

M. Hamdi Özçelik

Mehmet Hamdi Özçelik is a seasoned expert in business analytics, combining deep theoretical knowledge with hands-on experience in real-world business settings. With a multidisciplinary background, he has led the design and implementation of mission-critical intelligent software systems. He actively keeps pace with advancements in machine learning and optimization. He designs solutions by bridging academic research and practical application. A lifelong learner and educator, he is committed to both mastering and sharing knowledge.

Experience

2026 – PRESENT

Assistant Professor / Özyeğin University / Management Information Systems

At Management Information Systems department.

2020 – PRESENT

Data Science Consultant / Applied Analytics

Delivering advisory services to leading organizations on leveraging data science for digital transformation—ranging from the development of advanced analytics strategies and roadmaps to the end-to-end management of model development, deployment, and consumption. Designing and delivering tailored training programs to build organizational capabilities in data science. Creating innovative solutions in customer analytics and feature engineering.

2025 – 2026

Assistant Professor / MEF University / Management Information Systems

At Management Information Systems department. Currently teaching project management, operations management and probability & statistics.

2023

Part Time Instructor / Bahçeşehir University

Taught “Customer Analytics” course for “Big Data Analytics and Management” master program.

2020 & 2021

Part Time Instructor / Özyeğin University

Taught “Customer Analytics” for “Financial Engineering and Risk Management” master program.

2014 – 2019

Marketing Analytics and Optimization Manager / Yapı ve Kredi Bankası

Built and managed Marketing Analytics and Marketing Optimization departments. Recruited top talent engineers with Turkey’s first “data scientist” job posting. Simultaneously worked as a business translator and as chief data scientist. Designed, built and integrated business analytics solutions across different business units and products. Examples include

- Next Best Action project: which is the transformation of whole data driven marketing
- 1-to-1 Price Optimization for General Purpose Loans project: where the incremental value reached up to 70 million TL annually

- Price optimization of cash advance with instalments project
- Self Service World project: which won 4 innovation awards by enabling merchants to initiate their own targeted campaigns
- Budget distribution optimization project
- Salary firm valuation project for the acquisition of payroll firms
- Customer branch assignment optimization project
- Time deposit price optimization project
- Customer RM assignment optimization project.

2011–2013

Card Payment Systems Analytics and Optimization Manager / Yapı ve Kredi Bankası

Worked as an internal consultant to all data analysis teams, enriched and optimized customer analytics base tables, lead major analytics projects such as Credit Line Optimization and Credit Cards Reward Optimization.

2006–2011

Data Mining and Analytical Applications Manager / Yapı ve Kredi Bankası

- Managed a team of up to 20 developers.
- Developed predictive models for credit cards, commercial banking and private banking.
- Developed workflow applications and anomaly detection scenarios for internal control and audit.
- Developed a scoring system for anti-money laundering.
- Applied and took grant from TÜBİTAK for the first two R&D projects of the bank, namely “Mind Book” and “Log Book”.
- Built first four project partnerships with academia, namely “Fraud Prevention Optimization” project with Doğuş University, “Credit Card Churn Prediction” and “Log Book” projects with Koç University and “Behavioral Finance for Customer Portfolio Optimization” with Özyeğin University.
- Lead R&D and Innovation work stream at IT transformation program.
- Designed the computer engineering course "Use of Information Technologies at Finance" for university partnerships.

2004–2006

Software Architect / Yapı ve Kredi Bankası

Designed and developed the fraud detection solution which protected banks credit cards for more than 12 years. Built and maintained OLAP solutions for marketing. Integrated customer datamarts at the merger of Koçbank with ex-Yapı Kredi Bank.

1998–2004

Senior Developer and Project Manager / Alternatifbank

Developed core banking software for general ledger, money transfers, interest calculations, non-cash credits. Developed an innovative flexible reporting system within Excel for GL balances. Designed and developed customer profitability system. Developed an algorithm for matching incoming EFTs.

