

MARCH 10-12, 2016 ★ PHOENIX, AZ



# ANALYTICS CONFERENCE



MESA ARIZONA



**MAJOR LEAGUE BASEBALL**  
PROUDLY SUPPORTS

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**THE 2016 SABR  
ANALYTICS  
CONFERENCE**

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# Welcome!

Welcome to the fifth annual SABR Analytics Conference.

In 2016, we have invited another top group of speakers from throughout the baseball industry, including a special one-on-one session with Arizona Diamondbacks President/CEO Derrick Hall; a General Manager Panel with Dick Williams of the Cincinnati Reds and Billy Eppler of the Los Angeles Angels of Anaheim; and cutting-edge panels such as the Analytics of Hitting and Pitching, the Defensive Metrics Panel, and discussions on big data technology, baseball operations, and the business side of the game. We'll also have 11 research presentations with a wide-ranging, diverse group of speakers throughout the conference.

Each year, the top minds of the baseball analytic community gather to discuss, debate and share insightful ways to analyze and examine the great game of baseball. The event is a natural for SABR. The Society for American Baseball Research has a long and storied history with baseball statistical analysis, evidenced by the link between our name and sabermetrics. While SABR is a multi-faceted organization involved in virtually every aspect of baseball, we have taken a major step to reconnect with our beginnings by producing and hosting our fifth annual SABR Analytics Conference.

This year's Analytics Conference will be held from Thursday, March 10 through Saturday, March 12 at the Hyatt Regency Phoenix in downtown Phoenix. The schedule will consist of a combination of Guest Speakers, Panels and Research Presentations — plus the Diamond Dollars Case Competition. In this competition, graduate and undergraduate students will analyze and present a real baseball operations decision.

SABR's long history in this area of baseball research, coupled with our mission of advancing the understanding and the knowledge of baseball, makes us the perfect choice to coordinate and host such an important baseball industry event.

Once again, we want to thank all of our attendees and our sponsors, which include Major League Baseball, ESPN, Rawlings, Sportvision, Baseball Info Solutions, Bowman, SmartKage, Baseball-Reference.com, Sports Management Worldwide, Columbia University's Sports Management Graduate Program, and the following MLB teams: the Arizona Diamondbacks, Chicago Cubs, Cincinnati Reds, Cleveland Indians, Colorado Rockies, Los Angeles Dodgers, New York Mets, and San Francisco Giants.

You can visit [SABR.org/analytics](http://SABR.org/analytics) during and after the conference for complete coverage of the 2016 SABR Analytics Conference, including stories, multimedia highlights, and photo galleries.

**Vince Gennaro, SABR President ♦ Marc Appleman, SABR Chief Executive Officer**

# Events Schedule

## THURSDAY, MARCH 10

Thursday's programming will be held at the Hyatt Regency Phoenix, 122 N. 2nd St., Phoenix, AZ 85004.

♦ **8:00 a.m.-7:00 p.m.: Registration open**

You can pick up your SABR Analytics Conference registration packet in the Regency Ballroom Foyer (1st floor) of the Hyatt Regency Phoenix.

♦ **8:30 a.m.-1:00 p.m.: Diamond Dollars Case Competition  
(Remington, Borein, Russell and Phoenix Ballrooms, 2nd floor)**

Presentations of the Diamond Dollars Case Competition. Introduction at 8:30 a.m. by SABR President Vince Gennaro in the Phoenix Ballroom, 2nd floor. *See page 21 for more information.*

♦ **1:45-2:00 p.m.: Conference Welcome: Vince Gennaro/Marc Appleman  
(Regency Ballroom A/B, 1st floor)**

SABR President Vince Gennaro and Chief Executive Officer Marc Appleman welcome attendees to the 2016 SABR Analytics Conference.

♦ **2:00-2:30 p.m.: Brian Kenny: "Ahead of the Curve"  
(Regency Ballroom A/B, 1st floor)**

MLB Network host Brian Kenny will give a talk on the state of baseball analytics.

♦ **2:45-3:45 p.m.: The Analytics of Pitching and Hitting  
(Regency Ballroom A/B, 1st floor)**

Former major-leaguers Aaron Boone and Dallas Braden of ESPN, and FanGraphs staff writer Eno Sarris. Moderator: Mike Ferrin, Arizona Diamondbacks/MLB Network Radio.

♦ **4:00-5:00 p.m.: Research Presentations 1-2  
(Regency Ballroom A/B, 1st floor)**

*RP1 and RP2 will take place back-to-back in a single session.*

RP1—Jason Sherwin, "How The Brain Hits, And Where We See It On The Field"

RP2—Scott Spratt, "Splitting Range, Positioning, and Throwing in Defense"

♦ **5:15-6:15 p.m.: MLB Now Panel  
(Regency Ballroom A/B, 1st floor)**

SABR President Vince Gennaro, Ken Rosenthal of MLB Network/FoxSports.com, former major-leaguer Eric Byrnes of MLB Network. Moderator: Brian Kenny, MLB Network.

♦ **7:00-9:30 p.m.: Welcome/Networking Reception with Baseball Industry Network  
(Garden Terrace, 3rd floor)**

The welcome reception will be an opportunity for conference attendees to meet some of our panelists, speakers, writers and others working throughout the baseball industry. Cash bar.



# Events Schedule

## FRIDAY, MARCH 11

Friday's programming will be held at the Hyatt Regency Phoenix, 122 N. 2nd St., Phoenix, AZ 85004.

♦ **8:00 a.m.-5:00 p.m.: Registration open**

♦ **8:00-9:00 a.m.: One on One: Derrick Hall**

**(Regency Ballroom A/B, 1st floor)**

Derrick Hall, President/CEO, Arizona Diamondbacks. Moderator: Ken Rosenthal, MLB Network/FoxSports.com.

♦ **9:45-10:45 a.m.: General Manager Panel**

**(Regency Ballroom A/B, 1st floor)**

Dick Williams, Cincinnati Reds; Billy Eppler, Los Angeles Angels of Anaheim. Moderator: Brian Kenny, MLB Network.

♦ **11:00 a.m.-12:00 p.m.: Research Presentations 3-4**

**(Regency Ballroom A/B, 1st floor)**

*RP3 and RP4 will take place back-to-back in a single session.*

RP3—Jonathan Judge, "Measuring Performance Better and Sooner"

RP4—Joe Rosales, "Quantifying the Impact of Injuries on Playing Time and Performance"

♦ **12:00-1:00 p.m.: Lunch**

**(Atrium, 2nd floor)**

Analytics Conference registration includes lunch.

♦ **1:15-2:15 p.m.: Technology Panel**

**(Regency Ballroom A/B, 1st floor)**

Michael Bentley, Founder, Blast Motion; Kevin Forbes, Product Specialist, Kinduct Technologies Inc. Moderator: Vince Gennaro, SABR President.

♦ **2:30-3:30 p.m.: Statcast on Every Screen**

**(Regency Ballroom A/B, 1st floor)**

Daren Willman, Director of Baseball Research and Development, MLB Advanced Media; Mike Petriello, Analyst, MLB.com. Moderator: Vince Gennaro, SABR President.

