



# SKIM/Sawtooth Software European Conference and Training Event 19-22 September, 2017

Renaissance Barcelona Hotel  
Carrer de Pau Claris, 122, 08009 Barcelona, Spain



SKIM (The Netherlands) and Sawtooth Software (USA) are pleased to announce their 2017 European Conference and Training Event. The European event consists of 4 days of workshops, tutorials, and conference papers. It brings together market research practitioners and academics to learn about and discuss quantitative methods in marketing research.

## **Topics include:**

- Conjoint/Choice Analysis/Menu-Based Choice
- Maximum Difference Scaling (MaxDiff)
- Drivers Analysis, Text Mining

## **Instructors include:**

Bryan Orme, President, Sawtooth Software  
Keith Chrzan, Senior Vice President, Sawtooth Analytics, Sawtooth Software  
Aaron Hill, Vice President, Client Services, Sawtooth Software  
Brian McEwan, Director of Client Services, Sawtooth Software  
Gary Baker, Executive Vice President, Sawtooth Software  
Ewa Nowakowska, Head of Data Science, SUPERCRUNCH by GfK  
Jeroen Hardon, Senior Executive Consultant, SKIM  
Sophie Zimmermann, Research Manager, SKIM  
Kees van der Wagt, Senior Research Director, SKIM  
Stefan Ammerlaan, Senior Research Manager, SKIM

# Training Event and Conference At-A-Glance

Simultaneous breakout sessions are planned for 19-21 September —select which breakout rooms to attend (instructors shown in parentheses). All attendees will be together for the final conference sessions on 22 September.

	Tuesday, 19 Sep (Training)	Wednesday, 20 Sep (Training)	Thursday, 21 Sep (Training)	Friday, 22 Sep (Conference—All Combined)
<b>Breakout Room 1</b>	<u>(9:00 – 18:00):</u> CBC Workshop (Hill, McEwan).  (Day 1 of two-day continuous session.)	<u>(9:00 – 18:00):</u> CBC Workshop (Hill, McEwan).  (Continuation of two-day continuous session.)	<u>(9:00-11:00):</u> Random Forests in R (Nowakowska)  <u>(11:10 – 13:00):</u> New Features in the Market Simulator (Hill)  <u>(14:00 – 18:00):</u> Advanced Lighthouse Studio (Baker)	9:00-9:10 Intro remarks  9:10-11:10 Session 1 Speakers  Patterson, Frazier Simmons Rigby, Burton  (11:10-11:40 Break)
<b>Breakout Room 2</b>	<u>(9:00 – 18:00):</u> Becoming an Expert in Conjoint Analysis (Orme, Chrzan)  (Day 1 of three-day, modular seminar. Attend 1-3 days.)	<u>(9:00 – 18:00):</u> Becoming an Expert in Conjoint Analysis (Orme, Chrzan)  (Continuation of three-day, modular seminar. Attend 1-3 days.)	<u>(9:00 – 18:00):</u> Becoming an Expert in Conjoint Analysis (Orme, Chrzan)  (Continuation of three-day, modular seminar. Attend 1-3 days.)	11:40-13:00 Session 2 Speakers Chrzan, Büschken Belyakov  (13:00-14:10 Lunch)  14:10-16:10 Session 3 Speakers Pitcher, Koudinova, & Rosen Hedler, Howard Hardon, Lattery, & van der Wagt  (16:10-16:30 Break)
<b>Breakout Room 3</b>	<u>(9:00 – 11:00):</u> Introduction to Lighthouse Studio (Baker) <i>(Free Session!)</i>  <u>(14:00 – 18:00):</u> Intermediate Lighthouse Studio (Baker)	<u>AM (9:00 – 13:00):</u> Experimental Conjoint Solutions (Hardon)  <u>PM (14:00 – 18:00):</u> MBC Modeling Workshop (Zimmermann and van der Wagt)	<u>AM (9:00 – 13:00):</u> A Practitioner’s View (Ammerlaan)  <u>PM (14:00 – 18:00):</u> A Practitioner’s View, Continued (Ammerlaan)	16:30-17:50 Session 4 Speakers Chirilov Rausch, Kurz, Liegel, & Müller  17:50-18:00 Closing remarks
			*Complimentary After-Hours Dinner Event.	

## Pricing:

- €500 per day / €250 per half day (€50 per day less than the 2016 rates!)

Late Fees (payment received after 14 July): Add €100 per day of attendance; €50 per half day.

\* For the after-hours dinner on 21 September, additional guests cost €90 (pricing subject to change as we finalize the after-hours evening event).

