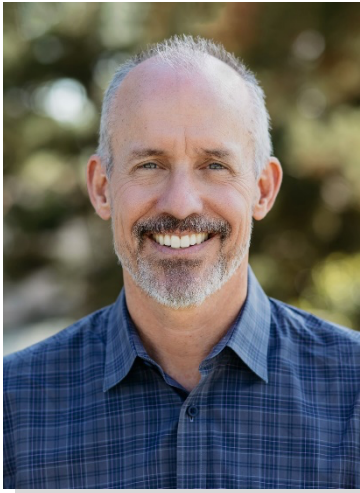


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CURRENT POSITION

Executive Vice President, Cirque Analytics; 2021–present

EDUCATION

Ph.D., Economics, University of Southern California, 1995
M.A., Economics, University of Southern California, 1992
M.A., Christian Apologetics (highest honors) Biola University, 2023
B.A., Economics (honors), Calif. State University, Fullerton, 1988

SPECIALIZED EXPERIENCE, RESEARCH, OR INTEREST

Antitrust; Commercial Disputes; Intellectual Property; Statistics and Econometrics, Valuation

PAST POSITIONS

2013–2022	Professor, Economics, Concordia University Irvine (retired)	Irvine, CA
2021	Visiting Researcher, Univ of Winchester, Sch of Bus, Law, and Tech	Winchester, UK
2007–2021	Senior Vice President, Nathan Associates Inc.	Irvine, CA
2002–2012	Associate Adjunct Professor, Economics, Univ of Southern California	Los Angeles, CA
2001–2007	Vice President, Analysis Group, Inc.	Los Angeles, CA
2001	Manager, PricewaterhouseCoopers, Financial Advisory Services	Los Angeles, CA
1998–2001	Managing Associate, Nathan Associates Inc.	Arlington, VA
1998–2000	Adjunct Professor, Economics, Johns Hopkins University	Washington, DC
1995–1998	Economist, U.S. Federal Trade Commission	Washington, DC

COURSES TAUGHT

Principles and Intermediate Economics, Managerial Economics, Statistics and Econometrics, Finance and Financial Markets, Environmental Economics, Business Info. Technology, Advanced Topics in Economics

EXPERIENCE SUMMARY

Dr. Mangum has over 30 years of experience in economic analysis, research, and teaching. His consulting practice centers on economic analysis and damages in matters related to IP and technology, antitrust, and complex commercial disputes, with particular application to class certification, statistical analysis, and use of survey data. Dr. Mangum's experience as an expert is extensive, with testimony in over 125 matters before local, state, and federal courts. Dr. Mangum has taught graduate and undergraduate courses in economics, statistics, finance, and econometrics at several universities, including Johns Hopkins, USC, Pepperdine and Concordia University Irvine. Dr. Mangum's career has included employment by Nathan Associates, Inc., Analysis Group, PricewaterhouseCoopers, and The US Federal Trade Commission.

PROFESSIONAL EXPERIENCE

Intellectual Property

Dr. Mangum has substantial experience in the area of intellectual property damages, including claims related to infringement of patents; FRAND licensing commitments; patent pools; copyrights; and trademarks; as well as theft of trade secrets; false designation of origin; and false advertising. The case contexts in which Dr. Mangum has performed these analyses include:

- Patent infringement and disputes related to:
 - Computer, electronics, and telecommunication industry:
 - Cellular communication network technology;
 - Modem communication devices;
 - Wireless communication network devices (routers, cards, including under FRAND licensing commitments);
 - Handheld device navigation applications;
 - NIC hardware and chipsets;
 - Semiconductors;
 - Webswitching and IP router network hardware;
 - Wired and wireless portable electronic temperature sensor devices;
 - Electronic eReader devices;
 - Digital TV Tuners under FRAND licensing commitments;
 - Automated lip-sync animation used in video games;
 - Data encryption devices.
 - VoIP network telephony services.
 - Medical devices:
 - Artificial vertebral disc implants;
 - Trocar seals for laparoscopic surgery;
 - Spinal fusion implants;
 - Breast biopsy devices;
 - Remote medical information monitoring technology;
 - Intraarterial guidewire and embolic filter devices.
 - Energy
 - Specialized valves used in oil refining;
 - Electric utility management systems;
 - Wide-area real time phasor measurement and monitoring.
 - Food and agriculture:
 - Additive-infused confections;
 - Nutritional supplements;