♦ **3:30-4:30 p.m.: Research Presentations 5-6**

**(Regency Ballroom A/B, 1st floor)**

*Presented by Baseball Info Solutions, RPs 5-6 will take place back-to-back-to-back in a single session.*

RP5—Robert Brustad, "Hidden Gold on the Diamond? The Contribution of the Relative Age Effect to Talent Estimation Errors of High School Players in the June MLB Draft"

RP6—Scott Powers and Eli Shayer, "True wOBA: Estimation of True Talent Level for Batters"



# Events Schedule

♦ **4:45-5:30 p.m.: Diamond Dollars Case Competition**

**(Regency Ballroom A/B, 1st floor)**

Encore of the winning presentation from the Diamond Dollars Case Competition.

## SATURDAY, MARCH 12

Saturday's programming will be held at the Hyatt Regency Phoenix, 122 N. 2nd St., Phoenix, AZ 85004.

♦ **8:00 a.m.-5:00 p.m.: Registration open**

♦ **8:00-8:30 a.m.: Baseball-Reference.com Q&A**

**(Regency Ballroom A/B, 1st floor)**

Baseball-Reference.com founder Sean Forman will be on hand to answer questions and provide tips on getting the most out of his website and its research tools. From the National League to the Federal League, from Japan to Cuba and from the Dominican Winter League to the Arizona Fall League, Baseball-Reference has you covered. The site allows you to find career statistics for every player in MLB history, as well as records for teams. Thanks to the tireless work of Retrosheet, B-R also has complete MLB box scores back to 1913 and most play-by-play accounts back to 1950. This overwhelming amount of information can be sliced and diced via a set of tools we call the "Play Index." With the tools in this subscription-only service you can make custom queries into baseball history. These searches can be run for season totals, single-game or span-of-games totals, dozens of splits, streak or game events. It is the most powerful baseball research tool available to the public and costs less than a dime per day (\$36/year).

♦ **8:30-9:30 a.m.: Defensive Metrics Panel**

**(Regency Ballroom A/B, 1st floor)**

Former major-leaguer Alex Cora of ESPN; John Dewan, Baseball Info Solutions; Caleb Peiffer, Manager, Baseball Operations, Seattle Mariners. Moderator: Mike Ferrin, Arizona Diamondbacks/MLB Network Radio.

♦ **9:45-10:45 a.m.: Research Presentations 7-8**

**(Regency Ballroom A/B, 1st floor)**

*RP7 and RP8 will take place back-to-back in a single session.*

RP7—Rob Arthur, "Hot & Cold Streaks Using Batted Ball Velocities"

RP8—Brian Cartwright, "Solving DIPS by Deconstructing BABIP"

♦ **11:00 a.m.-12:15 p.m.: How Big Data and Analytics is Impacting Baseball's Business Operations**

**(Regency Ballroom A/B, 1st floor)**

John Fisher, Arizona Diamondbacks; Ryan Gustafson, San Diego Padres.

Moderator: Dan Migala, PCG/SportsDesk Media.



# Events Schedule

♦ **12:15-12:45 p.m.: Research Presentation 9**

**(Regency Ballroom A/B, 1st floor)**

*Presented by Baseball Info Solutions*

RP9—Jim Albert, “Component Predictions of Batting and Pitching Measures”

♦ **12:45-1:45 p.m.: Lunch**

**(Atrium, 2nd floor)**

Analytics Conference registration includes lunch.

♦ **2:00-3:00 p.m.: Baseball Operations Panel**

**(Regency Ballroom A/B, 1st floor)**

Sarah Gelles, Baltimore Orioles; Yeshayah Goldfarb, San Francisco Giants; Nick Ennis, San Diego Padres.

Moderator: Vince Gennaro, SABR President.

♦ **3:15-3:30 p.m.: SABR Analytics Conference Research Award presentations**

**(Regency Ballroom A/B, 1st floor)**

The winners of the 2016 SABR Analytics Conference Research Awards will be announced and presented.

♦ **3:30-4:30 p.m.: Research Presentations 10-11**

**(Regency Ballroom A/B, 1st floor)**

*Presented by Baseball Info Solutions, RP10 and RP11 will take place back-to-back in a single session.*

RP10—Lindsay Parr, “The Stolen Base”

RP11—Rob Mains, “Unintended Consequences of Rising Strikeout Rates”

♦ **4:30-5:00 p.m.: Conference wrap-up**

**(Regency Ballroom A/B, 1st floor)**

SABR President Vince Gennaro and Chief Executive Officer Marc Appleman.

*Please note: All speakers and panelists are subject to change due to availability.*



# Speakers/Panelists

## Conference Welcome: Vince Gennaro and Marc Appleman

SABR President Vince Gennaro and Chief Executive Officer Marc Appleman welcome attendees to the 2016 SABR Analytics Conference. **1:45 p.m., Thursday, March 10, Regency Ballroom A/B, 1st floor.**

♦ **Vince Gennaro, President, SABR:** Vince is the President of SABR, the director of Columbia University's sports management graduate program, a consultant to MLB teams, and the host of *Behind the Numbers: Baseball SABR Style on SiriusXM* on Sunday nights. He is also the author of *Diamond Dollars: The Economics of Winning in Baseball* and a regular guest on MLB Network. He is also the architect of the Diamond Dollars Case Competition series, which brings together students and MLB team and league executives and serves as a unique learning experience, as well as a networking opportunity for aspiring sports executives. This follows a successful business career, which includes diverse roles — CEO of an early stage public company, president of a billion-dollar division of PepsiCo, and ownership of a women's pro basketball franchise. He is on the Advisory Board of The Perfect Game Foundation, which is dedicated to helping young people build a career in sports.

♦ **Marc Appleman, Chief Executive Officer, SABR:** Marc joined SABR as the Executive Director in 2010 and was named Chief Executive Officer in 2015. His arrival has sparked new growth for the organization as SABR has become a major part of the baseball community, especially since the launch of the SABR Analytics Conference in 2012. Marc's broad-based career began as a sportswriter who covered baseball for the *Los Angeles Times San Diego Edition*. He honed his skills in digital media and sports content development as the Senior Coordinating Editor and Director of SportsNation at ESPN New Media, the Director of Programming at AOL Sports, Managing Editor of FoxSports.com, and as a writer/editor for *Sports Illustrated for Kids*. He also brings a wealth of strategic and marketing skills to SABR, having worked as Chief Operating Officer for Active.com and President of Content and Programming for Nobok Sports.

## Brian Kenny: "Ahead of the Curve"

MLB Network host Brian Kenny will give a talk on the state of baseball analytics. **2:00 p.m., Thursday, March 10, Regency Ballroom A/B, 1st floor.**

♦ **Brian Kenny, Host, MLB Network:** Brian is a host at MLB Network, where he appears across the network's studio programming, including "MLB Now" and "MLB Tonight." A 25-year national TV and radio veteran, Brian joined MLB Network from ESPN, where he was a "SportsCenter" anchor, host of the Brian Kenny Show on ESPN Radio and an Emmy Award-winning anchor for "Baseball Tonight."

# Speakers/Panelists

## The Analytics of Hitting and Pitching

Two former major-leaguers and a baseball analyst will discuss the mental aspects of hitting and pitching.  
2:45 p.m., Thursday, March 10, Regency Ballroom A/B, 1st floor.

