

CURRICULUM VITAE

Prof. Dr. Ali Aydın Selçuk

PERSONAL DATA

Date & Place of Birth: 1971, Ankara, Turkey
Address: Department of Computer Engineering
TOBB University of Economy and Technology
06560, Ankara, Turkey
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ACADEMIC DEGREES

Ph.D., Computer Science, University of Maryland Baltimore County, 2001.

M.S., Industrial Engineering, Bilkent University, 1995.

B.S., Industrial Engineering, Middle East Technical University, 1993.

EMPLOYMENT HISTORY

05/2014 – Present, Professor, TOBB University of Economy and Technology, Department of Computer Engineering.

09/2013 – 05/2014, Associate Professor, TOBB University of Economy and Technology, Department of Computer Engineering.

09/2002 – 08/2013, Assistant Professor, Bilkent University, Department of Computer Engineering.

09/2001 – 09/2002, Postdoctoral Research Associate, Purdue University, Department of Computer Sciences.

09/1995 – 06/2001, Graduate Assistant, University of Maryland, Baltimore County, Department of Computer Science.

06/2000 – 08/2000, Intern, Novell, Network Security Group.

06/1997 – 08/1997, Intern, RSA Data Security Inc., RSA Laboratories.

09/1993 – 08/1995, Teaching Assistant, Bilkent University, Department of Industrial Engineering.

PROFESSIONAL AWARDS

- FSE Test-of-Time Award, Fast Software Encryption Conference, 2023. (Awarded for the paper, “A Meet-in-the-Middle Attack on 8-Round AES”, presented at FSE 2008.)
- Distinguished Teaching Award, Bilkent University, 2008.
- Graduate Merit Award, University of Maryland Baltimore County, 1995-96.

SCHOLARLY PUBLICATIONS

Ph.D. Dissertation:

“Probabilistic Optimization Techniques for Multicast Key Management and Bias Estimation in Linear Cryptanalysis,” June 2001, Dr. Deepinder Sidhu, University of Maryland Baltimore County.

Articles in Refereed Journals:

- “Evaluation of social bot detection models.” *Turkish Journal of Electrical Engineering and Computer Sciences*, 30, pages 1269-1283, May 2022. M. B. Torusdağ, M. Kutlu, A. A. Selçuk.
- “Privacy in blockchain systems.” *Turkish Journal of Electrical Engineering and Computer Sciences*, 30, pages 344-360, February 2022. M. Osmanoglu, A. A. Selçuk.
- “A study on exploitable DRDoS amplifiers in Europe.” *International Journal of Information Security Science*, 10, pages 26-41, June 2021. E. M. Ercan, A. A. Selçuk.
- “Server Notaries: A Complementary Approach to the Web PKI Trust Model.” *IET Information Security*, 12 (5), pages 455-461, September 2018. E. Yüce, A. A. Selçuk:
- “Distributed Multi-Unit Privacy Assured Bidding (PAB) for Smart Grid Demand Response Programs.” *IEEE Transactions on Smart Grid*, 9 (5), pages 4119-412, September 2018. M. F. Ballı, S. Uludağ, A. A. Selçuk, B. Tavlı.
- “Intractable Problems in Malware Analysis and Practical Solutions.” *Journal of Internet Technology and Secured Transactions*, 6 (2), pages 588-595, June 2018. A. A. Selçuk, F. Orhan, B. Batur.
- “A CRT-Based Verifiable Secret Sharing Scheme Secure Against Unbounded Adversaries.” *Security and Communication Networks*, 9 (17), pages 4416-4427, November 2016. O. Ersoy, T. B. Pedersen, K. Kaya, A. A. Selçuk, E. Anarım.
- “Improved Improbable Differential Attacks on ISO Standard CLEFIA: Expansion Technique Revisited.” *Information Processing Letters*, 116 (2), pages 136-143, February 2016. C. Tezcan, A. A. Selçuk.
- “The Cloaked-Centroid Protocol: Location Privacy Protection for a Group of Users of Location-Based Services.” *Knowledge and Information Systems*, 45 (3), pages 589-615, December 2015. M. Ashouri-Talouki, A. Baraani-Dastjerdi, A. A. Selçuk.
- “Punctured Interval Broadcast Encryption Scheme with Free Riders.” *Information Sciences*, 305, pages 285-301, June 2015. M. Ak, A. A. Selçuk.
- “IND-CCA Secure Encryption Based on Zheng-Seberry Scheme.” *Journal of Computational and Applied Mathematics*, 259, pages 529-535, March 2014. M. Ak, T. Hanoymak, A. A. Selçuk.