- New variety of late ripening white grapes;
- Structures and methods utilized in the growing of grapes and raisins;
- Cold extraction coffee processes.
- Business software
 - eProcurement;
 - Business intelligence;
 - Design and simulation;
 - Call routing software;
 - Computer tracking;
 - Program and application management;
- Clothing and clothing design
 - Padded athletic shirts/pants; shoes; headwear; accessories;
- Miscellaneous
 - Electronic nicotine delivery systems (NDS)
 - Personal watercraft devices and accessories
 - Consumer advertising design via use of digital media
 - Automated stapling machines used in bed manufacturing
 - Specialized hardware and control systems used in high-rise elevators
 - Electronic exchange systems for trading of commodities futures contracts
 - Electronic data management system used in public transportation projects
 - Document and print inspection systems
- Trademark, trade dress, or copyright infringement related to:
 - IT Network equipment (transceivers and switches);
 - Sponsorship with motorsports, automotive repair tools and devices, beverages and snacks, and apparel;
 - Banking services;
 - Skincare and cosmetics;
 - Real estate property acquisition services;
 - Online dining reservation and payment services;
 - Internet search engine terms related to retail sales of food and arranged food products;
 - Enterprise Resource Planning (ERP) software;
 - Veterinary Teleradiology (online/internet) Services;
 - Devices and software for online mobile device data extraction and IT network devices;
 - Clothing, shoes, and jewelry;
 - Advertising and marketing through wireless mobile communications;

- Motion picture trademarks in the manufacture of clothing;
- Furniture products (mechanized and non-mechanized);
- Portable combustion engines and portable air compressors
- Infant care products;
- Homeopathic products;
- Postal measuring products;
- Scented candle products;
- Children's toys;
- Art and art exhibits
- Design plans for a theme amusement park.
- Theft of trade secrets related to:
 - Neuroendovascular coils and catheters;
 - Cold extraction coffee processes
 - Electronic mechanisms for payment processing;
 - Technical documents, Product features, customer data, and marketing methods/models related to Systems for General Floor Hospital Monitoring of patient vital statistics;
 - Training methods, pricing models, and customer status databases related to Enterprise Resource Planning (ERP) software;
 - Customer data and information, and pricing models related to employee pension and benefits insurance brokerage services;
 - Government contracted research into laser vibrometry;
 - Devices and software for mobile device data extraction;
 - IT system design and implementation for the US defense industry;
 - Electronic engineering and CAD packages used in US naval warcraft architecture;
 - Methods for mathematical simulations for the pricing of mortgage backed securities;
 - Soy coffee alternative products;
 - Design, development, marketing, and manufacturing of toys;
 - Computer game accessories.
- False advertising, false designation of origin, or unauthorized use of likeness related to:
 - Chemical dependence treatment services;
 - Real estate property acquisition services;
 - Security monitoring systems and services;
 - Consumer appliances;
 - Medical data printer systems;
 - Furniture products;
 - Composed music and lyrics used in television commercials;

- Restaurant meals and shopping services;
- Internet advertising services via advertorial placement on publishers' websites;
- Nutritional supplements and beverages;
- Orthodontic and Dental devices and services;

Competition/Antitrust

Dr. Mangum has substantial experience in the area of competition and antitrust, including analyses of relevant product and geographic markets, market power, monopolization, and likelihood of monopolization from impending events. These analyses usually include statistical and econometric analysis of market data to identify the extent of competition, and the magnitude of competition. The case contexts in which Dr. Mangum has performed these analyses include:

