

سید پویا شریعت پناهی

- **استادیار (۱۳۹۸ - تاکنون)**

دانشکده مهندسی برق و کامپیوتر
دانشگاه تهران

- **هیات علمی پژوهشی (۱۳۹۲ - ۱۳۹۸)**

پژوهشکده علوم کامپیوتر
پژوهشگاه دانشهای بنیادی (IPM)

تحصیلات

دکتری	کارشناسی ارشد	کارشناسی
۱۳۸۷-۱۳۹۲	۱۳۸۵-۱۳۸۷	۱۳۸۱-۱۳۸۵
مخابرات	مخابرات	مخابرات
دانشکده مهندسی برق	دانشکده مهندسی برق	دانشکده مهندسی برق
دانشگاه صنعتی شریف	دانشگاه صنعتی شریف	دانشگاه صنعتی شریف

جوایز و افتخارات

- جایزه تحصیلی بنیاد ملی نخبگان در مقطع دکتری ۱۳۸۷
- ورود به مقطع کارشناسی ارشد از طریق استعدادهای درخشان ۱۳۸۵
- بورسیه تحصیلی از دانشگاه بوستون ۱۳۸۵
- مدال طلای کشوری المپیاد فیزیک ۱۳۸۰

زمینه های تحقیقاتی مورد علاقه

- | | |
|--------------------------|-----------------------|
| • تئوری شبکه | • شبکه های تصادفی |
| • تئوری اطلاعات | • تئوری یادگیری ماشین |
| • مخابرات بی سیم | • داده های حجیم |
| • تئوری زنجیره های بلوکی | • ریاضیات زیستی |

سابقه تدریس

- مبانی زنجیره های بلوکی (دوره درسی کوتاه، دانشگاه اولو، فنلاند)
- یادگیری تعاملی پیشرفته (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران)
- تئوری اطلاعات و یادگیری (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران)
- ارزشهای رمزگذاری شده (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران)
- کدینگ برای شبکه های اطلاعاتی (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران و مرکز مخابرات بی سیم، دانشگاه اولو، فنلاند)

- مبانی شبکه های بی سیم (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران)
- انتقال داده (دانشکده مهندسی برق و کامپیوتر، دانشگاه تهران)
- تئوری اطلاعات در علوم کامپیوتر (دانشکده علوم ریاضی، دانشگاه صنعتی شریف)
- مبانی مهندسی برق (دانشکده مهندسی برق، دانشگاه صنعتی شریف)

تجربه ها

- عضو کمیته اجرایی، بیست و یکمین کنفرانس ملی سالانه انجمن کامپیوتر ایران، اسفند ۹۴
- داوری در مجله های بین المللی:
IEEE TIT, IEEE TCOM, IEEE TWC, IEEE JSAC, IEEE TDSC, IEEE TPDS, IEEE T-SUSC, IEEE TAES, IEEE Access, IEEE SPL, IEEE WCL, IEEE CL, IEEE NL, IET Comm
- داور اولین و سومین دوره مسابقات فیزیک کفا، ۱۳۹۱ و ۱۳۹۴، تهران
- عضو کمیته علمی المپیاد بین المللی فیزیک IPHO 2007، اصفهان
- عضو کمیته علمی سمینار مخابرات باند پهن و تلویزیون دیجیتال BCDVB، ۱۳۸۳، تهران
- عضو کمیته علمی کارگاه مخابرات و نظریه اطلاعات ایران

دوره آموزشی و کارگاه

- Multi-Antenna Coded Caching for Enhanced Wireless Content Delivery
 - IEEE Wireless Communications and Networking Conference (WCNC), Austin, TX, USA, 2022.
 - The 12th Iran Workshop on Communication and Information Theory (IWCIT), Sharif University of Technology, Tehran, Iran. 2024.

سخنرانی های مدعو

1. Capacity Analysis of Ad-Hoc Wireless Networks, *Conference on Emerging Wireless Mobile Communication Networks (WMCN)*, Sharif University of Technology, Tehran, Iran, Oct. 17-19, 2011.
2. Multi-Server Coded Caching, *4th IPM, NUS Workshop on Computer Science*, 9 March, 2015, Tehran, Iran.
3. Distributed Load Balancing in Cache Networks, *3rd Winter Seminar Series, Sharif University of Technology*, Dec, 2017.
4. "Distributed Load Balancing in Cache Networks: The Role of Coding", *Iran Informatics Conference*, Tehran, Iran, Jan 2020.