- “Anonymous Trace and Revoke.” *Journal of Computational and Applied Mathematics*, 259, pages 586-591, March 2014. M. Ak, S. Pehlivanoğlu, A. A. Selçuk.
- “Sharing DSS by the Chinese Remainder Theorem.” *Journal of Computational and Applied Mathematics*, 259, pages 495-502, March 2014. K. Kaya, A. A. Selçuk.
- “Preserving Location Privacy for a Group of Users.” *Turkish Journal of Electrical Engineering and Computer Sciences*, 21, pages 1857-1870, October 2013. M. Ashouri-Talouki, A. Baraani-Dastjerdi, A. A. Selçuk.
- “GLP: A cryptographic approach for group location privacy.” *Computer Communications*, 35 (12), pages 1527-1533, July 2012. M. Ashouri-Talouki, A. Baraani-Dastjerdi, A. A. Selçuk.
- “Efficient Broadcast Encryption with User Profiles.” *Information Sciences*, 180 (6), pages 1060-1072, March 2010. M. Ak, K. Kaya, K. Onarlıoğlu, A. A. Selçuk.
- “Optimal Subset-Difference Broadcast Encryption with Free Riders.” *Information Sciences*, 179 (20), pages 3673-3684, September 2009. M. Ak, K. Kaya, A. A. Selçuk.
- “A Reputation-Based Trust Management System for P2P Networks.” *International Journal of Network Security*, 6 (2), pages 227-237, March 2008. A. A. Selçuk, E. Uzun, M. R. Pariente.
- “On Probability of Success in Linear and Differential Cryptanalysis.” *Journal of Cryptology*, 21 (1), pages 131-147, January 2008. A. A. Selçuk.
- “Threshold Cryptography Based on Asmuth-Bloom Secret Sharing.” *Information Sciences*, 177 (19), pages 4148-4160, October 2007. K. Kaya, A. A. Selçuk.
- “Probabilistic Optimization Techniques for Multicast Key Management.” *Computer Networks*, 40 (2), pages 219-234, October 2002. A. A. Selçuk, D. Sidhu.

Refereed Proceedings (International):

- “Blockchain-Based Privacy Preserving Linear Regression.” *ICONCS 2023: International Conference on Cyber Security and Computer Science*. Z. D. Mutlu, Y. Kurt Peker, A. A. Selçuk.
- “MILP-Aided Cryptanalysis of the FUTURE Block Cipher.” *SECITC 2022: The 15th International Conference on Security for Information Technology and Communications*. M. B. İltter, A. A. Selçuk.
- “In-Browser Cryptomining for Good: An Untold Story.” *DAPPS 2021: IEEE International Conference on Decentralized Applications and Infrastructures*. E. Tekiner, A. Acar, A. S. Uluagaç, E. Kırdar, A. A. Selçuk.
- “SoK: Cryptojacking Malware.” *EuroS&P 2021: IEEE European Symposium on Security and Privacy*. E. Tekiner, A. Acar, A. S. Uluagaç, E. Kırdar, A. A. Selçuk.
- “A New MILP Model for Matrix Multiplications with Applications to KLEIN and PRINCE.” *SECRYPT 2021: International Conference on Security and Cryptography*. M. B. İltter, A. A. Selçuk.
- “An Analysis DRDoS Amplifiers in Europe.” *ICONCS 2018: International Conference on Cyber Security and Computer Science*. E. M. Ercan, A. A. Selçuk.
- “Undecidable problems in malware analysis.” *ICITST 2017: International Conference for Internet Technology and Secured Transactions*. A. A. Selçuk, F. Orhan, B. Batur.
- “Privacy-Guaranteeing Bidding in Smart Grid Demand Response Programs.” *IEEE Globecom 2015 Workshop on SmartGrid Resilience (SGR)*. S. Uludağ, M. F. Ballı, A. A. Selçuk, B. Tavlı.
- “Trusting SSL in practice.” *Security in Information Networks, 2013*. A. A. Selçuk.