- Evaluated common impact and estimated damages, for direct and indirect purchasers, from price fixing and other conspiracies, including the markets for commercial tissue paper, bulk vitamins, high-end automobiles, ready mix concrete, consumer apparel, Korean noodles, packaged seafood, meat products, interior molded doors, airline travel, and pharmaceuticals.
- Evaluation of alleged competitive foreclosure in the market for sleep apnea products, including relevant markets, market power, and lost profits damages.
- Evaluation of alleged price discrimination across dealers of hardscape building materials.
- Evaluation of antitrust claims and affirmative defenses of patent misuse related to required terms in patent license programs for flash memory semiconductors and systems.
- Evaluation of market segments, market channels, and cost pass-through in the market for DRAM-containing products and NFL brand apparel.
- Estimation of damages related to:
 - A conspiracy to boycott developments in DRAM packaging;
 - Foreclosure of competition in market for footwear insoles and inserts.
- Evaluation of competitive effects of exclusive dealing clause in a franchise agreement.
- Evaluated the competitive effects of exclusive dealing policies regarding:
 - Acute care hospital and physician services;
 - Customer purchase data exchange related to direct mail advertising and sales;
 - Free standing insert advertising (coupon) services;
 - Replacement parts for 3-piece body welder systems;
 - Interconnect agreements between internet backbone communication services;
 - Supply of biological inputs used in creating generic biologic therapeutic treatments;
 - Professional sports branded athletic apparel;
 - Durable medical equipment;
 - Pharmaceuticals.
- Analyzed the competitive effects from wrongful patent application and issuance (fraud on the patent office) related to processes and mechanisms for food preparation and processing.

- Analyzed the likely competitive effects of proposed mergers in various industries, including hospital services, physician services, pharmaceuticals, medical insurance, construction aggregates, supermarkets, auto parts, cable systems and programming, industrial refractories, and computer game software.

Commercial Disputes

- Evaluated damages related to a data breach and the improper capture and transmission of personalized information held and maintained in commercial database(s).
- Evaluated damages related to alleged breach of contract involving collection and retention of personalized information connected to web browsing activity.
- Evaluated damages related to alleged breach of contract involving online storage agreements.
- Evaluated claims of damages related to attempted sale of cold extraction coffee company and the discovery of patents allegedly based on confidential information.
- Evaluated claims of damages related to failure to close a sale for multiple solar energy production properties/companies.
- Estimated damages in the form of lost profits from breach of contract in a services joint venture involving use of indexes and associated data for creation and analysis of international financial securitized and derivatives.
- Estimated damages in the form of disgorgement and lost company value related to brokerage services involving employee pension and benefit programs.
- Evaluated claims of replacement cost and lost profits damages related to alleged interference in the market for femtocell wireless communication products.
- Evaluated claims of damages in the form of lost profits and disgorgement of compensation and benefit from alleged unauthorized use of confidential materials in the market for government contracts for research into laser vibrometry.
- Estimated damages from employee theft of HDD computer memory products from a research/testing facility. Calculated value based on historical in-channel market price and on historical costs of manufacturing and sales.
- Evaluated claims of lost profits damages arising from alleged professional malpractice related to commercial development and land use.
- Provided statistical and data analysis of invoices for disaster recovery and construction services. Estimated lost profits related to alleged fraud, breach of contract, and tortious interference.
- Estimated damages related to alleged breaches of contract, including:
 - Contract involving the development and sale of solar power generation projects;
 - Contract involving the supply of active ingredients in nutraceuticals;
 - Non-solicitation agreement between government defense contracting companies;
 - Contract for concession services at amusement parks;
 - Contract for creation and promotion of credit reporting services;
 - Contract for supply of MLB jerseys used in creation of sports memorabilia;
 - Contract for blending and supply contracts for specialized non-dairy beverages;
 - Non-compete clauses (restaurant lease, franchising, structural steel fabrication);

- Contract for earning and redeeming of frequent flyer miles;
- Contract for purchase of television airtime on a local over-the-air station;
- Contract for representation and sale of television programming;
- Royalty contract regarding design and functionality elements use in toys;
- Contract for technology and support from software conference bridge systems;
- Contract for conference calling services and long-distance calls connection services.
- Estimated damages from defamation related to the launch of a clinic for medical disorders.
- Evaluated claims by the CA Coastal Commission related to lost recreational value from proposed coastal bluff seawall construction.
- Evaluated concepts and methods for calculating proceeds from a Qi Tam suit related to improper medical lab billing practices.
- Estimated damages related to Quantum Meruit claims involving use of software to manage viewing and storage of electronic medical images.