# Descriptions of Workshops and Tutorials

## Tuesday, 19 September

### **CBC Workshop**

(Breakout Room 1, 9:00 to 18:00)

*Aaron Hill and Brian McEwan, Sawtooth Software*

Choice-Based Conjoint has become the most popular conjoint-related method used today. Come spend two days of intense, hands-on training to learn the essentials of designing, fielding, and analyzing CBC studies. Because MaxDiff is so closely related to CBC, the instructors will also provide a brief introduction to MaxDiff and a programming demonstration.

Students will use their own Windows-capable laptops to program CBC studies in Lighthouse Studio and conduct analysis using a real CBC data set. Best practices and pitfalls to avoid will be covered. This course is intended for those who are new to or just getting started with CBC.

### **Becoming an Expert in Conjoint Analysis Seminar**

(Breakout Room 2, 9:00 to 18:00)

*Bryan Orme and Keith Chrzan, Sawtooth Software*

*(This course intended for those who are highly proficient in conjoint/choice analysis and are looking for the practical advanced training to achieve the next level.)*

Join Bryan Orme and Keith Chrzan for one, two, or three days of instruction. Bryan and Keith have developed a brand new 3-day seminar based on their new book, "Becoming an Expert in Conjoint Analysis" (to be released during 2017). The instructors will share the concepts and practical know-how (e.g. power tricks) that have taken them decades to learn. Attending this course and carefully reading the associated book will accelerate you toward expert status in conjoint/choice methods. This is the book that we wish had magically fallen out of the sky and onto our desks in the early part of our careers!

Bryan and Keith will take you on an adventure you will not soon forget! Feel free to sign up for all three days, or enroll in only a portion of the training. The sections tend to be independent and modular, so you can exit or enter the course at any time without losing much at all in terms of continuity.

The course outline will closely follow the chapter organization of the book:

#### **19-September:**

- How people choose
- Reducing hypothetical bias
- Advanced CBC designs
- Adaptive designs and customization
- The None alternative
- Holdout choice tasks

#### **20-September:**

- Dealing with many attributes and levels
- Sample size decisions
- Coding conjoint data for estimation
- Part-worth utility estimation
- Allocation and volumetric choice experiments
- Statistical testing

#### **21-September:**

- Willingness to pay
- Building choice simulators
- Optimization using choice simulators
- Situational choice experiments
- Best/Worst Case II
- Introduction to MBC
- Creating artificial data

Attend 1, 2, or all 3 days!



## **Introduction to Lighthouse Studio (*Free Session!*)**

(Breakout Room 3, 9:00 to 11:00)

*Gary Baker, Sawtooth Software*

Lighthouse Studio is Sawtooth Software's general survey writing platform. While we are well-known for our expertise in conjoint-related methods, general survey writing is a core competency of the Lighthouse Studio platform that offers great power and flexibility. Lighthouse Studio supports all the standard question types and supports mobile and CAPI/offline interviewing (devices not connected to the internet) data collection.

Come to this free session taught by Gary Baker, Executive VP of Sawtooth Software. Gary is one of the original software developers working on the Lighthouse Studio project (back when it was called SSI Web). Gary will demonstrate all the major survey questions and also show how conjoint/MaxDiff exercises are managed within the platform. He'll also cover questionnaire flow, including randomizations, skip patterns, constructed (dynamic) lists, and piping (using earlier responses in later questions). Administrative issues including survey hosting and linking to and from other survey platforms will also be discussed.

## **Intermediate Lighthouse Studio**

(Breakout Room 3, 14:00 to 18:00)

*Gary Baker, Sawtooth Software*

Lighthouse Studio (previously SSI Web) is a powerful tool that allows you to create general surveys, including those with conjoint analysis and MaxDiff. In this hands-on workshop we will be covering much of what Lighthouse Studio can do. Topics covered include:

- Skip logic, Constructed lists, Randomization, Looping, Quota control
- Introduction to programming CBC, MaxDiff, and ACBC
- Testing & publishing the survey, linking to other systems
- Offline surveys (CAPI)
- Introduction to advanced customization: HTML, JavaScript, CSS, Perl

Attendees must bring a laptop PC with Lighthouse Studio installed (a demonstration version will be given to you in advance for the purposes of classroom instruction).