- ♦ **Aaron Boone, Analyst, ESPN:** Aaron is an analyst for ESPN's "Monday Night Baseball" with frequent appearances on "Baseball Tonight" and other studio programming. He joined ESPN in 2010 after his retirement from professional baseball. He also served as a guest analyst on ESPN Radio during the 2009 National League Division Series. Boone played for six Major League franchises over 12 seasons including stops in Cincinnati (1997-2003), New York Yankees (2003), Cleveland (2005-06), Florida (2007), Washington (2008) and Houston (2009). In 2003, Boone earned his first and only All-Star appearance before being traded from the Cincinnati Reds to the Yankees. Later that year, he famously hit a dramatic, series-clinching home run in the bottom of the 11th inning of Game 7 of the ALCS, giving the Yankees a 6-5 victory over their rival, Boston Red Sox.
- ♦ **Dallas Braden, Analyst, ESPN:** Dallas joined ESPN as a studio analyst in 2014, and he regularly contributes to "Baseball Tonight," "SportsCenter," and other ESPN news programs. Drafted out of Texas Tech University in 2004, Braden debuted with the Oakland Athletics in 2007. On May 9, 2010, Braden threw the 19th perfect game in MLB history when he defeated the Tampa Bay Rays in Oakland on Mother's Day. That same year, he threw four additional complete games including two shutouts en route to a career-best 3.50 ERA. Braden spent five seasons with the Athletics from 2007-11. He attempted to further his career for two years, battling injuries, before retiring in 2014.
- ♦ **Eno Sarris, Staff Writer, FanGraphs:** Eno is a staff writer for FanGraphs, where he specializes in pitching analytics. He also takes the best public analytics findings to the players in the clubhouse to get their reactions. He has also been a contributor to ESPN, The Hardball Times, and 120Sports.
- ♦ **Moderator: Mike Ferrin, Broadcaster, Arizona Diamondbacks/MLB Network Radio:** Mike is entering his first season on the Diamondbacks radio broadcast team, as the pre- and postgame show host and secondary play-by-play announcer on Arizona Sports 98.7 FM and the Arizona Diamondbacks Radio Network. Since 2007, he has worked as a nationally renowned broadcaster on SiriusXM MLB Network Radio as the host of "Power Alley" and the on-site host in the MLB postseason and Winter Meetings. Previously, he was the play-by-play announcer for the Double-A Bowie Baysox and a sports producer and reporter for WGN Radio in Chicago.



Sportvision is proud to partner with the SABR Analytics Conference for the fifth consecutive year. Along with SABR, Sportvision continues to be on the cutting edge of baseball analytics through its development of iconic products such as PITCHf/x, HITf/x and COMMANDf/x, while breaking new ground with bleeding edge products like FIELDf/x and GameLab.

Sportvision®, Inc. is the nation's premier innovator of sports and entertainment products for fans, media companies and marketers by delivering a heightened sports-viewing experience across all forms of media. Sportvision solutions have enhanced experiences for fans and marketing partners of the NFL, MLB, NASCAR, The Olympic Games, NHL, PGA TOUR, LPGA Tour, NBA, NCAA, WTA, MLS, IRL, X Games, America's Cup and other sporting events on-air and online.

[www.sportvision.com](http://www.sportvision.com)



# Speakers/Panelists

## MLB Now Panel

Host Brian Kenny will moderate a wide-ranging discussion on issues affecting the modern game.

**5:15 p.m., Thursday, March 10, Regency Ballroom A/B, 1st floor.**

- ♦ **Eric Byrnes, Analyst, MLB Network:** Eric became an analyst for MLB Network after an 11-year career as an outfielder for the Oakland Athletics, Colorado Rockies, Baltimore Orioles, Arizona Diamondbacks, and Seattle Mariners. He was a key member of the Diamondbacks' 2007 NL West championship team, hitting 21 home runs, scoring 103 runs, and stealing 50 bases. As a member of the A's, he batted .462 in the 2003 AL Division Series against the Red Sox. He has also been a contributor on ESPN, MLB on FOX, Fox Sports Arizona, "The Best Damn Sports Show Period," "MLB Home Plate" on SiriusXM, and KNBR in San Francisco.
- ♦ **Vince Gennaro, President, SABR:** Vince is the President of SABR's Board of Directors and author of *Diamond Dollars: The Economics of Winning in Baseball*. He is a consultant to MLB teams, appears regularly on MLB Network, and director of Columbia University's sports management graduate program. He also hosts the syndicated MLB Network Radio program, *Behind the Numbers: Baseball SABR Style on SiriusXM* on Sunday nights. He is also the architect of the Diamond Dollars Case Competition series, which brings together students and MLB team and league executives and serves as a unique learning experience, as well as a networking opportunity for aspiring sports executives.
- ♦ **Ken Rosenthal, MLB Network/FoxSports.com:** Ken is a Baseball Insider for MLB Network and regularly appears on MLB Tonight and Hot Stove. A sportswriter for more than 20 years, he also is FoxSports.com's senior baseball writer and a weekly contributor to the Fox Saturday Baseball Game of the Week. On-air since 2005, he serves as the field reporter during Fox Sports' featured baseball matchup.
- ♦ **Moderator: Brian Kenny, Host, MLB Network:** Brian is a host at MLB Network, where he appears across the network's studio programming, including "MLB Now" and "MLB Tonight." A 25-year national TV and radio veteran, Brian joined MLB Network from ESPN, where he was a "SportsCenter" anchor, host of the Brian Kenny Show on ESPN Radio and an Emmy Award-winning anchor for "Baseball Tonight."

## One on One: Derrick Hall

Listen to a special one-on-one session with the Arizona Diamondbacks executive. **8:00 a.m., Friday, March 11, Regency Ballroom A/B, 1st floor.**

- ♦ **Derrick Hall, President/CEO, Arizona Diamondbacks:** Derrick is entering his 12th season in the Diamondbacks' front office. He was named as the Diamondbacks' team president in September 2006 and later added the title of CEO in January 2009. Hall originally joined the Diamondbacks in May 2005 as Senior Vice President, Communications, and served in numerous other capacities until being named president. During his tenure, the team has won two NL West championships (2007 and 2011) and was named the top Major League franchise in ESPN's Ultimate Standings in 2013. He has been named the "Best Boss in Sports" by TeamWork Online and Yahoo! named the

# Speakers/Panelists

Diamondbacks as the “Best Workplace in Sports.” His leadership in the local community allowed the Diamondbacks to become the first professional sports team to win the inaugural 2010 United Nations NGO Positive Peace Award.

♦ **Moderator: Ken Rosenthal, MLB Network/FoxSports.com**

## General Manager Panel

This panel will discuss how major league front offices are using analytics to develop a competitive edge and stay ahead of their competition. **9:45 a.m., Friday, March 11, Regency Ballroom A/B, 1st floor.**

♦ **Dick Williams, Senior Vice President/General Manager, Cincinnati Reds:** Dick is entering his 11th season in the Reds front office and was promoted to his current position in November 2015. He joined the baseball operations department in 2005 and was involved in all financial and administrative aspects, including budgeting and strategic planning for the major league, scouting and player development departments, as well as background analysis for contract negotiations and player acquisitions. Previously, Dick worked in investment banking and the private equity industry in New York and Atlanta. He also worked in Washington, D.C., at the campaign headquarters for President George W. Bush. He graduated from the University of Virginia.

