology and multivariate data analyses. She is the co-author (with Harry T. Lawless from Cornell University) of the sensory textbook *Sensory Evaluation of Foods: Principles and Practices*, currently the most prescribed sensory textbook worldwide. Heymann was named Honorary Researcher Lecturer by the American Society for Enology and Viticulture in 2004. In 2000, Dr. Heymann received the Faculty Alumni Award from the University of Missouri Alumni Association; in 1993 she received the Gold Chalk Award for Excellence in Graduate Teaching from the Graduate Professional Council; and in 1991 and 1993 she was awarded "Professor of the Year" from the Food Science Association.

➤ **1:45 pm – 2:45 pm: iPad Sensory Application & Sensory Panel Discussion**

Tim Hall, Boulevard Brewing Co.

Elizabeth Belden, Boulevard Brewing Co.

Tim Hall and Elizabeth Belden discuss sensory data collection and analysis using an iPad app developed in-house to integrate with existing manufacturing systems.

Tim Hall has worked as the Controls Engineer at Boulevard since 2006 and is responsible for implementing brewery automation and controls.

Elizabeth Belden has worked in the quality assurance lab at Boulevard since 2006 and has been in charge of the sensory program for the past three years.

➤ **2:45 pm – 3:00 pm: Break**

➤ **3:00 pm – 4:00 pm: *Oak 101***

David Llodrá, Independent Stave Co.

This presentation covers the history of oak barrels, facts about oak, reasons to use oak, controllable organoleptic properties of oak and oak products currently available.

David Llodrá joined the Independent Stave Company research team as R&D Director in March 2004.

Llodrá (pronounced yo-dra) holds a Bachelor of Science in Viticulture and Enology and a Ph.D. in Agricultural and Environmental Chemistry both from UC Davis. The focus of his research is correlations of sensory evaluation with chemical analysis of oak extractives in wine. He has fifteen years of comprehensive experience in winemaking, cellar and lab operations as well as consulting. His focus is on product development, chemistry, testing, market trends and liaising with production and sales.

Llodrá works closely with oak maturation expert Dr. James Swan. He has been assistant winemaker for Swanson Vineyards in Rutherford and Charles Krug in St. Helena, worked for Ann Noble in the sensory laboratory at UC Davis and was part of a team establishing 1000 acres of new vineyards for Wente Vineyards in Livermore. Most of his winemaking and research experience has been in the California wine industry, but since March 2004 he has been directing oak experiments worldwide for Independent Stave Company and its subsidiaries, gaining expertise in the Global wine market.

➤ **4:00 pm – 4:30 pm: *Announcement of Scholarship Recipients and Raffle***

➤ **5:00 pm: *Beer Reception and Brewery/Waste Water Plant Tours***