

Jae Young Bang, PhD

Software Technology Expert & CEO

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Education

University of Southern California: Los Angeles, CA, USA
5/2015 **Doctor of Philosophy** in Computer Science (Software Engineering)
5/2010 **Master of Science** in Computer Science
Soongsil University: Seoul, Republic of Korea
6/2008 **Bachelor of Engineering** in Computer Science

Work History

Cyberonix Experts, LLC: Redondo Beach, CA, USA
6/2025 – present **Software Technology Expert & CEO:** Managing the software expert witness consulting business and providing consulting services to clients in software intellectual property litigation, including cases involving patent infringement, copyright infringement, and breach of contract.

University of Southern California: Los Angeles, CA, USA
1/2024 – present **Adjunct Faculty:** Teaching the graduate-level *Software Architectures* (CSCI-578) and *Software Engineering* (CSCI-577a) classes, Thomas Lord Department of Computer Science, Viterbi School of Engineering.

Quandary Peak Research: Los Angeles, CA, USA
9/2022 – 4/2025 **Director of Software Development:** Leading the effort of internal software research and development to advance software technologies in software & source code analysis, quality evaluation, design comparison, reverse engineering, cost estimation, and failure investigation.

3/2019 – 4/2025 **Senior Computer Scientist:** (1) Serving as a testifying expert in software litigation cases, including patent and copyright infringement, trademark misappropriation, and breach-of-contract. (2) Consulting as a software expert in due diligence projects for startup investments and M&A.

University of California, Irvine: Irvine, CA, USA
1/2022 – 4/2022 **Adjunct Faculty:** Teaching the undergraduate-level *Software Design: Structure and Implementation* class, INF 122, Department of Informatics, Donald Bren School of Information and Computer Sciences.

Kakao Corporation: Seoul Capital Area, Republic of Korea
 6/2015 – 2/2019 **Software Engineer:** Developing the user identity platform for over 100 million users of Kakao services such as the messaging app KakaoTalk.

University of Southern California: Los Angeles, CA, USA
 5/2009 – 5/2015 **Research Assistant:** Leading the collaborative software design research, Researching distributed software reliability and Android data security.

1/2014 – 12/2014 **Teaching Assistant** (USC CSCI 578: Software Architecture)

Infosys Limited: Bangalore, Karnataka, India
 6/2012 – 8/2012 **Graduate Research Intern:** Conducted a large-scale empirical study as a member of Infosys Labs on collaborative software design.

Software Consulting Experience

Software Development Consulting Experience

Surlamer LLC 7/2025 – present
 Nature: Guiding internal software development
 Technologies: Financial software (fintech)

Software Litigation Consulting Cases: Active Cases¹

FlexShopper, Inc. v. Upbound Group, Inc. 7/2025 – present
 Jurisdiction: District Court, Eastern District of Texas
 Case No.: 2:24-cv-00794
 Counsel: Sullivan & Cromwell LLP
 Nature of suit: Patent

Note-e-fied v. Newton Isaac; Carebeyond; Michael Raiz; Marvin Javellana; Charles Sam Smith; and Final Solution Inc. 6/2025 – present
 Retaining Party: Jointly retained by both parties pursuant to court appointment
 Jurisdiction: Superior Court of California, County of Los Angeles
 Case No.: 21STCV03392
 Counsel: Miller Law Office, PC (Plaintiff) and Yassin Law, APC (Defendant)
 Nature of suit: Trade Secret, Breach of Duty, Fraud

Michael Gonzales v. Charter Communications, LLC 6/2025 – present
 Jurisdiction: District Court, Central District of California
 Counsel: Ferguson Case Orr Paterson LLP
 Nature of suit: Labor: Fair Standards

Austin Recht et al. v. TikTok Inc. (f/k/a Musical.ly, Inc.); ByteDance Inc.; Beijing Douyin Information Service Co. Ltd. a/k/a ByteDance Technology Co. Ltd.; and Douyin Ltd. a/k/a ByteDance Ltd. 5/2025 – present
 Jurisdiction: District Court, Northern District of Illinois

¹ I was retained by the underlined party.