بازدیدهای تحقیقاتی

- مرکز مخابرات بی سیم (CWC)، دانشگاه اولو (University of Oulu)، فنلاند
 - August 2017, August 2018, August 2019, March 2023
- موسسه کدینگ شبکه (INC)، دانشگاه چینی هنگ کنگ (Chinese Univ. of Hong Kong)، هنگ کنگ
 - October 2017

همکارهای بین المللی

- Prof. Antti Tolli, University of Oulu, Finland.

- Prof. Giuseppe Caire, Technical University of Berlin, Germany.
- Prof. Osvaldo Simeone, King's College, UK.

Journal Papers

1. E. Mirzaei, **S. P. Shariatpanahi**, A. Tavakoli, R. Hosseini and M. N. Ahmadabadi, "Exploiting Expertise of Non-Expert and Diverse Agents in Social Bandit Learning: A Free Energy Approach," in IEEE Transactions on Cognitive and Developmental Systems, doi: 10.1109/TCDS.2025
2. M. Ghorbani, R. Hosseini, **S. P. Shariatpanahi**, M. Nili Ahmadabadi, "Learning from different perspectives for regret reduction in reinforcement learning: A free energy approach," Neurocomputing, Volume 614, 2025.
3. M. J. Sojdeh, M. Letafati, **S. P. Shariatpanahi**, B. H. Khalaj, Secure multi-server coded caching, Computer Networks, Volume 253, 2024.
4. Z. Naderi, **S. P. Shariatpanahi**, B. Bahrak, "A novel approach to alleviate wealth compounding in proof-of-stake cryptocurrencies," Peer-to-Peer Netw. Appl. 17, 1335–1343, 2024.
5. S. B. Hassanpour, A. Khonsari, M. Moradian, **S. P. Shariatpanahi**, Privacy-preserving edge caching: A probabilistic approach, Computer Networks, Volume 226, 2023.
6. H. B. Mahmoodi, J. Kaleva, **S. P. Shariatpanahi** and A. Tölili, "D2D Assisted Multi-Antenna Coded Caching," in IEEE Access, vol. 11, pp. 16271-16287, 2023.
7. S. Jamialahmadi, I. Sahebi, M. M. Sabermahani, **S. P. Shariatpanahi**, A. Dadlani and B. Maham, "Rumor Stance Classification in Online Social Networks: The State-of-the-Art, Prospects, and Future Challenges," in IEEE Access, vol. 10, pp. 113131-113148, 2022.
8. F. Ghaffari, B. Bahrak, **S. P. Shariatpanahi**, "A novel approach to partial coverage in wireless sensor networks via the roman dominating set", IET Networks, 1–12, 2022.
9. F. Ghaffari, **S. P. Shariatpanahi**, M. J. Siavoshani, B. Bahrak, "Multi-Sender Index Coding Over Linear Networks", IEEE Communication Letters, vol. 26, no. 2, pp. 273-276, 2021.
10. M. J. Salehi, E. Parrinello, **S. P. Shariatpanahi**, P. Elia and A. Tölili, "Low-Complexity High-Performance Cyclic Caching for Large MISO Systems," in IEEE Transactions on Wireless Communications, 2021.
11. A. Ghaffari Sheshjavani, A. Khonsari, **S. P. Shariatpanahi**, M. Moradian, "Content caching for shared medium networks under heterogeneous users' behaviors," Computer Networks, Volume 199, 2021.
12. M. J. Siavoshani, **S. P. Shariatpanahi** and M. A. Maddah-Ali, "Private Information Retrieval for a Multi-Message Scenario with Private Side Information," in IEEE Transactions on Communications, vol. 69, no. 5, pp. 3235-3244, May 2021.