- “Generic Trace and Revoke Scheme.” *ICACM 2012: International Conference on Applied and Computational Mathematics*. M. Ak, A. Kiayias, S. Pehlivanoglu, A. A. Selçuk.
- “Joint Compartmented Threshold Access Structures.” *ICACM 2012: International Conference on Applied and Computational Mathematics*. A. A. Selçuk, R. Yılmaz.
- “Sharing DSS by the Chinese Remainder Theorem.” *ICACM 2012: International Conference on Applied and Computational Mathematics*. K. Kaya, A. A. Selçuk.
- “Practical Threshold Signatures with Linear Secret Sharing.” *Africacrypt 2009: Second International Conference on Cryptology in Africa*. LNCS v.5580, Springer-Verlag. İ. N. Bozkurt, K. Kaya, A. A. Selçuk.
- “A Verifiable Secret Sharing Scheme Based on the Chinese Remainder Theorem.” *Indocrypt 2008: 9th International Conference on Cryptology in India*. LNCS v.5365, Springer-Verlag. K. Kaya, A. A. Selçuk.
- “Generalized ID-Based Blind Signatures From Bilinear Pairings.” *ISCIS 2008*. S. Kalkan, K. Kaya, A. A. Selçuk.
- “Robust Threshold Schemes Based on the Chinese Remainder Theorem.” *Africacrypt 2008: First International Conference on Cryptology in Africa*. LNCS v.5023, Springer-Verlag. K. Kaya, A. A. Selçuk.
- “A Meet-in-the-Middle Attack on 8-Round AES.” *FSE 2008: 15th Fast Software Encryption Conference*. LNCS v.5086, Springer-Verlag. H. Demirci, A. A. Selçuk.
- “Generalized ID-Based ElGamal Signatures.” *ISCIS 2007*. S. Kalkan, K. Kaya, A. A. Selçuk.
- “Threshold Broadcast Encryption With Reduced Complexity.” *ISCIS 2007*. K. Kaşaloğlu, K. Kaya, A. A. Selçuk.
- “Threshold Cryptography Based on Asmuth-Bloom Secret Sharing.” *ISCIS 2006*. LNCS v.4263, Springer-Verlag. K. Kaya, A. A. Selçuk, Z. Tezcan.
- “Capture Resilient ElGamal Signature Protocols.” *ISCIS 2006*. LNCS v.4263, Springer-Verlag. H. Acan, K. Kaya, A. A. Selçuk.
- “Improved DST Cryptanalysis of IDEA.” *SAC 2006: 13th Annual Workshop on Selected Areas in Cryptography*. LNCS v.4356, Springer-Verlag. E. S. Ayaz, A. A. Selçuk.
- “A Strong User Authentication Protocol for GSM.” *WETICE'05: 14th IEEE International Workshops on Enabling Technologies*. Ö. Aydemir, A. A. Selçuk.
- “A Reputation-Based Trust Management System for P2P Networks.” *CCGrid 2004: 4th IEEE/ACM International Symposium on Cluster Computing and the Grid*. A. A. Selçuk, E. Uzun, M. R. Pariente.
- “A Zone-Based Shared-Tree Multicast Routing Protocol for Mobile Ad Hoc Networks.” *VTC2003-Fall: IEEE Semiannual Vehicular Technology Conference*. A. Rangnekar, Y. Zhang, A. A. Selçuk, A. Bıçak, V. Devarapalli, D. Sidhu.
- “Comparison of Zone-Based Multicast Routing Protocols for Ad Hoc Networks.” *ICON 2003: 11th IEEE International Conference on Networks*. Y. Zhang, A. Rangnekar, A. A. Selçuk, A. Bıçak, D. Sidhu.
- “A New Meet in the Middle Attack on The IDEA Block Cipher.” *SAC 2003: Tenth Annual Workshop on Selected Areas in Cryptography*. LNCS v.3006, Springer-Verlag. H. Demirci, A. A. Selçuk, E. Türe.
- “On Probability of Success in Linear and Differential Cryptanalysis.” *SCN'02: Third Conference on Security in Communication Networks*. LNCS v.2576, Springer-Verlag. A. A. Selçuk, A. Bıçak.