Employment and Labor

- Estimated damages related to lost profits; lost company value, employee training and hiring expense, and/or disgorgement of defendant's profits in multiple cases related to the alleged breach of non-solicitation agreements and unauthorized use of confidential information by departing employees the insurance and MLM health and wellness industries.
- Estimated lost profits damages and/or disgorgement of defendant's profits in multiple cases related to the alleged breach of non-solicitation agreements and unauthorized use of confidential information involving government defense contracting companies.
- Estimated plaintiff's lost profits and disgorgement of defendant's profits related to the theft of trade secrets by departing employees in the automated emergency/disaster response industry.
- Estimated disgorgement of defendant's profits related to the theft of trade secrets by departing employees in the naval engineering industry.
- Provided statistical analysis of employee timecard and pay data to estimate instances of underpayment or missed breaks.
- Estimated lost earnings and compensation damages related to an alleged wrongful termination of an employee; evaluated lost wages/earnings, lost retirement benefits, and lost compensation through stock options.
- Estimated damages to an employee/inventor related to exclusion as an inventor from PCT applications following termination from a start-up medical devices company; evaluated the plaintiff's claims of lost share of proceeds from technology share.

Statistical and Econometric Analysis

- Performed regression analysis to evaluate class-wide damages related to class certification in the context of alleged conspiracy on the prices of interior molded doors.
- Performed regression analysis to evaluate class-wide damages related to class certification in the context of alleged conspiracy on the prices of packaged seafood.

- Performed regression analysis to evaluate class-wide damages and cost pass-through in the context of multiple alleged antitrust conspiracies (including building materials, airline travel, food products, apparel, and DRAM).
- Evaluated regression and statistical analysis offered in support of damages related to an alleged breach of non-solicitation agreements and unauthorized use of confidential information by departing employees the insurance and MLM health and wellness industries.
- Evaluated regression and statistical analysis offered in support of damages and common impact in an indirect purchaser class action related to alleged false advertising for nutritional supplement beverages.
- Provided statistical analysis of employee timecard and pay data to estimate instances of underpayment or missed breaks.
- Provided sampling techniques and statistical analysis of customer service database to estimate the extent of use of an allegedly infringing feature in a commercial router.
- Evaluated sampling techniques and extrapolation estimates related to allegedly improper medical billing practices and in the context of damages related to construction defects.
- Provided statistical and econometric analysis of survivorship related to consumer membership attrition in credit reporting programs.
- Provided statistical and econometric analysis of the correlation between purchase of infringing products and consequential purchase of related services.
- Provided statistical analysis and estimate of medical product sales in the absence of data from third party sales force.
- Provided statistical and econometric analysis of conference calling minutes related to alleged intentional interference and unfair competition.
- Conducted statistical analysis of incremental costs in support of lost profits calculations.

EXPERT WITNESS EXPERIENCE (SINCE 2018)