♦ **Billy Eppler, General Manager, Los Angeles Angels of Anaheim:** Billy was hired as the Angels’ GM in October 2015. He spent 11 seasons in the New York Yankees front office, including the last four as Assistant GM to Brian Cashman, helping in all areas of MLB operations including player acquisitions, roster composition and management, staffing and personnel decisions, and player contract negotiations. Prior to his tenure with the Yankees, he worked for five years in the Colorado Rockies organization. He graduated cum laude with a degree in Finance from the University of Connecticut in 1998.

♦ **Moderator: Brian Kenny, Host, MLB Network**

## Technology Panel

Exploring ways in which technology will impact the game of baseball. **1:15 p.m., Friday, March 11, Regency Ballroom A/B, 1st floor.**

♦ **Michael Bentley, Founder, Blast Motion:** Michael is the founder of Blast Motion, a San Diego-based company that has helped develop some of the most innovative motion capture and analysis systems, including K-VEST, ENSO, and BLAST. He is considered an industry expert in 3D motion capture technologies and analysis. His extensive research and expertise spans Inertial, Electromagnetic, and Optical technologies. He is also a member of the Professional Golfers’ Association of America and a former PGA Tour player. During his playing career, he competed professionally in Australia, Asia, and the United States, and is a consultant to many of today’s top teams, coaches, and equipment manufacturers.

♦ **Kevin Forbes, Product Specialist, Kinduct Technologies Inc.:** Kevin is a Product Specialist with Kinduct Technologies, a Canadian-based technology company that delivers flexible solutions in health, wellness and high performance environments. The Kinduct Performance software plat-



# Speakers/Panelists

form provides tools for teams and organizations to assess their athletes, deliver programming and track progress, while serving as a centralized location for the collection and analysis of data. Kevin has worked in the field of sport and technology for the last ten years and in his role with Kinduct, works with clients in four major professional sport leagues in North America (MLB, NFL, NBA & NHL) as well as NCAA schools, and other elite performance organizations.

♦ **Jason Sherwin, Chief Executive Officer, deCervo:** Jason is Chief Executive Officer and co-founder of deCervo. Previously, he was Research Professor of Visual Neuroscience at the State University of New York. Before that, he held dual appointments as a post-doctoral research scientist at the Columbia University in the City of New York and as an Oak Ridge Associated Universities post-doctoral fellow at the U.S. Army Research Laboratory. His research during this time covered perceptual decision-making in real-world environments. Ultimately, this work led to establishing deCervo with co-founder and Chief Technology Officer Jordan Muraskin based on research and inventions they had pioneered at Columbia.

♦ **Moderator: Vince Gennaro, President, SABR**

## Statcast on Every Screen

Statcast is a revolutionary tracking technology developed by MLBAM. It gathers and displays aspects of the game that were previously immeasurable. The system collects the data using high-resolution optical cameras and radar equipment that have been installed in all 30 Major League ballparks. The technology precisely measures the positions and movements of the ball and every player on the field, introducing fans to a whole new generation of stats such as Exit Velocity, Launch Angle, Route Efficiency, Top Speed and more. **2:30 p.m., Friday, March 11, Regency Ballroom A/B, 1st floor.**

♦ **Daren Willman, Director of Baseball Research and Development, MLB Advanced Media:** Daren spearheads socially fan driven content featuring Statcast in his work for MLBAM. He developed the popular data websites BaseballSavant.com, MLBfarm.com, and NFLsavant.com. Previously, he was the lead software architect at the Harris County District Attorney's Office in Houston.

♦ **Mike Petriello, Analyst, MLB.com:** Mike is an analyst for MLB.com, host of the Statcast podcast, and he regularly appears on MLB Network. He has previously written for ESPN Insider and FanGraphs and was an editorial producer for Sports on Earth. From 2008 to 2013, he was Senior Digital Producer at Ketchum, one of the world's largest PR agencies.

♦ **Moderator: Vince Gennaro, President, SABR**

## Defensive Metrics Panel

This panel will discuss how the art of fielding and evaluating defense have changed thanks to modern analysis. **8:30 a.m., Saturday, March 12, Regency Ballroom A/B, 1st floor.**

♦ **Alex Cora, Analyst, ESPN:** Alex has been an analyst with ESPN and ESPN Deportes since 2013. He provides analysis on various platforms across both networks, including on "Baseball Tonight" and other studio programming. He was an infielder for 14 seasons in the major leagues, helping the Boston Red Sox win the 2007 World Series. He also helped lead the University of

# Speakers/Panelists

Miami to three College World Series. He is also the general manager of Puerto Rico's Caguas Criollos baseball team and led them to the 2013 Caribbean Series.

♦ **John Dewan, Owner, Baseball Info Solutions:** John is the owner of Baseball Info Solutions, which collects, analyzes and disseminates the most in-depth data in the industry with more than a dozen Major League Baseball teams as clients. He is also the co-publisher of ACTA Sports, a division of ACTA Publications, which publishes books on statistical baseball analysis, including the annual *Bill James Handbook* and other sports titles. John's three-volume set of *The Fielding Bible* books break new ground in an area that has been the least analyzed in baseball: defense. His Plus/Minus System and Defensive Runs Saved are a direct application of actuarial and sabermetric techniques. Before founding BIS, John was President and CEO of STATS, Inc., following a highly successful career as an insurance actuary.

♦ **Caleb Peiffer, Manager, Baseball Operations, Seattle Mariners:** Caleb is entering his eighth season in the Mariners front office, where he assists in player acquisitions, roster management, professional scouting, and contract negotiations. He was named Manager of Baseball Operations in 2013. He graduated from Harvard University with a bachelor's degree in History in 2007. He has also written for Baseball Prospectus.

♦ **Moderator: Mike Ferrin, Broadcaster, Arizona Diamondbacks/MLB Network Radio**

## How Big Data and Analytics is Impacting Baseball's Business Operations

The business of baseball is becoming more dependent on analytics. This panel will take an inside look into how team's front offices are using analytics and big data to progressively drive incremental revenue growth. **11:00 a.m., Saturday, March 12, Regency Ballroom A/B, 1st floor.**

♦ **John Fisher, Senior Vice President, Ticket Sales and Marketing, Arizona Diamondbacks:** John is entering his ninth season with the Diamondbacks front office, and sixth in his current position. He oversees all groups, suites and season ticket sales, service and ticket operations as well as all marketing efforts for the Diamondbacks. He originally joined the organization in October 2007 and managed a staff of season tickets sales representatives that set an organizational record in new ticket package revenue for the 2008 season. Prior to joining the Diamondbacks, Fisher worked for the Lake Erie Monsters of the America Hockey League in 2006-07 after spending six seasons leading group sales efforts for the NBA's Cleveland Cavaliers and Quicken Loans Arena.

♦ **Ryan Gustafson, Vice President, Strategy & Innovation, San Diego Padres:** Ryan oversees business analytics, strategic planning, financial projections, and special projects for the Padres. Previously, he worked at the MLB Commissioner's Office in ticket analytics, and received an MBA from Harvard Business School in 2012.

♦ **Moderator: Dan Migala, Chief Innovation Officer, PCG & SportsDesk Media:** Dan is the co-founder of PCG, a Chicago-based team marketing advisory firm and SportsDesk Media, a next generation digital media, analytics and marketing company with clients in MLB, NBA, NFL, NHL, NCAA and International sports organizations. He has helped design some of Major League and Minor League Baseball's most innovative revenue-generating concepts and has been recognized by the National Baseball Hall of Fame in Cooperstown for his creative advancement of baseball promotions.