Case No.: 1:24-cv-02110
 Counsel: Baron and Budd, P.C.
 Nature of suit: Class Action
Courtney Cole et al. v. LinkedIn Corporation 5/2025 – present
 Jurisdiction: District Court, Northern District of California
 Case No.: 5:25-cv-01097
 Counsel: Arisohn LLC
 Nature of suit: Class Action
 Testimony: Declaration (May 20, 2025)
 Matter of Position Mobile Ltd SEZC 5/2025 – present
 Retaining Party: Technology Investment Consortium, LLC
 Jurisdiction: Grand Court of the Cayman Islands
 Case No.: FSD 79 OF 2022 (DDJ)
 Counsel: Dinner Martin Attorneys t/a Dentons
 Nature of suit: Breach of Contract; Intellectual Property – Trade Secret
Entangled Media, LLC v. Dropbox, Inc. 1/2024 – present
 Jurisdiction: District Court, Northern District of California
 Counsel: Skiermont Derby, LLP
 Nature of Suit: Patent

Software Litigation Consulting Cases: Past Cases²

Algebraix LLC v. International Business Machines Corporation (IBM) 3/2025 – 4/2025
 Jurisdiction: District Court, Eastern District of Texas
 Counsel: Nelson Bumgardner Conroy PC
 Nature of Suit: Patent
 Confidential (Pre-Litigation) 2/2025 – 4/2025
 Nature of Suit: Patent
Via Transportation, Inc. v. RideCo Inc. 6/2022 – 2/2025
 Jurisdiction: District Court, Western District of Texas
 Counsel: Wilson Sonsini Goodrich & Rosati
 Nature of Suit: Patent
InQuisient Inc. v. ServiceNow, Inc. 2/2024 – 11/2024
 Jurisdiction: District Court, District of Delaware
 Counsel: Fish & Richardson P.C.
 Nature of Suit: Patent
 Nations Info Corp. v. Rink 1/2023 – 9/2024
 Jurisdiction: American Arbitration Association
 Counsel: The Law Offices of Robert M. Moss, Inc.
 Nature of Suit: Breach of Contract

² I was retained by the underlined party.

Smart Mobile Technologies, LLC v.
 Samsung Electronics Co. Ltd. et al. 10/2023 – 6/2024
 Jurisdiction: District Court, Western District of Texas
 Counsel: Graves & Shaw LLP
 Nature of Suit: Patent

IPA Technologies, Inc. v. Microsoft Corp. 10/2022 – 5/2024
 Jurisdiction: District Court, District of Delaware
 Counsel: Skiermont Derby, LLP
 Nature of Suit: Patent

AGI SureTrack, LLC v. Farmers Edge Inc. et al. 4/2022 – 4/2024
 Jurisdiction: District Court, Eastern District of Texas
 Counsel: Irell & Manella LLP
 Nature of Suit: Patent

MyPort, Inc. v. Samsung Electronics Co., Ltd. et al. 9/2022 – 2/2024
 Jurisdiction: District Court, Eastern District of Texas
 Counsel: Skiermont Derby, LLP
 Nature of Suit: Patent
 Testimony: IPR Declaration (Jul 17, 2023), IPR Deposition (Sep 28, 2023),
 Expert Report (Oct 13, 2023), Deposition (Oct 17, 2023)

Polaris PowerLED Technologies, LLC v.
 Samsung Electronics America, Inc. et al. 9/2023 – 11/2023
 Jurisdiction: District Court, Eastern District of Texas
 Counsel: Kramer Alberti Lim & Tonkovich LLP
 Nature of Suit: Patent

Farmobile, LLC v. Farmers Edge Inc. 4/2019 – 9/2023
 Jurisdiction: Federal Court of Canada
 Counsel: Gowling WLG (Canada) LLP
 Nature of Suit: Patent
 Testimony: Affidavit (Nov 5, 2021), Deposition (Nov 23, 2021)

Mendoza v. WP Company LLC 4/2023 – 5/2023
 Jurisdiction: District Court, District of Columbia
 Counsel: Edelsberg Law
 Nature of Suit: Class Action

Barber v. Eisenhower Medical Center, Inc. 4/2023 – 5/2023
 Jurisdiction: Central District of California
 Counsel: Edelsberg Law
 Nature of Suit: Class Action

Waller v. Times Publishing Company 4/2023 – 5/2023
 Jurisdiction: Middle District of Florida
 Counsel: Edelsberg Law