- *MSP Recovery Claims Series v. Espress Scripts Inc., et al.*, United States District Court, Northern District of Illinois, Western Division, (2023). Submitted an expert report on behalf of plaintiff classes (direct and indirect) related to the economic effects of an alleged anticompetitive practices involving the pharmaceutical drug Acthar.
- *Q Industries Inc. v. O'Reilly Automotive Inc., et al.*, United States District Court, Northern District of California (2023). Submitted an expert report on behalf of O'Reilly defendants related to alleged trademark infringement involving retail supply of automotive equipment.
- *Q Industries Inc. v. Test-Rite Products Corp., et al.*, United States District Court, Northern District of California (2023). Submitted an expert report on behalf of defendant Test-Rite Corp. related to alleged trademark infringement involving wholesale supply of automotive equipment.
- *In Re Turkey Antitrust Litigation*, United States District Court, Northern District of Illinois, Eastern Division (2023). Provided deposition testimony on behalf of plaintiff class related to the economic effects of an alleged conspiracy to increase prices and restrain supply in the turkey industry.
- *In Re Pork Antitrust Litigation*, United States District Court, Northern District of Minnesota (2023). Provided testimony in depositions (2) on behalf of plaintiff class related to the economic effects of an alleged conspiracy to constrain capacity and increase prices in the pork industry.
- *MGA Entertainment Inc. v. Clifford "T.I." Harris, et al.*, United States District Court, Central District of California, Western Division (2023). Testified at trial and deposition on behalf of counter-defendant related to misappropriation of intellectual property (name, likeness, trade dress) related to the promotion and sale of toys.
- *Microvention Inc. v. Balt USA, LLC, et al.*, United States District Court, Central District of California (2023). Provided deposition testimony on behalf of Defendant involving damages related to alleged misappropriation of trade secrets involving neuroendovascular medical devices.
- *In Re Blackbaud, Inc. Customer Data Security Breach Litigation*, United States District Court for the District of South Carolina, Columbia Division (2023). Provided deposition testimony on behalf of plaintiff class related to damages involving a data breach and the improper capture and transmission of personalized information held and maintained in commercial database(s).
- *In Re Broiler Chicken Antitrust Litigation*, United States District Court, Northern District of Illinois (2022). Testified at a bench trial (evidentiary hearing), and in depositions (3) on behalf of plaintiff class related to the economic effects of an alleged conspiracy to constrain capacity and increase prices in the broiler chicken industry.
- *Dr. Joseph Ciccio, et al., v. SmileDirect Club Inc., et al.*, United States District Court, Middle District of Tennessee, Nashville Division, (2022). Provided deposition testimony on behalf of plaintiff class involving damages related to allegations of false statements regarding orthodontic and dental treatment.
- *Lauren Adele Oliver v. Meow Wolf Inc., et al.*, United States District Court for the District of New Mexico (2022). Provided deposition testimony on behalf of plaintiff involving damages related to alleged copyright infringement involving art and art exhibits.

- *Sprint Communications Company LP v. Cequel Communications, LLC, et al.*, United States District Court, District of Delaware (2022). Testified at a bench trial (evidentiary hearing), and in deposition on behalf of plaintiff related to lost profits and royalty damages from alleged patent infringement involving VoIP telephony network services.
- *VRtoysone, LLC, et al v. Disney Interactive Studios, Inc.*, United States District Court, Central District of California, Western Division (2022). Submitted an expert report on behalf of Defendant involving damages related to alleged patent infringement involving video games.
- *Patrick Calhoun, et al. v. Google LLC*, United States District Court, Northern District of California (2021). Provided testimony in depositions (2) on behalf of plaintiff class involving damages and common impact related to alleged breach of contract involving the collection and retention of personalized information connected to web browsing activity.
- *CPI Security Systems Inc. v. Vivint Smart Home Inc. et al.*, United States District Court, Western District of North Carolina, Charlotte Division (2021). Provided deposition testimony on behalf of plaintiff involving unjust enrichment and royalty damages related to alleged false advertising and unfair competition related to security monitoring systems and services.
- *Martifer-Silverado Fund I, LLC and Silverado Power LLC v. Talesun Solar USA, Ltd.*, Superior Court of California, San Francisco County (2021). Provided trial and deposition testimony on behalf of Defendant, related to alleged breach of contract involving solar energy projects.
- *Javo Beverage Co., Inc., v. Stephen Corey*, American Arbitration Association (2021). Provided trial (arbitration) and deposition testimony on behalf of respondent related to breach of contract and misappropriation of confidential information and technology in the market for coffee extracts.
- *Andrea Williams and James Stewart (class reps) v. Apple Inc.*, United States District Court, Northern District of California (2021). Submitted an expert report on behalf of plaintiffs related to damages involving alleged breach of contract regarding provision of electronic file storage.
- *QC Manufacturing, Inc., v. Solatube International, Inc. and Brighter Concepts, Inc. dba Solatube Home Daylight*, JAMS Arbitration, Los Angeles, CA (2020). Provided trial (arbitration) testimony on behalf of complainant related to a breach of contract (litigation settlement agreement) involving whole house fans.
- *In Re Domestic Airline Travel Antitrust Litigation*, United States District Court, District of Columbia (2020). Provided deposition testimony on behalf of plaintiff class related to the economic effects of an alleged conspiracy to constrain capacity in the domestic airline travel industry.
- *RV Skincare Brands LLC v. Digby investments Ltd., Quickebox LLC, et al.*, United States District Court, Southern District of New York (2020). Submitted an expert report on behalf of certain defendant related to damages from alleged counterfeit sales and trademark infringement involving fulfillment of skincare product commerce.
- *Cisco Systems Inc. et al. v. Zabid Hassan Sheikh et al.*, United States District Court, Northern District of California (2020). Provided deposition testimony on behalf of certain defendants related to damages from alleged counterfeit sales and trademark infringement involving transceiver and switching IT network equipment.
- *San Diego Country Credit Union v. Citizens Equity First Credit Union*, United States District Court, Southern District of California (2020). Provided deposition testimony on behalf of plaintiff related to damages flowing from fraudulent declaration in the registration of a trademark involving credit unions.