1997–1998

Solution Manager / BYM Epistem

Designed and developed software using APIs, COM, DCOM and MQ Series via C, C++, VB and Exchange.

1995–1997

Startup Owner / Marmara Computer and Delta Computer

Developed accounting software for brokerage houses, developed fundamental and trend analysis software for stocks. Developed an innovative flexible integration tool between Excel and Meta-Stock.

1993–1995

Research Assistant at Industrial Engineering / Marmara University

Maintained computer labs at Computer Integrated Manufacturing laboratory, assisted various IE courses, instructed the course "IE 365 Advanced Programming" where the main focus was numerical analysis.

1994 SEPTEMBER – 1995 APRIL

Military Service / Kağızman, Kars

Built computer network for brigade headquarters and trained military staff to use MS-Office software.

1992 SEPTEMBER – 1993 APRIL

Freelance Programmer

Developed a heuristic optimization algorithm for cable cutting job sequencing and implemented at a car harness production factory. Later, it is published at a number of academic seminars and journals.

1990 DECEMBER – 1992 JUNE

Computer Specialist / Part – Time / Akdeniz Brokerage House

Maintained the computer network and the server. Developed some utility software for technical analysts.

Education

1993-1995, 2021-2025

Industrial Engineering, PhD / Marmara University

Completed with a GPA of 4.00. Thesis topic was "Cluster and Similarity Based Classifier Algorithm". The thesis advisor was Prof. Dr. Serol Bulkan and Dr. Selami Bağrıyanık.

1990-1993

Industrial Engineering, Master's Degree / Boğaziçi University

Completed with a GPA of 3.06. Graduation thesis was "Letter recognition using implicit polynomials". The thesis advisor was Prof. Dr. Aytül Erçil.

1985-1990

Electrical and Electronics Engineering, Bachelor's Degree / Boğaziçi University

Completed Systems and Control Option with a GPA of 3.07. Took various programming and numerical analysis courses. Graduation project was a numerical analysis software for control engineering laboratory. The advisor was Prof. Dr. Kadri Özçaldıran.

Volunteer Experience

2017 SEPTEMBER – PRESENT

Member of the Journal Review Board / Applied Intelligence

<https://link.springer.com/journal/10489>

Reviewing artificial intelligence manuscripts submitted to this Springer Nature journal for their scientific novelty and quality.

2018 – 2019

International Editorial Committee member / EFMA (QORUS)

Suggesting research and giving feedback through surveys for European Financial Management Association (EFMA) publications.

2014 – 2019

Guest Lecturer for Big Data Analytics / İstanbul University

Participated 1 week at each semester to the course "Use of Information Technologies at Finance" which is given by Yapı Kredi Bank to computer engineering students.

2011 – 2019

Guest Lecturer for Big Data Analytics / Bahçeşehir University

Participated 1 week at each semester to the course "Use of Information Technologies at Finance" which is given by Yapı Kredi Bank to computer engineering students.

2010 – 2019

Certified Trainer / Yapı Kredi Banking Academy

Taught new Software Development Life Cycle (SDLC) methodology, including processes, tools and standards.

2010 – 2018

Founding Board Member / Data Governance Foundation Turkey

The foundation became Turkey chapter of Data Management International (DAMA).

1994, 2001, 2002, 2003

Instructor for IE 365 Advanced Programming / Marmara University

Taught Advanced Programming full course to Industrial Engineering students. The course aimed to develop programming skills needed to implement operations research algorithms such as exponential smoothing, association rule mining and different variants of dynamic programming.

Skills and Interests

- Designing intelligent systems
- Developing heuristics algorithms
- Model management frameworks
- Decision Science
- Advanced feature engineering
- Coaching analytic talent
- Software Engineering
- Simplifying complex solutions

Other Activities

Participated various panels and meetings about business analytics, industry-academia partnership and innovation (SAS Analytics 2016, Bahçeşehir University Computer Engineering Advisory Board, Yıldız Technical University Computer Engineering, Koç University Business Administration CEMS, Marmara University Banking and Finance department, member of IDC Turkey advisory board for IoT, Big Data & Analytics).