## **Wednesday, 20 September**

**CBC Workshop** (Breakout Room 1, 9:00 to 18:00)

*Aaron Hill and Brian McEwan, Sawtooth Software*

*(Continuation of the workshop that begins on September 19)*

**Becoming an Expert in Conjoint Analysis** (Breakout Room 2, 9:00 to 18:00)

*Bryan Orme and Keith Chrzan, Sawtooth Software*

*(Second day of the modular seminar that begins on September 19. Feel free to jump in on any day.)*

**Experimental Conjoint Solutions** (Breakout Room 3, 9:00 to 13:00)

*Jeroen Hardon, SKIM*

Sometimes standards are not enough to answer the research questions at hand and one has to deviate from the roads most travelled. Jeroen Hardon would like to get you on board for this 4-hour tutorial on advanced applications. He will focus on a number of challenging and interesting extensions of choice modeling, including:



- Custom statistical design techniques (designs using Lighthouse Studio and Excel) (such as for example alternative-specific, frequency imbalance, pricing rules) and implications of these customizations
- Showing different coding methods for faster processing
- Combining multiple MaxDiff studies in one Latent Class estimation
- Combining MaxDiff and CBC: different ways of data augmentation
- Duct-tape solutions for the red-bus-blue-bus problem

### **MBC Modeling Workshop (Breakout Room 3, 14:00 to 18:00)**

*Sophie Zimmermann and Kees van der Wagt, SKIM*

Customized products and services are becoming more and more common in a lot of industries, it is therefore necessary to replicate accurately consumers' choices. Menu-Based Choice (MBC) is a flexible choice modeling approach for solving a variety of multi-check (combinatorial) menu-selection problems. MBC applies for various choice situations such as selections from a menu in a coffee shop or for fast food, choosing car features, configuring an insurance policy or banking options as well as purchasing bundled or *a la carte* services for telecom offers.

Having various choice situations implies using different ways of setting-up and modeling those in MBC. This training will focus on how to best model and conduct the analysis of an MBC using Sawtooth Software's MBC software (although learnings can be applied using different software as well (e.g. R)).

This course is intended for those with a strong background in discrete choice and/or econometric modeling that have already conducted some MBC studies. The basics will be quickly covered but we will mainly talk about some tips and tricks for advanced MBC modeling. It is not necessary to own any software to participate: a demo license will be given. Attendees must bring their own Windows-capable laptops. The learning is enhanced by working with real practice datasets. If you have a case that you would like to discuss, feel free to send it to us in advance and we will try to cover it during the training.

## **Thursday, 21 September**

### **Intro to Random Forests (Breakout Room 1, 9:00 to 11:00)**

*Ewa Nowakowska, SUPERCRUNCH by GfK*

Random Forest (RF) analysis has been gaining in popularity over the past few years as an accessible and robust approach to predictive modeling. RF analysis has been found to be particularly useful in various areas including big data analytics. The RF model indeed offers numerous advantages over other machine learning algorithms i.e.,:

- Computational efficiency / speed on large data sets
- The ability to effectively handle numerous variables of mixed type
- Robustness to noise / outliers; multiple strategies for dealing with missing data
- Highly accurate predictions at relatively low cost.

RF analysis also provides a variety of valuable outputs without requiring extensions to the model. Details depend on the implementation however typical examples include a transferable classification tool, unbiased classification error estimates and a proximity matrix which may in turn be used to segment the data. Altogether it makes RF analysis a first choice prediction & classification approach for a growing number of analysts and data scientists.

In this tutorial we will focus on explaining the fundamental concepts behind random forests and demonstrate its application using software that does not require extensive programming expertise. We will start with simple tree-based methods, useful for gaining valuable visual insight. Next, we will discuss ways of combining multiple trees in order to improve both model stability as well as predictive accuracy. Our focus will be on random forests however bagging and boosting, which complement and further develop the concept of RF analysis, will also be discussed. Practical examples will be explored using the free and open source R software package Rattle (Williams, 2009). Built on top of R, Rattle provides a means for executing low level R commands via a friendly GUI thus enabling straightforward implementation of the RF model.



## **New Features in the Market Simulator (Breakout Room 1, 11:10 to 13:00)**

*Aaron Hill, Sawtooth Software*

The latest release of Lighthouse Studio (v9) includes a new market simulator that replaces the older SMRT simulator. This simulator is also available as a standalone software system for you or your clients.

We'll give you an orientation to the new market simulator with special emphasis on the new advanced features, including: sensitivity analysis, netted shares, ability to export Excel simulators, adjustments for awareness, the new external effect adjustment to correct for product distribution, reporting revenues and profits, and search optimization.

## **Advanced Lighthouse Studio (Breakout Room 1, 14:00 to 18:00)**

*Gary Baker, Sawtooth Software*

Lighthouse Studio is a powerful application that has been designed to be very flexible. Custom code can be added to modify the appearance and functionality of your surveys allowing you to do amazing things. In this workshop we will learn about how to incorporate the following into your Lighthouse surveys:

- HTML
- CSS
- JavaScript
- jQuery
- Perl

Learning a little bit about these technologies will greatly enhance your ability to create surveys that your customers will love. This workshop will be very hands on. You will be learning about these scripting languages and then applying them to a Lighthouse Studio survey. We will be on hand to help you every step of the way.