- *Sprint Communications Company LP v. Atlantic Broadband Finance LLC, et al.*, United States District Court, District of Delaware (2020). Provided deposition testimony on behalf of plaintiff related to lost profits royalty damages from alleged patent infringement involving VoIP telephony network services.
- *Sprint Communications Company LP v. Charter Communications Inc. et al.*, United States District Court, District of Delaware (2020). Provided deposition testimony on behalf of plaintiff related to lost profits and royalty damages from alleged patent infringement involving VoIP telephony network services.
- *Sprint Communications Company LP v. Mediacom Communications Corp.*, United States District Court, District of Delaware (2020). Provided deposition testimony on behalf of plaintiff related to lost profits and royalty damages from alleged patent infringement involving VoIP telephony network services.
- *Sprint Communications Company LP v. TPC Global LLC et al.*, United States District Court, District of Delaware (2020). Provided deposition testimony on behalf of plaintiff related to lost profits and royalty damages from alleged patent infringement involving VoIP telephony network services.
- *Sprint Communications Company LP v. Wideopenwest Inc. et al.*, United States District Court, District of Delaware (2020). Provided deposition testimony on behalf of plaintiff related to lost profits and royalty damages from alleged patent infringement involving VoIP telephony network services.
- *S&P Dow Jones Indices LLC and SPDJ Singapore Pte Ltd. v. BSE Ltd.*, United States District Court, Northern District of California (2020). Provided trial (tribunal) testimony on behalf of claimants and counterrespondants for an arbitration concerning damages from breach of contract in a service joint venture related to the use of indexes and associated data for creation and analysis of international financial securitized and derivatives.
- *In Re: Molded Doors Indirect Purchaser Antitrust Litigation*, United States District Court, Eastern District of Virginia, Richmond Division (2020). Provided deposition testimony related to class certification and the merits phase of an antitrust case on behalf of an indirect purchaser plaintiff class related to the evaluation of common impact, pass-through, and class wide damages involving alleged collusion on the prices for interior molded doors.
- *Citicon USA LLC v. Riverpay Inc. et al.*, United States District Court, Northern District of California (2019). Provided trial and deposition testimony on behalf of defendant/counterplaintiff concerning damages from alleged tortious interference and breach of contract involving electronic payment processing network services.
- *3G Licensing, et al., v. Lenovo Group Ltd., et al.*, United States District Court, District of Delaware (2019). Submitted an expert report on behalf of defendants Lenovo and Motorola Mobility related to reasonable royalty damages for patent infringement involving cellular phone network technologies.
- *Inteliquent, Inc. v. Free Conferencing Corporation, et al.*, United States District Court, Northern District of Illinois, Eastern Division (2019). Provided deposition testimony on behalf of Counterclaim Plaintiffs, related to alleged breach of contract, intentional interference, and unfair competition involving conference calling services and long-distance calls connection network services.
- *In Re: Packaged Seafood Products Litigation*, United States District Court, Southern District of California (2019). Provided testimony in depositions (3) and testified at trial (evidentiary hearing) on behalf of direct purchaser plaintiff class related to class certification and estimation of class wide damages in an antitrust case involving alleged collusion on the prices for packaged seafood.