13. P. Eslami, M. H. Ameri Mehr, and **S. P. Shariatpanahi**, "A New Framework for Mobile Edge Caching by Proposing Flexible User in Heterogeneous Cellular Networks", IEEE Access, vol. 8, pp. 188938-188950, 2020.
14. S. B. Hassanpour, A. Diyanat, A. Khonsari, **S. P. Shariatpanahi**, and A. Dadlani, "Context-Aware Privacy Preservation in Network Caching: An Information Theoretic Approach," in IEEE Communications Letters, vol. 25, no. 1, pp. 54-58, Jan. 2021.
15. A. Tölli, **S. P. Shariatpanahi**, J. Kaleva, and B. H. Khalaj, "Multiantenna Interference Management for Coded Caching," IEEE Transactions on Wireless Communications, vol. 19, no. 3, pp. 2091 – 2106, Jan. 2020.
16. M. Jafari Siavoshani, F. Parvaresh, A. Pourmiri, and **S. P. Shariatpanahi**, "Coded Load Balancing in Cache Networks", IEEE Transactions on Parallel and Distributed Systems, vol. 31, no. 2, pp. 347-358, Feb. 2020.
17. **S. P. Shariatpanahi**, G. Caire, and B. H. Khalaj, "Physical-Layer Schemes for Wireless Coded Caching", IEEE Transactions on Information Theory, vol. 65, no. 5, pp. 2792-2807, May 2019.
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19. S. Peyman Shariatpanahi, **S. Pooya Shariatpanahi**, K. Madjidzadeh, M. Hassan, M. Abedi-Valugerdi, "Mathematical modeling of tumor-induced immunosuppression by myeloid-derived suppressor cells: implications for therapeutic targeting strategies", Journal of Theoretical Biology, 2018.
20. **S. P. Shariatpanahi**, S. A. Motahari, and B. H. Khalaj, "Multi-Server Coded Caching", IEEE Transactions on Information Theory, vol. 62, no. 12, pp. 7253-7271, 2016.
21. A. Diyanat, A. Khonsari, and **S. P. Shariatpanahi**, "A Dummy-Based Approach for Preserving Source Rate Privacy", IEEE Transactions on Information Forensics & Security, vol. 11, no. 6, pp. 1321-1332, 2016.
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24. **S. P. Shariatpanahi**, B. H. Khalaj, and H Shah-Mansouri, "Power Allocation Scheme in TDMA Distributed MIMO Interference Channels", IET Communications, vol. 7, no. 5, pp. 391 – 396, March 2013.
25. **S. P. Shariatpanahi**, B. H. Khalaj, K. Alishahi, and H Shah-Mansouri, "One-Hop Throughput of Wireless Networks with Random Connections", IEEE Wireless Communications Letters, vol. 1, pp. 205-208, Jun 2012.
26. **S. P. Shariatpanahi**, B. H. Khalaj, and H Shah-Mansouri, and J. Del Ser, "Analysis of Quantization Effects on the Performance of Cooperative MIMO Techniques in Wireless Networks", EURASIP Journal on Wireless Communications and Networking, 2012:290 doi:10.1186/1687-1499-2012-290.
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28. **S. P. Shariatpanahi**, B.H. Khalaj, A.A. Shishegar and H.S. Rad, "Decorrelating closely spaced antennas by pattern design in uniform scattering environments", IET Microwaves, Antennas & Propagation, vol. 4, pp. 1903-1909, Nov 2010.