- “Probabilistic Methods in Multicast Key Management.” *Information Security: Third International Workshop, ISW 2000*. LNCS v.1975, pages 179-193, Springer-Verlag. A. A. Selçuk, D. Sidhu.
- “On Bias Estimation in Linear Cryptanalysis.” *Indocrypt 2000: First International Conference in Cryptology in India*. LNCS v.1977, Springer-Verlag. A. A. Selçuk.
- “Initialization Vector Attacks on the IPsec Protocol Suite.” *WETICE'00: 9th IEEE International Workshops on Enabling Technologies*. C. McCubbin, A. A. Selçuk, D. Sidhu.
- “New Results in Linear Cryptanalysis of RC5.” *FSE 1998: 5th Fast Software Encryption Conference*. LNCS v.1372, Springer-Verlag. A. A. Selçuk.

Refereed Proceedings (National):

- “An Analysis of Ethereum Smart Contract Vulnerabilities.” *ISC-TURKEY 2021: Information Security and Cryptology*. T. A. Usman, S. Özarslan, A. A. Selçuk.
- “Implementing a Method for Docker Image Security.” *ISC-TURKEY 2021: Information Security and Cryptology*. Ö. Sengül, H. Özkılıçaslan, E. Arda, U. Yavanoglu, İ. A. Dogru, A. A. Selçuk.
- “Effectiveness Analysis of Public Rule Sets Used in Snort Intrusion Detection System.” *SIU 2021: Signal Processing and Communications Applications Conference*. İ. Gündoğdu, A. A. Selçuk, S. Özarslan.
- “Post Connection Attacks in MySQL.” *UBMK 2020*. A. S. Kaya, A. A. Selçuk.
- “Evasion Techniques Efficiency Over The IPS/IDS Technology.” *UBMK 2019*. H. Kılıç, N. S. Katal, A. A. Selçuk.
- “Usability of authentication mechanisms in secure messaging applications.” *SIU 2018: Signal Processing and Communications Applications Conference*. G. Akman, A. A. Selçuk.
- “Atlama Aralık Yayın Şifrelemesinde Bedava Alıcıların İyi Yerleştirilmesi.” *ABGS 2011*. M. Ak, A. A. Selçuk.
- “Linear Hierarchical Secret Sharing.” *ISC-TURKEY 2010: Information Security and Cryptology*. A. A. Selçuk, R. Yılmaz.
- “Secret Sharing for General Access Structures.” *ISC-TURKEY 2010: Information Security and Cryptology*. İ. N. Bozkurt, K. Kaya, A. A. Selçuk.
- “Threshold Cryptography Based on Blakley Secret Sharing.” *ISC-TURKEY 2008: Information Security and Cryptology*. İ. N. Bozkurt, K. Kaya, A. A. Selçuk, A. M. Güloğlu.
- “An Analysis of the Generalized ID-Based ElGamal Signatures.” *ISC-TURKEY 2008: Information Security and Cryptology*. H. Koyuncu, K. Kaya, A. A. Selçuk.
- “Generalized ID-Based ElGamal Signatures with Message Recovery.” *ISC-TURKEY 2007: Information Security and Cryptology*. S. Kalkan, K. Kaya, A. A. Selçuk.
- “Threshold Paillier and Naccache-Stern Cryptosystems Based on Asmuth-Bloom Secret Sharing.” *2nd National Cryptology Symposium*. K. Kaya, B. G. Dündar, S. Kalkan, A. A. Selçuk.
- “Similar State Tables and Related Keys in RC4.” *2nd National Cryptology Symposium*. H. Demirci, E. S. Ayaz, A. A. Selçuk.
- “Experiments on Probability of Success in Linear and Differential Cryptanalysis.” *First National Cryptology Symposium*. M. Ak, K. Kaya, A. A. Selçuk, Z. Tezcan.