Designed and implemented an R&D project named “AI-Enabled Software Sizing & Cost Estimation” which is funded by TÜBİTAK TEYDEB 1507 (project no: 7210488).

Personals

- Birth : January 13th 1969
- Marital status: Married, 2 children

- Language: English - BULATS B2 – 2017
YDS 87.5 – 2021

Awards

2019 MARCH

Best banks in Data Intelligence Category Winner / UniCredit CEE

Yapı Kredi was selected as one of the best banks in data intelligence category with the success of marketing campaigns driven by cross-sell propensity models for retail clients.

2017 NOVEMBER

Big Data Analytics Category Winner / IDC Finance Technology Awards - Turkey

General Purpose Loans Price Optimization Project won first place.

2017 NOVEMBER

Best Marketing Innovation Award / BAI Global Innovation Awards 2017

Self Service World (Merchant Campaign Platform) won first place.

2017 MAY

Innovation of the Year Award / Mastercard Turkey

Self Service World (Merchant Campaign Platform) won first place.

2016 OCTOBER

Big Data Analytics Category Winner / IDC Finance Technology Awards - Turkey

Self Service World (Merchant Campaign Platform) won first place.

2016 OCTOBER

Merchant Partnerships Category Winner / IDC Finance Technology Awards

Self Service World (Merchant Campaign Platform) won first place.

2015 JUNE

Finalist in Revenue Management and Pricing Section Practice Award / INFORMS Wagner Prize

The joint work done with Koç University at Log Book (Golden Offer) project has been selected as a finalist.

2014 MARCH

Innovation at Private Banking Award / Private Asset Management Magazine

The joint work done with Koç University at Log Book project won first place.

2005 DECEMBER

Internal Customer Satisfaction Award / Yapı Kredi Information Technologies

Credit Card Fraud Detection project won first place.

PUBLICATIONS

Journal Papers

2025 MAY 5

Enhanced nearest centroid model tree classifier

Mehmet Hamdi Özçelik, Ekrem Duman, Selami Bağrıyanık, Serol Bulkan

Discover Computing

<https://doi.org/10.1007/s10791-025-09561-x>

2017 NOVEMBER 17

Cross-Selling Investment Products with a Win-Win Perspective in Portfolio Optimization

Özden Gür Ali, Yalçın Akçay, Serdar Sayman, Emrah Yılmaz, M. Hamdi Özçelik

Operations Research

<https://doi.org/10.1287/opre.2016.1556>

2011 SEPTEMBER 15

Detecting credit card fraud by genetic algorithm and scatter search

Ekrem Duman, M. Hamdi Özçelik

Expert Systems with Applications

<https://doi.org/10.1016/j.eswa.2011.04.110>

2005 JUNE

A TSP (1,2) application arising in cable assembly shops

Ekrem Duman, M. Hamdi Özçelik, Ahmet Ceranoğlu

Journal of the Operational Research Society

<https://doi.org/10.1057/palgrave.jors.2601850>

Book Chapters

2023

Nearest Centroid Classifier Based on Information Value and Homogeneity

Mehmet Hamdi Özçelik, Serol Bulkan

Advances in Intelligent Manufacturing and Service System Informatics. IMSS 2023

https://doi.org/10.1007/978-981-99-6062-0_5

2011

Use of Risk Analysis in Computer-Aided Persuasion Calibration of Customer Risk Scoring via Classification Techniques for Money Laundering Prevention

M. Hamdi Özçelik, Tuğba Tosun, Emel Eldemir, M. Tolga İncöz

NATO Science for Peace and Security Series - E: Human and Societal Dynamics, Use of Risk Analysis in Computer-Aided Persuasion