Conference Papers

1. F. Aligolzadeh and **S. P. Shariatpanahi**, "Improving Physical Layer Computation with Reconfigurable Intelligent Surfaces," 2025 29th International Computer Conference, Computer Society of Iran (CSICC), Iran, Islamic Republic of, 2025.
2. M. Abolpour, M. Salehi, S. Mohajer, **S. P. Shariatpanahi** and A. Tölili, "Coded Multi-User Information Retrieval with a Multi-Antenna Helper Node," 2024 IEEE International Symposium on Information Theory (ISIT), Athens, Greece, 2024, pp. 2233-2238.
3. A. G. Sheshjavani, A. Khonsari, **S. P. Shariatpanahi**, M. Moradian and A. Dadlani, "Content Caching in Shared Medium Networks with Non-Uniform and User-Dependent Demands," ICC 2022 - IEEE International Conference on Communications, 2022, pp. 2501-2506.
4. M. J. Sojdeh, M. Mahmoudi, M. Letafati, **S. P. Shariatpanahi** and B. Hossein Khalaj, "Secure Multi-Antenna Coded Caching," 2022 IEEE 23rd International Workshop on Signal Processing Advances in Wireless Communication (SPAWC), 2022, pp. 1-5.
5. M. Mahmoudi, M. J. Sojdeh, **S. P. Shariatpanahi**, "On Decentralized Multi-Transmitter Coded Caching in Linear Networks, Workshop on Smart Antennas (WSA), 2021.
6. M. J. Siavoshani, **S. P. Shariatpanahi**, N. Omidvar, "Intelligent Reflecting Surfaces for Compute-And-Forward", Iran Workshop on Communication and Information Theory (IWCIT), 2021.
7. H. B. Mahmoodi, J. Kaleva, **S. P. Shariatpanahi** and A. Tölili, "D2D Assisted Beamforming for Coded Caching," 2020 IEEE Wireless Communications and Networking Conference (WCNC), Seoul, Korea (South), 2020.
8. A. G. Sheshjavani, A. Khonsari, **S. P. Shariatpanahi**, M. Moradian and A. Dadlani, "Coded Caching Under Non-Uniform Content Popularity Distributions with Multiple Requests," 2020 IEEE Wireless Communications and Networking Conference (WCNC), Seoul, Korea (South), 2020.
9. M. Salehi, A. Tölili and **S. P. Shariatpanahi**, "Coded Caching with Uneven Channels: A Quality of Experience Approach," 2020 IEEE 21st International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), Atlanta, GA, USA, 2020.
10. M. Salehi, A. Tölili and **S. P. Shariatpanahi**, "A Multi-Antenna Coded Caching Scheme with Linear Subpacketization," ICC 2020 - 2020 IEEE International Conference on Communications (ICC), Dublin, Ireland, 2020.
11. M. Salehi, A. Tölili and **S. P. Shariatpanahi**, "Subpacketization - Beamformer Interaction in Multi-Antenna Coded Caching," 2020 2nd 6G Wireless Summit (6G SUMMIT), Levi, Finland, 2020.

12. M. J. Salehi, A. Tölli, **S. P. Shariatpanahi**, and J. Kaleva, "Subpacketization-Rate Trade-off in Multi-Antenna Coded Caching" GLOBECOM - IEEE Global Telecommunications Conference, Waikoloa, HI, USA, 2019.
13. S. B. Hassanpour, A. Khonsari, **S. P. Shariatpanahi**, and A. Dadlani, "Hybrid Coded Caching in Cellular Networks with D2D-Enabled Mobile Users," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Istanbul, 2019.
14. **S. P. Shariatpanahi**, J. Zhang, O. Simeone, B. H. Khalaj, M. A. Maddah-Ali, "Cloud-Aided Interference Management with Cache-Enabled Edge Nodes and Users", International Symposium on Information Theory (ISIT), 2019, Paris.
15. **S. P. Shariatpanahi**, M. Jafari Siavoshani, M. A. Maddah-Ali, "Multi-Message Private Information Retrieval with Private Side Information", IEEE Information Theory Workshop (ITW), 2018.
16. A. Tölli, J. Kaleva, **S. P. Shariatpanahi**, B. H. Khalaj, "Linear Multicast Beamforming Schemes for Coded Caching", Asilomar Conference on Signals, Systems, and Computers, 2018.
17. **S. P. Shariatpanahi** and B. H. Khalaj, "Coded Caching for Optimal Content Delivery in 5G: The Case of Low Cache Sizes", European Conference on Networks and Communications (EuCNC), 2018.
18. A. Tölli, **S. P. Shariatpanahi**, J. Kaleva, and B. H. Khalaj, "Multicast Beamformer Design for Coded Caching" in IEEE International Symposium on Information Theory (ISIT), 2018.
19. A. Tölli, **S. P. Shariatpanahi**, J. Kaleva, and B. H. Khalaj, "Multicast Mode Selection for Multi-antenna Coded Caching" The 3rd Content Caching and Delivery in Wireless Networks Workshop (CCDWN) 2018.
20. M. Amerimehr, **S. P. Shariatpanahi**, M. Jafari Siavoshani, F. Ashtiani, and M. Mazoochi, "Performance Analysis of Network Coding-Based Content Delivery in Dual Interface Cellular Networks", Iran Workshop on Communication and Information Theory (IWCIT), 2018.
21. M. J. Salehi, A. Motahari, B. H. Khalaj, and **S. P. Shariatpanahi**, "Content Delivery Networks: Interactions Between Storage/Delay/Cost", Iran Workshop on Communication and Information Theory (IWCIT), 2018.
22. A. Pourmiri, M. Jafari Siavoshani, **S. P. Shariatpanahi**, "Proximity-Aware Balanced Allocations in Cache Networks", in Proc. of 31st IEEE International Parallel & Distributed Processing Symposium (IEEE IPDPS), Orlando, 2017.
23. **S. P. Shariatpanahi**, G. Caire, and B. H. Khalaj, "Multi-Antenna Coded Caching", in Proc. of IEEE International Symposium on Information Theory (IEEE ISIT), Aachen, 2017.
24. B. Kananian, M. A. Maddah-Ali, **S. P. Shariatpanahi**, and B. H. Khalaj, "Characterization of Degrees of Freedom versus Receivers Backhaul Load in K-User Interference Channel", in Proc. of IEEE International Symposium on Information Theory (IEEE ISIT), Aachen, 2017.
25. M. A. Tahmasbi Nejad, **S. P. Shariatpanahi**, and B. H. Khalaj, "On Storage Allocation in Cache-Enabled Interference Channels with Mixed CSIT", in Proc. of Advanced Caching in Wireless Networks Workshop, IEEE International Conference on Communications (IEEE ICC), Paris, 2017.
26. **S. P. Shariatpanahi**, H. Shah-Mansouri, and B. H. Khalaj "Throughput of One-Hop Device-to-Device Wireless Networks with Channel Estimation Error", 26th European Conference on Networks and Communications (EuCNC'2017), Oulu, 2017.