Nature of Suit: Class Action
Broadband iTV, Inc. v. Charter Communications, LLC 4/2022 – 10/2022
 Jurisdiction: International Trade Commission (ITC)
 Counsel: Feinberg Day Kramer Alberti Lim Tonkovich & Belloli LLP
 Nature of Suit: Patent
Zeta Global Corp. v. Maropost Marketing Cloud, Inc. 4/2022 – 1/2023
 Jurisdiction: District Court, Southern District of New York
 Counsel: Newman Du Wors Durrance
 Nature of Suit: Patent
 Testimony: Declaration (Jan 19, 2023)
Allscripts Healthcare, LLC v. Andor Health, LLC 4/2022 – 8/2022
 Jurisdiction: District of Delaware
 Counsel: Locke Lord LLP
 Nature of Suit: Breach of Contract
Express Mobile, Inc. v. Meta Platforms, Inc. 4/2021 – 3/2022
 Jurisdiction: Northern District of California
 Counsel: Kramer Day Alberti Lim Tonkovich & Belloli, LLP
 Nature of Suit: Patent
Express Mobile, Inc. v. eBay Inc. 4/2021 – 3/2022
Express Mobile, Inc. v. Salesforce.com, Inc. 4/2021 – 3/2022
Express Mobile, Inc. v. Slack Technologies, Inc. 4/2021 – 3/2022
 Jurisdiction: Western District of Texas
 Counsel: Feinberg Day Kramer Alberti Lim Tonkovich & Belloli LLP
 Nature of Suit: Patent
RS Software LTD v. Chromedio LLC (dba PayeFX)..... 3/2021 – 4/2021
 Jurisdiction: Superior Court of California, County of San Diego
 Counsel: Messner Reeves LLP
 Nature of Suit: Breach of Contract
Total Meter Services Inc. v. GVM Integration Inc. 3/2021 – 5/2023
 Jurisdiction: Superior Court of Justice, Ontario, Canada
 Counsel: Gowling WLG (Canada) LLP
 Nature of Suit: Copyright
 Testimony: Expert Report (Mar 26, 2021), Trial (May 18, 2023)
Bryndon Fisher v. The United States 12/2020 – 12/2022
 Jurisdiction: United States Court of Federal Claims
 Counsel: Schubert Jonckheer & Kolbe LLP
 Nature of Suit: Class Action

Revitch v. New Moosejaw, LLC, et al. 8/2020 – 12/2021
 Jurisdiction: District Court, Northern District of California
 Counsel: Bursor & Fisher, P.A.
 Nature of Suit: Corporate Civil Suit

The Hertz Corp. v. Accenture, LLP 7/2019 – 7/2020
 Jurisdiction: District Court, Southern District of New York
 Counsel: Wiggin and Dana, LLP
 Nature of Suit: Breach of Contract

OnSors, LLC v. Sabrina Schueppl dba NuMe, ABV Group, Inc., et al. 3/2019 – 9/2019
 Jurisdiction: Superior Court of the State of California
 Counsel: Ulich Balmuth Fisher, LLP
 Nature of Suit: Breach of Contract

Technical Due Diligence Consulting (Merger & Acquisitions) Experience

HotelPlanner + Reservations.com Merger with Astrea – SPAC 6/2021 – 8/2021
 Technologies: Hospitality Management Systems

Enoviq 3/2021 – 5/2021
 Technologies: Insurance Management Systems

Big Capital 6/2020 – 7/2020
 Technologies: Smartphone Operating Systems and User Interface

Software Intellectual Property (IP) Consulting Experience

Confidential 3/2025 – 4/2025
 Nature: Prior art patent analysis
 Technologies: Multimedia

Teaching Experience

Software Architectures (CSCI-578), USC Fall 2025
Software Engineering (CSCI-577a), USC Spring 2025
Software Architectures (CSCI-578), USC Fall 2024
Software Architectures (CSCI-578), USC Spring 2024
Software Design: Structure and Implementation (INF 122), UC Irvine Winter 2022

Media Mentions

“Samsung Co-CEO Han Jong-hee Dies of Heart Attack at 63,” CNET March 25, 2025

Patents

1. US Patent 10,827,349, SEALANT: Security for End-Users of Android via Light-Weight Analysis Techniques, granted on November 3, 2020.

2. US Patent Application US-2012-0089960-A1, Extensible Collaborative Software Modeling, published on April 14, 2012.

Publications

Journal Papers

1. Dohyun Kim, Soohyun Park, Joongheon Kim, Jae Young Bang, and Soyi Jung. "Stabilized Adaptive Sampling Control for Reliable Real-Time Learning-based Surveillance Systems." *IEEE/KICS Journal of Communications and Networks*. 23(2):128-136, April 2021.
2. Jae Young Bang, Yuriy Brun, and Nenad Medvidovic. "Collaborative Design Conflicts: Costs and Solutions." *IEEE Software*, vol. 35, no. 6, November/December 2018, pp. 25–31.
3. Yuriy Brun, Jae Young Bang, George Edwards, and Nenad Medvidovic. "Self-Adapting Reliability in Distributed Software Systems." *IEEE Transactions on Software Engineering (TSE)*, 2015.