# Speakers/Panelists

## Baseball Operations Panel

This panel will focus on how baseball operations departments throughout Major League Baseball are using analytics. **2:00 p.m., Saturday, March 12, Regency Ballroom A/B, 1st floor.**

- ♦ **Sarah Gelles, Director, Analytics and Major League Contracts, Baltimore Orioles:** Sarah is entering her sixth season in the Orioles front office. She has also served as a judge in the Diamond Dollars Case Competition. Previously, she had internships in the Labor Relations Department for Major League Baseball and in the Pittsburgh Pirates' baseball operations department. She graduated summa cum laude with a degree in Law, Jurisprudence & Social Thought from Amherst College in 2010.
- ♦ **Yeshayah Goldfarb, Vice President of Baseball Operations, San Francisco Giants:** Yeshayah is entering his 16th season with the Giants, his first as Vice President of Baseball Operations. He runs minor league operations on a day-to-day basis, which includes: running spring training camp, forming and managing rosters, conducting player evaluation, staff development, budget oversight, and acting as the affiliate team liaison. Additionally he provides statistical analysis on major league, minor league, and amateur players for purposes of roster construction, player acquisition and development. He is also responsible for seeking out and incorporating new technologies and data into baseball operations information systems. Goldfarb graduated cum laude from the University of California, San Diego.
- ♦ **Nick Ennis, Director of Baseball Operations, San Diego Padres:** Nick is entering his seventh season in the Padres front office, having been promoted to his current post in November 2014. His primary responsibilities include assisting in player acquisitions, roster management, professional scouting and contract negotiations. He is also involved in the club's analytics research initiatives and the application of new technologies throughout the department's activities. He first joined the club as an intern in the summer of 2010. A 2004 graduate of Georgetown University, Ennis worked in the venture capital industry before receiving his Master of Business Administration from Columbia Business School in 2010.
- ♦ **Moderator: Vince Gennaro, President, SABR**

# Research Presentations

SABR and Baseball Info Solutions are pleased to announce the research presentations that will be delivered at the fifth annual SABR Analytics Conference. Most presentations will be delivered back-to-back in hour-long single sessions.

All presentations will be held in **Regency Ballroom A/B on the 1st floor of the Hyatt Regency Phoenix**. Here is the schedule of research presentations for the 2016 SABR Analytics Conference:

## Research Presentations 1-2

**4:00-5:00 p.m., Thursday, March 10**

*RP1 and RP2 will take place back-to-back in a single session.*

### **RP1—Jason Sherwin, “How The Brain Hits, And Where We See It On The Field”**

Hitting a baseball is described as one of the “hardest things to do in sports.” While much vision research has focused on this difficult visual task, the study of the neural correlates of hitting a baseball have been only minimally studied. This is because of the technical difficulty of precisely measuring relevant brain response and then decoding the performance-relevant aspects of that signal. deCervo launched in 2014 as a company that offered a solution to these and related problems of high-speed decision-making, such as hitting a thrown baseball. Founded by Ph.D.’s Jordan Muraskin and Jason Sherwin, deCervo grew out of the Columbia University School of Engineering and Applied Sciences, where the founders realized that they could utilize rapid decisions’ neural correlates as biomarkers of expertise. To date, deCervo has worked with four NCAA Division I Baseball teams and seven Major League Baseball teams, having collected over 30 million brain measurements from professional and collegiate players. deCervo has also just begun to bring this capability to youth players in limited test markets. In this talk, Dr. Sherwin will cover both in-depth neuroscience findings and extensions into professional practice via deCervo. Particularly, he will also talk about the relationships seen between deCervo Baseball Profiles and on-field performance metrics, such as plate discipline.

**Jason Sherwin, Ph.D.**, is Chief Executive Officer and co-founder of deCervo. Previously, he was Research Professor of Visual Neuroscience at the State University of New York. Before that, he held dual appointments as a post-doctoral research scientist at the Columbia University in the City of New York and as an Oak Ridge Associated Universities post-doctoral fellow at the U.S. Army Research Laboratory. His research during this time covered perceptual decision-making in real-world environments. Ultimately, this work led to establishing deCervo with co-founder and Chief Technology Officer Jordan Muraskin based on research and inventions they had pioneered at Columbia.

### **RP2—Scott Spratt, “Splitting Range, Positioning, and Throwing in Defense”**

Modern defensive metrics have previously been limited in their capacity to separate individual components of a fielder’s ability to convert batted balls into outs. A shortstop might make a play on a batted ball that historically was rarely made because he showed a lot of range, because he made a great throw, or because he was well-positioned in the first place. Thanks to newer data from Baseball Info Solutions such as infielder starting position coordinates, we can now systematically break out individual components of a defensive play for the first time. The process begins by estimating a batted ball’s likelihood of being converted for an out given different sets of prior information and at different moments in time. From there, we can dis-



# Research Presentations

tribute the credit/penalty between a player's range, positioning, and throwing abilities for every groundball throughout the past three seasons. We find that many players with strong defensive reputations excel in the range category, but their positioning and throwing often limit their overall contributions. On the other hand, some fielders are among baseball's most effective by complementing their mediocre range with excellent positioning and machine-like reliability in making accurate throws to first base.

**Scott Spratt** is a Research Analyst for Baseball Info Solutions. He writes for ESPN Insider and Fan-Graphs and co-hosts the Off the Charts Football Podcast with Aaron Schatz. He is a Sloan Sports Conference Research Paper Competition and FSWA award winner.

## Research Presentations 3-4

**11:00 a.m.-12:00 p.m., Friday, March 11**

*RP3 and RP4 will take place back-to-back in a single session.*

### **RP3—Jonathan Judge, “Measuring Performance Better and Sooner”**

Everyday baseball statistics measure outcomes, not actual player contributions. With modern software, we can and should do better. Through proper mixed modeling, analysts can peg player value sooner, and account dynamically for quality of opponent, stadium effect, and virtually any other statistic of interest. Moreover, modeling not only provides a better answer, but further provides confidence intervals around that answer. These measures of certainty allow better analysis and empower management to make more informed decisions, sooner.

**Jonathan Judge** has a degree in piano performance from the Lawrence University Conservatory of Music and a law degree from the University of Wisconsin. He is a trial lawyer specializing in the defense and regulation of consumer products. He is a senior member of the Stats Team at Baseball Prospectus, and has been heavily involved in the rollout of mixed modeling to drive a new generation of baseball statistics. He believes that analytics can play an important role in driving better legal decisions.

### **RP4—Joe Rosales, “Quantifying the Impact of Injuries on Playing Time and Performance”**

Up to now, one of the barriers to being able to do research on how injuries might affect how a player performs or how a player ages has been lack of information. So, in 2015, Baseball Info Solutions began collecting detailed information on all game events in Major League Baseball that have a physical impact on a player, whether that event resulted in a trip to the Disabled List or not. This includes everything from a hitter simply fouling a ball off his foot to a pitcher requiring Tommy John surgery. While one year of data is not yet enough to necessarily draw definitive conclusions, we can begin to examine the data to see what trends stand out and where the most fertile areas of research may be. For example, when we look at injuries by defensive position, we now have clear evidence that catchers are involved in the most injury events. By far. This is primarily because of all the foul balls they take off the mask and other parts of their bodies. Given the greater understanding that medical professionals are gaining regarding the effects of repeated head trauma on people, this type of data could help illuminate which players may be at greater risk than others. This presentation will begin to explore these and other such injury related topics.