<http://ebooks.iospress.nl/volumearticle/25630>

DOI: 10.3233/978-1-60750-828-1-304

2010

Preventing Internet Banking Fraud and Money Laundering Using Customer Trustability Index

M. Hamdi Özçelik, Ekrem Duman

NATO Science for Peace and Security Series - D: Information and Communication Security

<http://ebooks.iospress.nl/publication/23879>

DOI: 10.3233/978-1-60750-611-9-109

Conference Papers

2022 OCTOBER 26-28 [STACKED ENSEMBLE MODELLING WITH PERSONALIZED WEIGHTS](#)

M. Hamdi Özçelik, Serol Bulkan

41th National Operations Research and Industrial Engineering Congress – Pamukkale University

2022 OCTOBER 26-28 [COST ESTIMATION AND SIZING OF AI-ENABLED SOFTWARE SYSTEMS](#)

Selami Bağrıyanık, M. Hamdi Özçelik

41th National Operations Research and Industrial Engineering Congress – Pamukkale University

2013 JUNE 4 [CROSS-SELLING MODELS FOR PRIVATE BANKING – WHICH DATA ARE USEFUL?](#)

Özden Gür Ali, Yalçın Akçay, Serdar Sayman, Emrah Yılmaz, M. Hamdi Özçelik

EURO | INFORMS 26TH EUROPEAN CONFERENCE ON OPERATIONAL RESEARCH

2011 OCTOBER 20 [CROSS SELLING MODELS FOR PRIVATE BANKING](#)

Umut Arıttürk, Özden Gür Ali, Mehmet Hamdi Özçelik

Conference on Financial Engineering – İzmir Ekonomi University

2011 JUNE 11 [IMPROVED CHURN PREDICTION WITH MORE EFFECTIVE USE OF CUSTOMER DATA](#)

Özden Gür Ali, Umut Arıttürk, Mehmet Hamdi Özçelik

33th INFORMS Marketing Science Conference (2011)

2011 JULY 5-6 [CHURN PREDICTION WITH ADVANCE NOTICE IN A NON-CONTRACTUAL SETTING: THE CASE OF PRIVATE BANKING CUSTOMERS](#)

Umut Arıttürk, Özden Gür Ali, Mehmet Hamdi Özçelik

YAEM'2011 – Operations Research and Industrial Engineering 31th National Congress

2010 DECEMBER 3 [RESTRUCTURING SOFTWARE DEVELOPMENT LIFE CYCLE METHODOLOGY](#)

M. Hamdi Özçelik, Mustafa Bezeklioğlu, Ergin Murat

2nd Symposium on Software Quality and Software Dev.Tools, İstanbul Kültür University

2010 JUNE 11 [IMPROVING A CREDIT CARD FRAUD DETECTION SYSTEM USING GENETIC ALGORITHM](#)

M. Hamdi Özçelik, Ekrem Duman, Mine Işık, Tuğba Çevik

IEEE ICNIT - International Conference on Networking and Information Technology

2007 OCTOBER 9-11 [A TSP\(1,2\) APPLICATION ARISING IN CABLE ASSEMBLY SHOPS – A NEW HEURISTIC APPROACH](#)

Ahmet Nuri Ceranoğlu, Ekrem Duman, Mehmet Hamdi Özçelik

IFAC Symposium on Computational Economics & Financial & Ind. Systems – CEFIS'07

2005 JUNE 19-22 [OPERATIONS SEQUENCING IN A CABLE ASSEMBLY SHOP](#)

Ahmet Nuri Ceranoğlu, Ekrem Duman, Mehmet Hamdi Özçelik

Proceedings of the 35th Int. Conference on Computers and Industrial Engineering

2003 JULY 6-10 [MINIMIZATION OF TOTAL SETUP TIME IN CABLE SYSTEM MANUFACTURING](#)

Ekrem Duman, Mehmet Hamdi Özçelik

5th EURO/INFORMS Joint International Conference