Conference Papers

1. Jae Young Bang, Yuriy Brun, and Nenad Medvidovic. "Continuous Analysis of Collaborative Design." In *proceedings of the IEEE International Conference on Software Architecture (ICSA17)*, Gothenburg, Sweden, April 2017. **Best Paper Award**.
2. Youn Kyu Lee, Jae Young Bang, Gholamreza Safi, Arman Shahbazian, Yixue Zhao, and Nenad Medvidovic. "A SEALANT for Inter-App Security Holes in Android." In *proceedings of the 39th International Conference on Software Engineering (ICSE17)*, Buenos Aires, Argentina, May 2017.
3. Jae Young Bang and Nenad Medvidovic. "Proactive Conflict Detection of Higher-Order Software Design Conflicts." In *proceedings of the 12th Working IEEE/IFIP Conference on Software Architecture (WICSA15)*, Montreal, Quebec, Canada, May 2015.
4. Youn Kyu Lee, Jae Young Bang, Joshua Garcia, and Nenad Medvidovic. "ViVA: A Visualization and Analysis Tool for Distributed Event-Based Systems." In *proceedings of the 36th International Conference on Software Engineering (ICSE14)*, Hyderabad, India, May 2014.
5. Yuriy Brun, George Edwards, Jae Young Bang, and Nenad Medvidovic. "Smart Redundancy for Distributed Computation." In *proceedings of the 31st International Conference on Distributed Computing Systems (ICDCS11)*, Minneapolis, Minnesota, USA, June 2011.
6. Jae Young Bang, Daniel Popescu, George Edwards, Nenad Medvidovic, Naveen Kulkarni, Girish M. Rama, and Srinivas Padmanabhuni. "CoDesign – A Highly Extensible Collaborative Software Modeling Framework." In *proceedings of the 32nd International Conference on Software Engineering (ICSE10)*, Cape Town, South Africa, May 2010.

Workshop Papers

1. Dohyeon Kim, Joongheon Kim, and Jae Young Bang. "A Reliable, Self-Adaptive Face Identification Framework via Lyapunov Optimization." *In Proceedings of the Workshop on AI Systems at Symposium on Operating Systems Principles (AISys17)*, Shanghai, China, October 2017.
2. Jae Young Bang, Ivo Krka, Nenad Medvidovic, Naveen Kulkarni, and Srinivas Padmanabhuni. "How Software Architects Collaborate: Insights from Collaborative Software Design in Practice." *In proceedings of the 6th International Workshop on Cooperative and Human Aspects of Software Engineering at International Conference on Software Engineering (CHASE13)*, San Francisco, California, USA, May 2013.
3. Jae Young Bang, Daniel Popescu, and Nenad Medvidovic. "Enabling Workspace Awareness for Collaborative Modeling." *Presented at the Future of Collaborative Software Development at Computer Supported Cooperative Work (FutureCSD12)*, Seattle, Washington, USA, February 2012.

Non-refereed Publications

1. Youn Kyu Lee, Ruhollah Shemirani, Jae Young Bang, Arman Shahbazian, Gholamreza Safi, and Nenad Medvidovic. "SEALANT: Preventing Inter-Application Attacks in Android." *Technical Report USC-CSSE-16-601*, Center for Systems and Software Engineering, University of Southern California, 2016.
2. Yuriy Brun, George Edwards, Jae Young Bang, and Nenad Medvidovic. "Online Reliability Improvement via Smart Redundancy in Systems with Faulty and Untrusted Participants." *Technical Report USC-CSSE-2009-510*, Center for Systems and Software Engineering, University of Southern California, 2009.

Research Grants

1. "Computation- and Data-Privacy on the Cloud Google", Google Research, Cloud Credits Award, 2014.

Formal Presentations and Guest Lectures

1. Software Analysis Practice. Invited talk at the 14th International Conference on ICT Convergence (ICTC23), Jeju Island, Korea, October 12, 2023.
2. Software Analysis in Practice. Guest lecture for USC CS577b Software Engineering, March 22, 2022.
3. The Web and Internet Security. Guest lecture for USC LAW730 Computer Science for Lawyers, September 22, 2020.
4. Software Forensics in Practice. Guest lecture for USC CS699 Software Forensics, January 27, 2020.
5. Collaborative Design Conflicts: Costs and Solutions. Invited talk at the Korean Conference on Software Engineering 2019 (KCSE19), Pyeongchang, Korea, January 29, 2019.