**Joe Rosales** is a Research Analyst for Baseball Info Solutions. He is a New England native and joined BIS after internships in baseball operations with the Boston Red Sox, Pittsburgh Pirates, and New York Mets. He is also a winner of the MIT Sloan Sports Analytics Conference Research Competition for the development of BIS's Strike Zone Runs Saved pitch framing methodology.

# Research Presentations

## Research Presentations 5-6

**3:30-4:30 p.m., Friday, March 11**

*Presented by Baseball Info Solutions, RP5 and RP6 will take place back-to-back in a single session.*

### **RP5—Robert Brustad, “Hidden Gold on the Diamond? The Contribution of the Relative Age Effect to Talent Estimation Errors of High School Players in the June MLB Draft”**

Identifying and projecting talent of high school players is complicated by meaningful age differences that exist among players within the same draft class. The “relative age effect” (RAE) refers to the tendency for older athletes within any competitive age cohort to appear more “talented” than younger athletes when current performance differences can be partially attributed to additional maturation and accumulated practice favoring older players. This study examined relative age influences on the probability of draft selection and eventual return value of high school players with the assumptions that relatively older players a) are more likely to be selected but b) relatively younger players have a higher ceiling and provide greater potential return. All high school draft selections in the first twenty rounds of the 2005 through 2012 MLB June drafts were included. The first analysis included those players born within the 12-month age range corresponding with the age of “typical” high school senior year players. Chi-square frequency analysis revealed a significant difference that favored the selection of older players. Return value was then assessed through subsequent accumulated MLB WAR values of three age-on-draft day groups. Significant differences existed in return value favoring the youngest group of players (m draft day age = 17.97 yrs.) who outperformed the average (m age = 18.40 yrs.) and oldest players (m age = 18.79 yrs.) by 2.36 and 2.44 times, respectively. This advantage was also present for seven of the eight individual drafts. Maturation considerations involved in projecting talent will be further discussed.

**Robert Brustad** is Professor in the School of Sport and Exercise Science at the University of Northern Colorado and former Editor of the Journal of Sport & Exercise Psychology. His focus is on the design of talent identification and talent development systems in sport with primary interest devoted to the role of physical and psychological maturation and development on sport performance. He has consulted with various professional sport organizations and the United States Olympic Committee.

### **RP6—Scott Powers and Eli Shayer, “True wOBA: Estimation of True Talent Level for Batters”**

Estimating the run value of plate appearance outcomes for batters is a solved problem. What has received relatively little attention in sabermetric literature is the problem of estimating the frequency with which a batter will produce each of these outcomes. In an industry where all sample sizes are finite, it is insufficient to distinguish only between a “small sample” and one that is large enough. Dodgers infielder Corey Seager posted a wOBA of .421 in 113 Major League plate appearances in 2015. On a level playing field, how does this compare with Pirates infielder Jung-ho Kang’s .356 wOBA over 456 PA? This is a simplified example of the questions that baseball executives need to address when making roster decisions in the face of uncertainty.

Our proposal, True wOBA, uses ridge multinomial regression to estimate batters’ true skill levels while simultaneously adjusting for sample size, park effects, opponent quality and luck factors, like BABIP. True wOBA is closely related to a simplified version of Deserved Run Average (Judge et al. 2015) for batters, with the novel contribution that outcome probabilities are estimated under the restriction that they sum to one, which is not feasible under the framework of linear mixed effects models. The focus of our work is espousing the idea of leveraging the interplay between population variance and

# Research Presentations

sample variance for different statistics, which is not new (*The Book*, Tango et al. 2007) but is also not used in mainstream baseball analysis as much as we would like.

**Scott Powers** is a Ph.D student in statistics at Stanford University, where he is co-president of the Stanford Sports Analytics Club. He works as an analytics consultant to the Oakland Athletics and as a data analyst for the professional soccer club AZ Alkmaar in the Dutch Eredivisie. Scott is involved with the Stanford Club Baseball team as a former catcher and current coach, and he is also a setter on the Stanford Men's Club Volleyball team.

**Eli Shayer** is a sophomore at Stanford University studying Mathematical and Computational Science, originally from Anchorage, Alaska. At school, Eli is the Technology Officer of the Stanford Sports Analytics Club. In the last several months he placed first in the engineer division of the TruMedia Baseball Hackathon and led his team from the Stanford Sports Analytics Club to a second-place finish in the Graphicacy Major League Data Challenge.

## Research Presentations 7-8

**9:45-10:45 a.m., Saturday, March 12**

*RP7 and RP8 will take place back-to-back in a single session.*

### **RP7—Rob Arthur, “Hot & Cold Streaks Using Batted Ball Velocities”**

Hot streaks have been the subject of considerable controversy in statistical research, both in baseball and other sports. First conclusively debunked, more recent analyses have found some evidence that hot streaks may be real. New batted ball velocity data offers the cleanest and best opportunity yet to search for a signal of streakiness in baseball. To do so, I employed a statistical approach called a Hidden Markov Model, which attempts to infer which of two states (“hot” or “cold”) a hitter is in based on their batted ball exit velocities. After adjusting for opposing pitchers, park effects, and a number of other factors, I examined batted ball velocities of about 100 hitters. I found that some hitters showed strong statistical evidence of streakiness, according to a likelihood ratio test. The difference between some hitters when they were “hot” and “cold” was up to 10-15 mph of exit velocity, which equates to a several hundred point increase in OPS. Notably, I found no similar signal of hot streaks in pitchers. My results indicate that at least some hitters in MLB can go through hot streaks which significantly elevate their offensive performance, and that sabermetric researchers should re-evaluate the existence of streakiness in baseball.

**Rob Arthur** is a freelance journalist, consultant, and researcher based in Chicago. He has contributed to Baseball Prospectus, FiveThirtyEight, and *ESPN The Magazine*, among others. When he's not thinking about baseball, he works as a postdoctoral fellow studying cancer at the University of Chicago Medical Center.

### **RP8—Brian Cartwright, “Solving DIPS by Deconstructing BABIP”**

Batting average on balls in play is a ‘noisy’ stat because it is an aggregation of several rate stats, each with their own properties. Using a binary decision tree to classify each batted ball by ground or air; infield, outfield or over the fence, we'll examine how the launch angles and exit velocities by batters and allowed by pitchers shape the results within each of these batted ball types. This combination of advanced remote sens-

# Research Presentations

ing metrics with publicly available play by play provides valuable insight to interpret the batting, pitching and fielding from college, foreign and minor leagues where the advanced metrics are not available.

**Brian Cartwright** is the developer of the Oliver projections that have appeared at The Hardball Times and FanGraphs since 2009. He was a finalist in the Baseball Prospectus Idol competition and has been studying play by play, projections and defensive metrics for more than 35 years. When away from baseball he applies data science to photogrammetry to manage Obstruction Evaluation / Airport Airspace Analysis for the largest geospatial firm in North America.