Attendees must bring a laptop PC with Lighthouse Studio installed (a demonstration version will be given to you in advance for the purposes of classroom instruction).

## **Becoming an Expert in Conjoint Analysis (Breakout Room 2, 9:00 to 18:00)**

*Bryan Orme and Keith Chrzan, Sawtooth Software*

*(Third day of the modular seminar that begins on September 19. Feel free to jump in on any day.)*

## **A Practitioner's View (Breakout Room 3, 9:00 to 18:00)**

*Stefan Ammerlaan, SKIM*

Are you already (somewhat) experienced with conjoint analysis, but still struggle with questions like: "How many SKUs can I include in my study? Which method is the most appropriate for the business question? Which kind of none should I use? First choice of share of preference? What is the difference between preference share, market share and volume share? How many concepts do I show? Should I line-price my products? ..." We do too!

After doing thousands of conjoint studies at SKIM, we have developed a good feeling for how to deal with these kinds of challenges. Therefore, I would like to invite you to join our session to discuss these topics, learn from us, but certainly also from the other participants' experiences. Please prepare yourself for a lively and interactive session!

After the session, you will have a better appreciation of the pros and cons of different methodologies, set-up specifications, simulation possibilities and...you have learned why we most often reply to conjoint related questions with... "it depends"...

See you in Barcelona!

PS. In case you have specific questions / topics you want to include or you want to use your own study as an example during this training, don't be shy to contact me prior to the session (at least one week in advance please): [s.ammerlaan@skimgroup.com](mailto:s.ammerlaan@skimgroup.com)

# Main Conference Session Abstracts

## Friday, 22 September

Introductory Remarks  
(9:00 - 9:10)

▪ Session 1 (9:10 - 11:10):

### **Choice Models vs. Implicit Association Tests: Which Assess Brand Preference More Accurately?**

*Michael Patterson and Curtis Frazier, Radius Global Market Research*

Implicit Association Tests are being utilized more frequently within marketing research in order to assess brand preferences. However, a number of studies have raised questions about their predictive validity and reliability. In this paper, we compare IAT measures with choice measures to determine which approach provides a more accurate assessment of individual's likely purchase behaviors.



### **Can Unconscious Thought Theory Be Used to Improve Choice-Based Conjoint? (or CBC meets UTT)** *Sid Simmons, Cranfield University*

Unconscious Thought Theory (UTT) has shown that complex problems are best solved by accessing an individual's subconscious rather than making someone consciously think about the problem for longer. This works because our subconscious brain has a much bigger bandwidth than our conscious brain. The tricky part is getting our subconscious brain to engage while simultaneously disengaging our conscious brain. This paper demonstrates how this can be done and how it can enhance a CBC exercise.

### **Using on-the-fly Logit Scores to Lower the Cognitive Load of Direct Binary Anchored MaxDiff** *Dan Rigby, University of Manchester and Michael Burton, University of Western Australia*

There is increased interest in Anchored MaxDiff. The Threshold question in Direct Binary Anchored MaxDiff re-introduces some of the long-list cognitive load which MaxDiff seeks to lower. We report studies in which the items in the Threshold question are presented in their estimated order of preference, via on-the-fly logit estimation. We evaluate the approach via studies in which respondents are randomly assigned to Threshold questions using the default, or logit ordered, item lists.

Break (11:10 - 11:40)

▪ Session 2 (11:40 - 13:00):

### **Driver Analysis for Customer Satisfaction Research: Some Problems and New Approaches**

*Keith Chrzan, Sawtooth Software and Joachim Büschken, Catholic University of Eichstätt-Ingolstadt, Germany*

Customer satisfaction data is among the most challenging data for analysts to use in derived importance models. After discussing familiar problems (collinearity) and established solutions (relative importance analysis with averaging-over-orderings methods) we will discuss some less well known but potentially more severe problems. We introduce a new survey response model that allows for respondents to switch between alternative response strategies as they move from item to item in a survey and present empirical results from a study applying the new model. We show that respondents switch heavily between response modes and demonstrate how a model-based analysis of satisfaction data improves inference.

### **Predictive, Stable, Meaningful, Visual: Looking for a Suitable Key Driver Analysis Method**

*Dmitry Belyakov, Ipsos Comcon*

This paper compares different well-known methods for Key Driver Analysis and shows how they can be improved. We compare predictive validity, stability of the estimates, and interpretability. We provide recommendations regarding which method to use depending on conditions and purposes.