SCHOLARLY AND PROFESSIONAL DUTIES

- Program co-chair for *ISC-TURKEY 2022: 15th Information Security and Cryptology Conference*.
- Program co-chair for *LightSec 2011: Workshop on Lightweight Security & Privacy*.
- Referee for the following journals:
 1. IEEE Trans. on Information Theory
 2. IEEE Trans. on Wireless Communications
 3. Designs, Codes and Cryptography
 4. International Journal of Network Security
 5. Cryptologia
 6. Turkish Journal of Electrical Engineering and Computer Sciences
 7. TBV Bilgisayar Bilimleri ve Mühendisliği Dergisi
- Technical program committee member for the following international conferences/workshops:
 1. CNS 2023: 11th IEEE Conference on Communications and Network Security. Austin, TX, USA, 2023.
 2. Africacypt 2023: 14th International Conference on Cryptology in Africa. Sousse, Tunisia, 2023.
 3. ISDFS 2023: 11th International Symposium On Digital Forensics And Security. Chattanooga, TN, USA, 2023.
 4. ICISSP 2023: 9th International Conference on Information Systems Security and Privacy. Lisbon, Portugal, 2023.
 5. CNS 2022: 10th IEEE Conference on Communications and Network Security. Austin, TX, USA, 2022.
 6. Africacypt 2022: 13th International Conference on Cryptology in Africa. Fes, Morocco, 2021.
 7. ISDFS 2022: 10th International Symposium On Digital Forensics And Security. Istanbul, Turkey, 2022.
 8. Africacypt 2020: 12th International Conference on Cryptology in Africa. Cairo, Egypt, 2020.
 9. ISDFS 2020: 8th International Symposium On Digital Forensics And Security. Beirut, Lebanon, 2020.
 10. Africacypt 2019: 11th International Conference on Cryptology in Africa. Rabat, Morocco, 2019.
 11. ISDFS 2019: 7th International Symposium On Digital Forensics And Security. Barcelos, Portugal, 2019.
 12. PST 2018: 16th Privacy, Security and Trust Conference. Belfast, UK, 2018.
 13. ISDFS 2018: 6th International Symposium On Digital Forensics And Security. Little Rock, AR, USA, 2018.
 14. CT-RSA 2016: RSA Conference 2016–Cryptographers’ Track. San Fransisco, CA, USA, 2016.
 15. PST 2015: 13th Privacy, Security and Trust Conference. Izmir, Turkey, 2015.
 16. CT-RSA 2015: RSA Conference 2015–Cryptographers’ Track. San Fransisco, CA, USA, 2015.
 17. BalkanCryptSec 2014: International Conference on Cryptography and Information Security. Istanbul, Turkey, 2014.