6. Continuous Analysis of Collaborative Design. The IEEE International Conference on Software Architecture (ICSA17), Gothenburg, Sweden, April 6, 2017.
7. Proactive Detection of Higher-Order Software Design Conflicts. The 12th Working IEEE/IFIP Conference on Software Architecture (WICSA15), Montreal, Quebec, Canada, May 7, 2015.
8. Proactive Detection of Higher-Order Software Design Conflicts. University of Southern California Center of Systems and Software Engineering Annual Research Review 2015, Los Angeles, CA, April 15, 2015.
9. Proactive Detection of Higher-Order Software Design Conflicts. PhD Dissertation Defense, Los Angeles, CA, March 19, 2015.
10. Using a Next-Generation Climate Architecture in Education. The 3rd Annual ESGF/UV-CDAT F2F Meeting, Livermore, CA, December 5, 2013.
11. How Software Architects Collaborate: Insights from Collaborative Software Design in Practice. University of Southern California Center of Systems and Software Engineering Annual Research Review 2013, Los Angeles, CA, March 13, 2013.
12. Fast Conflict Detection for Remote Collaborative Software Modeling. University of Southern California Center of Systems and Software Engineering Annual Research Review 2011, Los Angeles, CA, March 8, 2011.
13. CoDesign–A Highly Extensible Collaborative Software Modeling Framework. The 32nd International Conference on Software Engineering (ICSE10), Cape Town, South Africa, May 5, 2010.
14. CoDesign – A Highly Extensible Collaborative Software Modeling Framework. University of Southern California Center of Systems and Software Engineering Annual Research Review 2010, Los Angeles, CA, March 9, 2010.
15. CoDesign/CoWare: A Highly Extensible and Scalable Collaborative Software Modeling Infrastructure. Infosys Aurora 09'. Los Angeles, CA, October 19, 2009.

Research Project Experience

Funded

University of Southern California: Los Angeles, CA, USA
 6/2009 – 12/2014 **CoDesign/CoWare:** A highly extensible, scalable, and event-based collaborative software modeling framework that provides real-time model synchronization, inconsistency checking and conflict detection and resolution via extensible plug-ins. Funded by Infosys Limited.

Graduate-level

University of Southern California: Los Angeles, CA, USA
 1/2015 – 5/2015 **FLAME:** An extensible collaborative software design framework that detects high-order design conflicts in a proactive way, i.e., before an architect synchronizes her model and finally becomes aware of them.
 Project website: <https://www.flamedesign.org/>

- 6/2014 – 12/2014 **sTile**: Secure distributed computation architecture on clouds
- 3/2009 – 11/2009 **Smart Redundancy**: Novel redundancy technique for distributed computation. Deployed modified BOINC on PlanetLab.
- 7/2009 – 9/2009 **rMapReduce**: A programming model and software framework that extends the MapReduce paradigm to gracefully and efficiently tolerate a wide class of failures, including hard-to-detect failures caused by faulty and malicious nodes. Deployed modified Hadoop on PlanetLab.
- 1/2009 – 3/2009 **Mahjong on PlanetLab**: Deployed Mahjong, by Prof. Yuriy Brun, on PlanetLab, as a Directed Research student under the supervision of Prof. Nenad Medvidovic at University of Southern California.

Professional Services

Refereeing and Reviewing

- Computing (COMP) 2023
- Computing (COMP) 2022
- Computing (COMP) 2021
- Computing (COMP) 2018
- Transactions on Software Engineering and Methodology (TOSEM)..... 2015
- 8th European Conference on Software Architecture (ECSA 2014) 2014
- 28th Int'l Conference on Automated Software Engineering (ASE 2013) 2013
- 7th European Conference on Software Architecture (ECSA 2013)
- 4th Int'l Symposium on Architecting Critical Systems (ISARCS 2013)
- 16th Int'l Symposium on Component-Based Software Engineering (CBSE 2013)
- 7th Int'l Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2012).....2012
- 6th Int'l Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2011).....2011
- 26th Int'l Conference on Automated Software Engineering (ASE 2011)

Technical Expertise

Programming: Java (Spring, JDBC), Ruby (Rails), HTML (Slim), Go, Rust, CSS, JavaScript (Apps Script, React, Angular, Node, CoffeeScript, TypeScript, JQuery), C, C++, C#, Kotlin, Objective-C, Swift, PHP (Hack), Python (Django, Flask), Perl, Visual Basic

Mobile platforms: Android (AOSP, Samsung Galaxy), iOS

Cloud platforms: Microsoft Azure, Google Compute Engine, Amazon AWS

Frameworks: Hadoop, PlanetLab, BOINC, GME, Prism-MW, XTEAM

Honors, Awards, Fellowships

4/2017	Best Paper Award at Int'l Conference on Software Architecture 2017
8/2010– 5/2014	USC Annenberg Graduate Fellowship