Lunch (13:00 - 14:10)

▪ Session 3 (14:10 - 16:10):

### **A Direct Comparison of Discrete Choice and Allocation Conjoint Methodologies in the Healthcare Domain**

*James Pitcher, GfK UK, Tatiana Koudinova and Daniel Rosen, GfK US*

Patient Based Discrete Choice (PBC) and Allocation Based Conjoint (ABC) are both commonly used to estimate new product preference shares in the healthcare space. For the first time, this research directly compares the accuracy of the two methods, their characteristic similarities and differences, as well as their ease of implementation and respondent-friendliness. Our research revealed significant differences between the two models both in terms of modelled preference share estimates and directly reported preference share.

### **How to Extract Insights from Text**

*Frank Hedler and Ryan Howard, Simpson Carpenter Ltd*

Free form text data is everywhere and growing at an incredible rate, providing marketers with a real opportunity to reach beyond simple metric scores to understand what is driving their brand and customer experience. Although there are many tools available, few approaches speak to the specific needs of market researchers. In this paper we document our successful approach using LDA models in dealing with text within the context of market research.

### **Tools for Dealing with Correlated Alternatives**

*Jeroen Hardon, Kevin Lattery, and Kees van der Wagt, SKIM Group*

Correlated alternatives violate our standard conjoint modeling assumptions (IIA). While respondent level utilities help, sometimes that is not enough. We describe and compare several tools for dealing with correlated alternatives. These include full blown nested logit, error components logit, and post-hoc simulator adjustments.

Break (16:10 - 16:30)



▪ Session 4 (16:30 - 17:50):

### **Choice Based Conjoint Meets Virtual Reality: Can It Provide More Realistic Experiences and Better Quality Data?**

*Alexandra Chirilov, GfK Marketing and Data Sciences, Germany*

Virtual Reality (VR) is becoming more accessible to a larger audience, thus there is a heightened need to understand if VR may improve the way we conduct marketing research (and conjoint studies in particular) and how we can benefit from producing more realistic experiences. During the first quarter of 2017, we conducted in a central location, one of the most comprehensive Virtual Reality Enhanced Interview (VREI) studies known, with more than 250 VR untrained participants, to evaluate the effects of different study environments (VREI vs. CAPI) on respondents' behavior in a conjoint-like choice experiment.

### **Choice-Based Conjoint and NeuroPricing: Combining the Best of Two Worlds**

*Maximilian Rausch, Peter Kurz, KANTAR TNS – Applied Marketing Science, Munich, Nathalie Liegel, and Kai-Markus Müller, The Neuromarketing Labs, Stuttgart*

NeuroPricing uses EEG brain scan measurements to derive optimal price points and price elasticities for products. The method results in precise individual measures for price thresholds. This deep dive is only possible for a selected set of products and only for a small sample. Market research commonly uses discrete choice models for pricing research. This method can deliver price demand curves for reasonably large sets of products. Here, we present a synthesis of DCM and NeuroPricing conducted in a market for print products. The approach combines the best from both worlds and yields an overall result of a strikingly scalable deep dive.

Closing Remarks (17:50 - 18:00)





## Conference Registration

Registration link coming soon! Prices are listed on page 2 of this brochure.

## Hotel Registration

The event will be held at the **Renaissance Barcelona Hotel**, with a promotional rate of €205 per night.

Renaissance Barcelona Hotel  
Carrer de Pau Claris, 122, 08009 Barcelona,  
Spain

Register with the hotel during the conference registration process (using the link provided above). Or, you may directly dial the hotel at +34 932 72 38 10. Be sure to mention that you are with the SKIM/Sawtooth Software event to get the promotional rate.



Promotional room rates are available until 17 August or until the room block is full. We have reserved a room block at the promotional rate, but rooms are limited. Therefore, we recommend you register with the hotel as soon as you are able to make plans.

## Questions?

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**Disabilities:** SKIM and Sawtooth Software are committed to providing equal access to our meetings for all attendees. If you are an attendee with a disability and require meeting room/program accommodations (wheelchair access, hearing or visual assistance, dietary restrictions, etc.) please contact us and a member of our staff will ensure that appropriate access arrangements are made.

If you have specific disability-related needs for your hotel sleeping room, please be sure to communicate those directly to the hotel when you make your reservation. In an effort to provide the highest quality of service to all attendees, we require that details of all access requests be communicated to the Sawtooth Software office at least 14 days in advance of the beginning of the meeting.