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28. B. Kananian, M. A. Maddah-Ali, **S. P. Shariatpanahi**, and B. H. Khalaj, "Collaboration Alignment in Distributed Interference Management in Uplink Cellular Systems", in Proc. of IEEE International Symposium on Information Theory (IEEE ISIT), Spain, 2016.
29. A. Shabani, **S. P. Shariatpanahi**, V. Shah-Mansouri, and A. Khonsari "Mobility Increases Throughput of Wireless Device-to-Device Networks with Coded Caching", in Proc. of IEEE International Conference on Communications (IEEE ICC), 2016, Malaysia.
30. **S. P. Shariatpanahi**, S. A. Motahari, and B. H. Khalaj "Content Delivery via Multi-Server Coded Caching in Linear Networks", in Proc. of IEEE Information Theory Workshop (IEEE ITW), Oct. 2015, South Korea.
31. **S. P. Shariatpanahi**, H. Shah-Mansouri, and B. H. Khalaj "Caching Gain in Wireless Networks with Fading: A Multiuser Diversity Perspective", in Proc. of IEEE WCNC 2014, Istanbul, Turkey.
32. **S. P. Shariatpanahi**, B. H. Khalaj, and H. Shah-Mansouri, "Achievable Throughput of Wireless Networks with Local Traffic", in Proc. of IEEE WCNC 2014, Istanbul, Turkey.
33. H. Shah-Mansouri, B. H. Khalaj, and **S. P. Shariatpanahi**, "On the Route Discovery Rate of Flooding in Large Wireless Networks", in Proc. of IEEE PIMRC 2012, Sydney, Australia.
34. **S. P. Shariatpanahi** and B. H. Khalaj, "Analysis of Quantization Effects on Performance of Hierarchical Cooperation Schemes in Ad-Hoc Wireless Networks", 36th IEEE Conf. on Local Computer Networks (LCN), Bonn, Germany, 2011.
35. **S. P. Shariatpanahi** and B. H. Khalaj, "A Novel Approach to Power Allocation in Wireless Ad Hoc Networks", ACM MsWIM 2010 (Poster Presentation) and ACM PM2HW2N 2010 (Oral Presentation), Bodrum, Turkey, Oct 2010.
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39. H. F Aarabi and **S. P. Shariatpanahi**, "Diversified Broadcasting in Wireless Networks", ISCTA 2007, Ambleside, England.
40. **S. P. Shariatpanahi** and H.F. Aarabi, "On reliable routing in wireless networks with diversity", 4th IEEE and IFIP International Conference on Wireless and Optical Communications Networks, WOCN 2007, Singapore.
41. **S. P. Shariatpanahi** and B.H. Khalaj, "Delay-aware scheduling in heterogeneous multiuser systems", IEEE Workshop on Signal Processing Advances in Wireless Communications, SPAWC, 2006, France.

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