18. LightSec 2014: Third International Workshop on Lightweight Cryptography for Security & Privacy. Istanbul, Turkey, 2014.
 19. SIN 2013: The 6th International Conference on Security of Information and Networks. Aksaray, Turkey, 2013.
 20. LightSec 2013: Workshop on Lightweight Security & Privacy. Gebze, Turkey, 2013.
 21. ICACM: International Conference on Applied and Computational Mathematics. Ankara, Turkey, 2012.
 22. LightSec 2011: Workshop on Lightweight Security & Privacy. Istanbul, Turkey, 2011.
 23. ISCIS'09: The 24th International Symposium on Computer and Information Sciences. Famagusta, Cyprus, 2009.
 24. Africacypt 2009: Second African International Conference on Cryptology. Gammarth, Tunisia, 2009.
 25. Africacypt 2008: First African International Conference on Cryptology. Casablanca, Morocco, 2008.
 26. ISCIS'07: The 22nd International Symposium on Computer and Information Sciences. Ankara, Turkey, 2007.
 27. ISCIS'06: The 21st International Symposium on Computer and Information Sciences. Istanbul, Turkey, 2006.
 28. WETICE'06: 15th IEEE International Workshops on Enabling Technologies. Manchester, UK, 2006.
 29. IEEE WirelessCom'05: Symposium on Mobile Computing. Maui, Hawaii, 2005.
- Technical program committee member for the following national conferences/workshops:
 1. ISC-Turkey 2023: 16th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2023.
 2. ISC-Turkey 2022: 15th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2022.
 3. ISC-Turkey 2021: 14th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2021.
 4. ISC-Turkey 2020: 13th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2020.
 5. ISC-Turkey 2019: 12th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2019.
 6. BILGEM BW 2019: 2nd National Blockchain Workshop. Istanbul, Turkey, 2019.
 7. ISC-Turkey 2018: 11th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2018.
 8. ISC-Turkey 2017: 10th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2017.
 9. ISC-Turkey 2016: 9th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2016.
 10. ISC-Turkey 2015: 8th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2015.
 11. ISC-Turkey 2014: 7th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2014.
 12. ISC-Turkey 2013: 6th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2013.
 13. ISC-Turkey 2012: 5th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2012.
 14. IPv6 Conference. Ankara, Turkey, 2011.
 15. ISC-Turkey 2010: 4th Info. Sec. and Crypto. Conference. Ankara, Turkey, 2010.
 16. ISC-Turkey 2008: 3rd Info. Sec. and Crypto. Conference. Ankara, Turkey, 2008.
 17. Second National Cryptology Symposium. Ankara, Turkey, 2006.
 18. First National Cryptology Symposium. Ankara, Turkey, 2006.

SEMINARS AND INVITED TALKS

Keynote Speeches and Invited Conference Talks:

- “Applications of Integer-Linear Programming in Cryptanalysis,” invited talk, *3rd Applied Cryptanalysis Workshop*, Ankara, Turkey, October 2019.
- “Cryptography and the Internet,” invited talk, *Free Software Summer Camp*, Bolu, Turkey, July 2019.
- “Blockchain: Expectations and Reality,” invited talk, *21st Academic Informatics Conference*, Ordu, Turkey, February 2019.
- “Blockchain: Expectations and Reality,” keynote address, *ISC-TURKEY 2018: Information Security and Cryptology*, Ankara, Turkey, October 2018.
- “Computing the Success Probability in Linear Cryptanalysis,” invited talk, *2nd Atılım Crypto Workshop*, February 2017.
- “Trusting SSL in Practice,” keynote address, *SIN 2013: The 6th Int. Conf. on Security of Information and Networks*, Aksaray, Turkey, November 2013.
- “SSL Security & Trust,” invited talk, *CryptoDays*, Gebze, Turkey, June 2013.

Seminars:

- “Bitcoin and Blockchain: Applications and Expectations,” Informatics Institute, METU, December 2022.
- “Bitcoin and Blockchain: Applications and Expectations,” Erzurum Technical University, May 2022.
- “Zero-Knowledge Protocols,” Informatics Institute, METU, October 2019.
- “Cryptography and the Internet,” Faculty of Engineering, Kadir Has University, July 2019.
- “Blockchain: Expectations and Reality,” Faculty of Management, Yıldırım Beyazıt University, May 2019.
- “Blockchain: Expectations and Reality,” Dept. of Computer Engineering, TOBB ETU, October 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” Dept. of Computer Engineering, Çankaya University, May 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” Dept. of Computer Engineering, Bilkent University, April 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” Dept. of Computer Engineering, Ankara University, March 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” Dept. of Industrial Engineering, Bilkent University, March 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” Dept. of Computer Engineering, TOBB University, January 2018.
- “Trusting SSL in Practice,” Dept. of Computer Engineering, Karadeniz Technical University, January 2017.
- “Trusting SSL in Practice,” Dept. of Computer Engineering, Firat University, April 2015.
- “Practical Threshold Signatures with Linear Secret Sharing Schemes,” Dept. of Mathematics, Atılım University, March 2015.
- “Trusting SSL in Practice,” Dept. of Computer Science, Kuwait University, December 2014.
- “Trusting SSL in Practice,” Dept. of Computer Engineering, Koç University, October 2014.
- “SSL Security & Trust,” Technical University of Berlin, Berlin, Germany, May 2013.