- *T.R.P. Company, Inc., v. Similasan AG and Similasan Corporation*, United States District Court, District of Nevada (2019). Provided deposition testimony on behalf of plaintiff/counter-defendant involving unjust enrichment and lost profits related to trademark infringement of certain homeopathic products.
- *Advanced Digital Solutions International, Inc., v. Rabi Systems, Inc., et al.*, Superior Court for the State of California, County of Alameda (2019). Provided deposition testimony on behalf of plaintiff concerning disgorgement damages related to trade secret misappropriation involving the theft of customer lists.
- *ADT LLC and ADT US Holdings v. Alder Holdings LLC, et al.*, United States District Court, Southern District of Florida, Palm Beach Division (2019). Provided trial and deposition testimony on behalf of plaintiff involving unjust enrichment and royalty damages related to alleged false advertising and unfair competition, and contempt of injunction related to security monitoring systems and services.
- *ADT LLC v. Security Networks LLC et al.*, United States District Court, Southern District of Florida, Palm Beach Division (2019). Submitted an expert report on behalf of plaintiff involving unjust enrichment and royalty damages related to alleged false advertising and unfair competition, and contempt of injunction related to security monitoring systems and services.
- *ADT LLC & ADT US Holdings, Inc. v. Northstar Alarm Services LLC et al.*, United States District Court, Southern District of Florida (2019). Submitted an expert report on behalf of plaintiff involving unjust enrichment and royalty damages related to alleged false advertising and unfair competition, and contempt of injunction related to security monitoring systems and services.
- *Grasshopper House LLC. V. Clean & Sober Media LLC., et al.*, and *Cliffside Malibu, et al. v. Grasshopper House LLC, et al.* United States District Court, Central District of California, Western Division (2019). Provided trial and deposition testimony on behalf of counterclaim plaintiffs involving damages from alleged false advertising related to treatment services for chemical dependence.

RESEARCH PAPERS AND PUBLICATIONS

- “FRAND Commitments and Royalties for Standard Essential Patents”, with S. Bosworth and E. Matolo, in Complications and Quandaries in the ICT Sector, Bharadwaj, Gupta, and Devaiah eds., Ch. 2, Springer Open, ISBN 978-981-10-449570, 2018.
- “Corrective Advertising in Lanham Act Damages: The Use and Misuse of Past Advertising Expenditures” with S. Bosworth and E. Matolo, *The Trademark Reporter*, May-June Volume, 2017.
- “The Case for Admitting Settlement License Agreements in a Reasonable Royalty Analysis,” with S. Conroy and R. Knudsen, 2011, *Les Nouvelles*, Volume XLVI No. 4, 2012.
- “Cost Analysis,” with J. Kinrich and A. Meister, in Intellectual Property Damages, Guidelines and Analysis, 2004 supplement, M. Glick, L. Reymann, and R. Hoffman, eds., Chapter 14a, Wiley: New York.
- “Analysis and Measurement of Damages in Patent Infringement Actions,” with J. Kinrich, 2003, proceedings of Practising Law Institute.

PAST OR PRESENT AWARDS, PROFESSIONAL MEMBERSHIPS

Outstanding Antitrust Litigation Achievement in Economics, American Antitrust Institute, 2023

Outstanding Antitrust Litigation Achievement in Economics, American Antitrust Institute, 2019

American Antitrust Institute, advisory board member

American Bar Association, member

American Economic Association, member

Licensing Executives Society, member, chapter chair

Los Angeles County Bar Association, member

Los Angeles Intellectual Property Law Association, member

Orange County Bar Association, member

Orange County Patent Law Association, member