## Research Presentation 9 12:15-12:45 p.m., Saturday, March 12

*Presented by Baseball Info Solutions*

### **RP9—Jim Albert, “Component Predictions of Batting and Pitching Measures”**

To predict batting measures for the following season, it is well known that it is desirable to shrink or adjust a batter’s season average towards the average for all players. This result was demonstrated forty years ago by Efron and Morris (1975), and recent demonstrations of these improved predictions are described in Albert (2004) and Tango, Lichtman, and Dolphin (2007). The degree of shrinkage depends on the type of batting measure (Albert, 2004)—the variability of some types of measures such as strikeout and home run rates are more influenced by the different talents of the batters, and for other measures such as batting average and batting average on balls in play are more influenced by chance variation. Bickel (2004) and Bickel (2003) demonstrated how a batting average can be decomposed as a function of other rates such as strikeout rate, home run rate, and hit-in-play rates. This research uses these decompositions to develop improved predictions of batting averages. The strategy is to estimate groups of component rates (such as strikeout rates, home run rates, and hit-in-play rates) separately, and aggregate the component estimates to get new predictions of batting average. A similar strategy can be used to predict on-base percentages, and to predict field-independent-pitching (FIP) measures for pitchers. For pitchers, the method is to separately estimate strikeout rates, home run rates, walk rates, and hit-in-play rates for a group of pitchers, and then aggregate these component estimates to develop “better” estimates of FIP ability.

By using batting data for all non-pitchers in a given season to predict batting measures in the following season, it is demonstrated that the new method tends (over a fifty season period) to provide better predictions of batting average and on-base percentages than standard shrinkage methods. In addition to providing better predictions, the component estimates provide better insight into the specific batting and pitching talents of hitters and pitchers. We provide insight into the situations where one would anticipate seeing the best improvement of these component predictions of batting and pitching performance. In awarding long-term contracts, baseball teams need to make informed predictions about the performance of players in future seasons, and this research should be helpful in the development of better predictions.

**Jim Albert** is a statistics professor at Bowling Green State University. He is past editor of the *Journal of Quantitative Analysis of Sports* and been active in the Section of Statistics in Sports in the American Statistical Association. He has written three baseball books, *Curve Ball* (with Jay Bennett), *Teaching Statistics Using Baseball*, and *Analyzing Baseball Data with R* (with Max Marchi). Growing up in the Philadelphia area, he is a longtime member of SABR and has been a lifelong Phillies fan.



# Research Presentations

## Research Presentations 10-11

**3:30-4:30 p.m., Saturday, March 12**

*Presented by Baseball Info Solutions, RP10 and RP11 will take place back-to-back in a single session.*

### **RP10—Lindsay Parr, “The Stolen Base”**

The stolen base is an integral part of the game of baseball. As it is frequent that a player is in a situation where he could attempt to steal a base, it is important to determine when he should try to steal in order to obtain more wins per season for his team. We used a sample of games during the 2012 and 2013 Major League Baseball seasons to see how often players stole in given scenarios based on number of outs, pick-off attempts, runs until the end of the inning, left or right-handed batter/pitcher, run differential, and inning. New stolen base strategies were created using the percentage of opportunities attempted and the percentage of successful attempts for each scenario in the sample, a formula introduced by Bill James for batter/pitcher match-up, and run expectancy. After writing a program in R to simulate baseball games with the ability to change the stolen base strategy, we compared new strategies to the current strategy used to see if they would increase each Major League Baseball team’s average number of wins per season. We found that when using a strategy where a team steals 80% of the time it increases its run expectancy and 20% of the time that it does not, the average number of wins per season increases for a vast majority of teams over using the current strategy.

**Lindsay Parr** is working towards her Ph.D in Applied Mathematics and Statistics at the Colorado School of Mines in Golden, Colorado. She is a Graduate Teaching Fellow who is currently teaching undergraduate Probability and Statistics at her University. The research that she is presenting was conducted under her advisor Dr. William Navidi. She is an avid sports fan, especially baseball and hockey. Her dream is to work on the statistical side of baseball.

### **RP11—Rob Mains, “Unintended Consequences of Rising Strikeout Rates”**

The main impact of rising strikeout rates has been well-reported: More whiffs and fewer walks mean fewer balls in play, fewer baserunners, and fewer runs scored. In this project, I researched how rising strikeout rates may affect other outcomes.

The first conclusion is that, unsurprisingly, pitchers are increasingly ahead in the count. The data illustrate that 2014 and 2015 were probably (I use the qualifier because of the limited availability of pitch data) the first two seasons in modern baseball history in which more plate appearances ended with the pitcher ahead in the count than with the batter ahead.

The second conclusion is that this trend has led to a statistically significant increase in wild pitches and batters hit by pitches and a decrease in sacrifice flies. (Stolen base attempts are more successful with the pitcher ahead as well, though that could be a result of managerial strategy.)

The hypothesis, supported by pitch location heatmaps, is that when a pitcher is ahead in the count, he focuses on the edges of the strike zone, where a miss can become a hit batter, a wild pitch, or a slower catcher pop time, while the batter is likely to shorten his swing, resulting in fewer well-hit outfield fly balls with runners on third and fewer than two outs. The conclusion is that increased strikeouts have yielded an increase in hit batters and wild pitches and a decrease in sacrifice flies.

**Rob Mains** is a retired Wall Street equities analyst, now analyzing baseball. He has contributed to FanGraphs Community, writes for BanishedToThePen.com, and blogs about the Pittsburgh Pirates at OnTheFieldOfPlay.com. He is a SABR member and a Retrosheet volunteer.

# Diamond Dollars Case Competition

The SABR Analytics Conference is pleased to host the unique **Diamond Dollars Case Competition**. Undergraduate and graduate students from colleges and universities across the country will compete against each other by preparing an analysis and presentation of a baseball operations decision — the type of decision a team's GM and his staff is faced with over the course of a season. The case was developed by Vince Gennaro, author of *Diamond Dollars: The Economics of Winning in Baseball*, and consultant to MLB teams. The Case Competition is the first national competition to be based solely on baseball operations issues.

Four- to five-person student teams will be asked to evaluate a baseball operations case problem. Once the student team has prepared its case, they will have the opportunity to present their analysis and recommendations to a panel of judges, which will include MLB front office executives. They will have a dialog, receive feedback and ultimately be evaluated based on the quality of their insights and analysis.

The competition will be divided into graduate/professional and undergraduate divisions. Awards will be presented to winners in each division. The competition will take place on Thursday, March 10 at the Hyatt Regency Phoenix.