- “Cryptography and Internet Security,” Technical University of Berlin, Berlin, Germany, May 2013.
- “Fundamentals of Cryptographic Protocols,” Technical University of Berlin, Berlin, Germany, May 2013.
- “Threshold Cryptography with Linear Secret Sharing Schemes,” Dept. of Mathematics, TOBB ETU, March 2011.
- “Practical Threshold Signatures with Linear Secret Sharing Schemes,” Faculty of Computing, Kingston University, UK, September 2010.
- “Threshold Cryptography based on the Chinese Remainder Theorem,” Faculty of Computing, Kingston University, UK, September 2010.
- “An Introduction to Cryptography and Cryptological Problems,” Dept. of Industrial Engineering, METU, May 2009.
- “Threshold Cryptography,” UEKAE, TÜBİTAK, November 2008.
- “ID-Based Encryption and Signatures,” UEKAE, TÜBİTAK, November 2007.
- “Threshold Cryptography with Asmuth-Bloom Secret Sharing,” Inst. of Applied Mathematics, METU, May 2006.
- “Reputation-Based Trust Management in P2P Networks,” Dept. of Computer Sciences, Purdue University, April 2004.
- “A New Meet-in-the-Middle Attack on the IDEA Block Cipher,” Inst. of Applied Mathematics, METU, October 2003.
- “Security of Cryptographic Protocols,” UEKAE, TÜBİTAK, June 2003.
- “Applications of Cryptography in Computer Science,” Dept. of Mathematics, METU, April 2003.
- “Protocol Cryptanalysis and IPsec,” Faculty of Engineering and Natural Sciences, Sabancı University, March 2003.
- “Probabilistic Optimization Techniques for Multicast Key Management,” Dept. of Computer Science, University of Texas at San Antonio, April 2002.
- “Probabilistic Optimization Techniques for Multicast Key Management,” Dept. of Computer Sciences, Purdue University, May 2001.
- “New Results in Linear Cryptanalysis of RC5,” T. J. Watson Research Center, IBM, July 1998.

Student Seminars and Guest Lectures:

- “Mathematics, Cryptology, and the Internet,” Ankara High School of Science, April 2021.
- “Zero Knowledge Protocols,” guest lecture, *Free Software Summer Camp*, July 2019.
- “Bitcoin and Blockchain: A Technical Introduction,” guest lecture, *21st Academic Informatics Conference*, February 2019.
- “Bitcoin and Blockchain: A Technical Introduction,” guest lecture, Dept. of Computer Engineering, Koç University, November 2018.
- “Blockchain: Expectations and Reality,” guest lecture, Dept. of Computer Engineering, Koç University, November 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” guest lecture, Dept. of Computer Engineering, Hacettepe University, April 2018.
- “Bitcoin and Blockchain: A Technical Introduction,” guest lecture, Dept. of Electrical and Electronics Engineering, Bilkent University, April 2018.
- “Cryptography: Algorithms & Protocols,” course at *Hacktrick 2017 Cybersecurity Conference*, April 2017.