## Presentation schedule Thursday, March 10, 2016

	<u>Undergraduate Division</u>		<u>Graduate/Professional</u>
	<u>Borein Ballroom</u>	<u>Russell Ballroom</u>	<u>Remington Ballroom</u>
9:00-9:30 a.m.	Syracuse University	OPEN	OPEN
9:35-10:05 a.m.	Middlebury College	Ohio University	Columbia University-Sports Management
10:10-10:40 a.m.	NYU-SPS Tisch Institute	VCU-Walker Governor's School	Alabama-Manderson School of Business
10:55-11:25 a.m.	St. John Fisher College	Loras College	Carnegie Mellon-Tepper School of Business
11:30 a.m.-12:00 p.m.	Virginia Tech	Elon University	Ryerson University-MBA Program

### Judges

- ♦ **Mike Debartolo**, Washington Nationals
- ♦ **Scott Freedman**, Philadelphia Phillies
- ♦ **Sarah Gelles**, Baltimore Orioles
- ♦ **Ed Lewis**, Arizona Diamondbacks

- ♦ **Samuel Mondry-Cohen**, Washington Nationals
- ♦ **Matt Obernauer**, Colorado Rockies
- ♦ **Dane Sorenson**, St. Louis Cardinals
- ♦ **Victor Wang**, Cleveland Indians

# SABR Analytics Conference

## Research Awards

The **SABR Analytics Conference Research Awards** recognize baseball researchers who have completed the best work of original analysis or commentary during the preceding calendar year. Winners will be announced from 3:15-3:30 p.m. on Saturday, March 12. Here are the 2016 finalists:

### Contemporary Baseball Analysis

- ♦ Benjamin S. Baumer, Shane T. Jensen, Gregory J. Matthews, “OpenWAR: An Open Source System for Evaluating Overall Player Performance in Major League Baseball,” *Journal of Quantitative Analysis*, Vol. 11, Issue 2, June 2015.
- ♦ Jonathan Judge, Harry Pavlidis, and Dan Turkenkopf. “Introducing Deserved Runs Average — And All Its Friends,” *Baseball Prospectus*, April 29, 2015.
- ♦ Ben Lindbergh, “Among the Power Pitchers: Does Kansas City’s Contact-Heavy Approach Give the Royals a Postseason Edge?” *Grantland*, October 20, 2015.
- ♦ Jeff Sullivan, “So You Want An Edge Against Mike Trout,” *FanGraphs*, August 27, 2015.
- ♦ Jeff Zimmerman, “Velocity’s Relationship with Pitcher Arm Injuries,” *The Hardball Times*, April 22, 2015.

### Contemporary Baseball Commentary

- ♦ Alexis Brudnicki, “I’m Different. I’m the Same.” *The Hardball Times*, November 18, 2015.
- ♦ Nathaniel Grow, “The MLBPA Has A Problem,” *FanGraphs*, March 30, 2015.
- ♦ Dan Rosenheck, “Spring Forward,” *The Economist*, March 4, 2015.
- ♦ Meg Rowley, “Post-Moneyball’s Clubability,” *Baseball Prospectus*, November 4, 2015.
- ♦ Eno Sarris, “Joey Votto on Aging,” *FanGraphs*, September 22, 2015.

### Historical Analysis/Commentary

- ♦ Adam Darowski, “The Standards of Today Would Create a Very Different Hall of Fame,” *The Hardball Times*, December 18, 2015.
- ♦ Jason Foster, “How One Pitch Might Have Sent John Smoltz on a Path to the Hall of Fame,” *The Sporting News*, July 24, 2015.
- ♦ Bryan Grosnick, “Jason Giambi, Patron Saint of the ‘00s,” *Beyond the Box Score*, February 17, 2015.
- ♦ John McMurray, “Examining Stolen Base Trends by Decade from the Deadball Era through the 1970s,” *SABR Baseball Research Journal*, Fall 2015.
- ♦ Alex Remington, “Anniversary of a Myth: The Knickerbockers’ Most Famous Game,” *The Hardball Times*, June 19, 2015.

*Voting for the winners was conducted online at [SABR.org](http://SABR.org), [BaseballProspectus.com](http://BaseballProspectus.com), [FanGraphs.com](http://FanGraphs.com), [HardballTimes.com](http://HardballTimes.com) and [BeyondtheBoxScore.com](http://BeyondtheBoxScore.com), with results weighted equally at 20%. Links to read the finalists can be found at [SABR.org/analytics](http://SABR.org/analytics).*

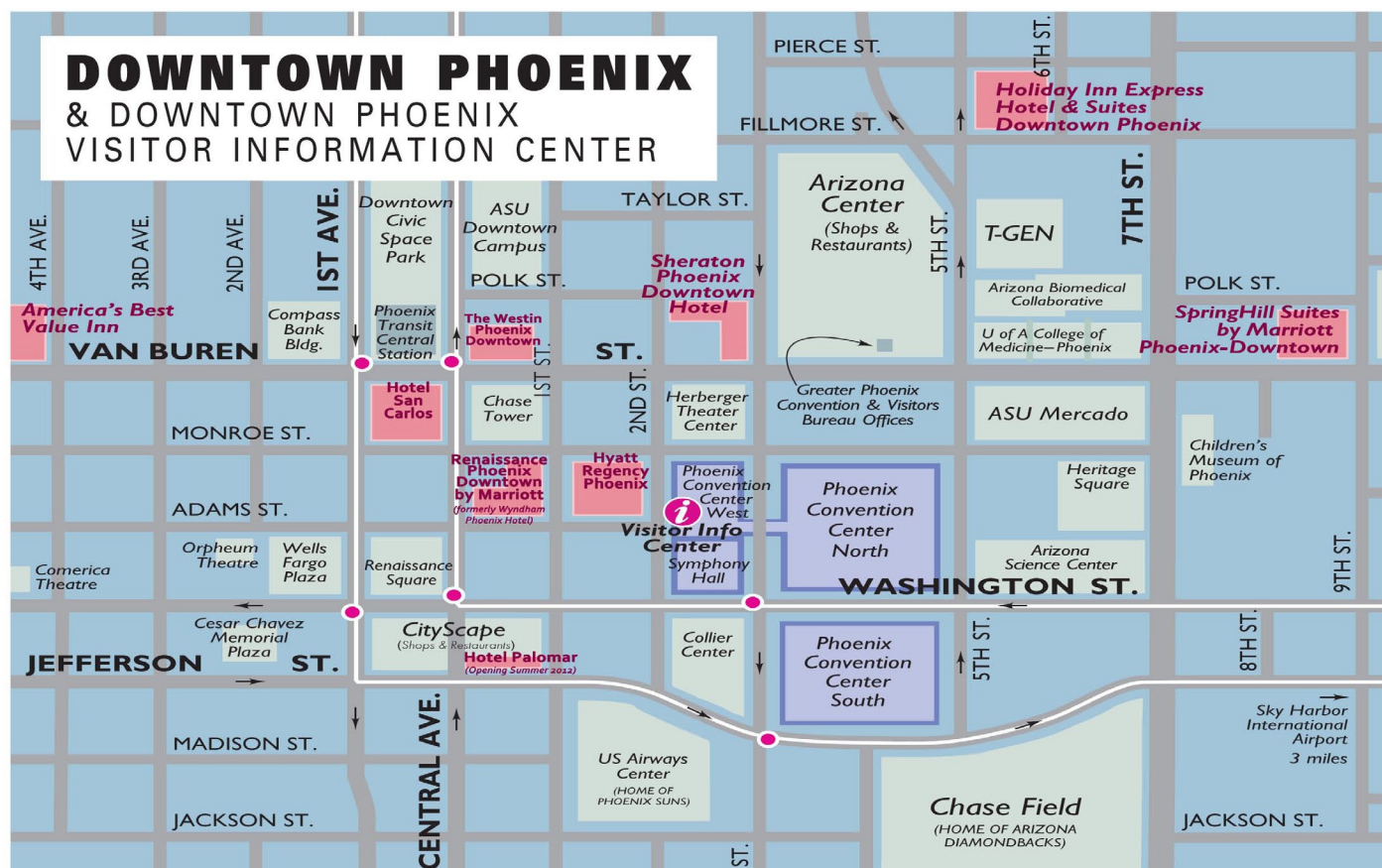
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