- “Cryptographic Protocols,” TÜBİTAK Cryptology Summer School, September 2016.
- “Cryptography and Communications Security,” ACM Student Seminar, Bilkent University, April 2016.
- “Cryptography and Communications Security,” ACM Student Seminar, TOBB ETU, November 2015.
- “Cryptography and Protocols,” TÜBİTAK Cybersecurity Summer School, September 2014.
- “Cryptographic Protocols,” TÜBİTAK Cryptology Summer School, September 2013.
- “Cryptographic Protocols,” TÜBİTAK Cryptology Summer School, September 2012.
- “Differential and Linear Cryptanalysis,” TÜBİTAK Cryptology Summer School, September 2011.
- “Cryptographic Protocols,” TÜBİTAK Cryptology Summer School, September 2011.
- “An Introduction to Cryptography and Cryptological Problems,” Dept. of Industrial Engineering, METU, May 2009.
- “Threshold Cryptography,” Dept. of Computer Engineering, Galatasaray University, May 2005.
- “IPsec and Protocol Cryptanalysis,” Dept. of Computer Engineering, Galatasaray University, May 2005.
- “Cryptography,” Dept. of Mathematics, Hacettepe University, April 2005.
- “Differential and Linear Cryptanalysis of Block Ciphers,” Informatics Institute, METU, May 2004.

GRANTS

As Principal Investigator:

- “Secret Sharing Schemes and Extensions Based on the Chinese Remainder Theorem,” TÜBİTAK project no. 108E150, 112,000 TL, 10/2008 – 10/2010.
- “Development of Trace and Revoke Systems based on Broadcast Encryption,” TÜBİTAK project no. 111E213, 82,600 TL, 03/2012 – 03/2013.

As Researcher:

- “BTT-Türkiye: New Information Society Technologies for Turkey,” TÜBİTAK project no. 105E065, 550,000 YTL, 12/2005 – 12/2008.
- “Bluetooth Scatternet Construction and Bluetooth Applications,” TÜBİTAK project no. 103E014, 9,048 MTL, 09/2003 – 09/2005.

GRADUATE STUDENT SUPERVISION

Ph.D. Students:

- Emre Yüce, “Server Notaries: A Complementary Approach to the Web PKI Trust Model,” 01/2016. (co-supervisor)
- Murat Ak, “Optimization Techniques and New Methods for Broadcast Encryption and Traitor Tracing Schemes,” 01/2013.
- Turgut Hanoymak, “On Provable Security of Some Public Key Encryption Schemes,” 09/2012. (co-supervisor)
- Kamer Kaya, “Threshold Cryptography with Chinese Remainder Theorem,” 07/2009.

M.S. Students:

- Turgay Arda Usman, “A Security Audit Methodology for Ethereum Smart Contracts,” 2/2022.
- Harun Ecik, “Improving Effectiveness and Efficiency of Vulnerability Management by Passive Scanning Method,” 12/2021.
- Özkan Şengül, “Vulnerability Detection on Docker Images and a Proposal on Running Images Safely in a Controlled Environment,” 12/2021.
- İlayda Gündoğdu, “Analysis of Open Source Intrusion Detection Systems with Open Rulesets,” 4/2021.
- Muhammet Buğra Torusdağ, “Evaluation of Machine Learning Based Twitter Social Bot Detection Systems,” 12/2020.
- Ahmet Selim Kaya, “Post Connection Attacks to Database Management Systems,” 12/2020.
- Hakan Kılıç, “Evasion Techniques’ Efficiency over Intrusion Prevention and Detection Technologies,” 08/2019.
- Mevlüt Serkan Tok, “IoT Botnets: A Case Study on Mirai Malware,” 08/2019.
- Osman Tufan Tekin, “Anti-Virtualization Techniques Used by Malware and Measures That Can Be Taken Against Them,” 12/2018.
- Emre Murat Ercan, “An Analysis of DRDoS Amplifiers in Turkey and Europe,” 08/2018.
- Yunus Çağrı Yurdakul, “A Technical Analysis of Proof of Stake Based Blockchain Systems,” 08/2018.
- Gamze Akman, “User Interaction with Change of Authentication and Encryption Key in Popular Instant Messaging Applications,” 04/2018.
- Hasan Hüseyin Subaşı, “Development of Integrated And Hybrid TSM Model For the New Generation Cash Registers,” 12/2016.
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