

# ANNUAL REPORT 2020

Computer Networks Group  
Institute of Computer Science  
Faculty of Mathematics and Computer Science  
Georg-August-Universität Göttingen

**COMPUTER NETWORKS GROUP**  
**GOLDSCHMIDTSTRASSE 7, 37077 GÖTTINGEN, GERMANY**  
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## Computer Networks Group

### Introduction

Founded in April 2007, the Computer Networks Group is devoted to cutting-edge leading research and education programs in the field of network architectures, protocols and applications. This report series intends to review the most relevant and important research results and other achievements and activities performed by the Computer Networks Group. The present report summarizes those of the year of 2020.

Due to the coronavirus pandemic, things went more difficult in 2020 than previous years: many of our teaching and research activities had to be online; many research visits, project meetings and conference attendance had to be cancelled, postponed or shortened. We look forward to a brighter and more prosperous new year in 2021 with the projected wide injection of COVID-19 vaccine, great treatments and social changes. Stay safe and healthy!

### Group Members

Weijun Wang and Fabian Wölk joined the NET group as PhD students in January and July 2020, respectively. Dr. Tingting Yuan joined the group in October 2020. Dr. Sripriya Srikant Adhatarao and Dr. Shichang Ding completed their PhD theses in September and December 2020, respectively. After his joint PhD study from NET group, Dr. Shuai Xu completed his PhD thesis at Southeast University in November 2020 and joins Nanjing University of Aeronautics and Astronautics as a faculty member. Dr. Mayutan Arumathurai joined Deutsche Bahn AG as a 5G Senior Expert in May 2020.

Dr. Hui Zheng (Ranplan Ltd, UK, April 2019-March 2020), Dr. Jinxu Zhao, Yue Zhang, Yi Li, and Xin Gao (Tsinghua U, China, Dec 2019-Mar 2020) spent research visits at NET group, contributing to its research activities. Also, several student assistants worked on projects and BSc/MSc.thesis work; they are an important part of the team.

By the end of year 2020, the research group comprises 1 professor, 3 senior researchers/postdoc fellows, 7 PhD students, as well as a couple of master and bachelor students. See Table 1 for detailed information.

Table 1: Member of Computer Networks Group (as of 31.12.2020):

Admin staff	Head	Postdocs	PhD researchers	Adjunct researchers/lecturers
Secretary: Tina Bockler  System administrator: Gunnar Krull	Prof. Dr. Xiaoming Fu	Dr. Sripriyas Adhatarao,  Dr. Tingting Yuan,  Dr. Yali Yuan	Bangbang Ren, Yachao Shao, Weijun Wang, Yunxiao Wang, Fabian Wölk, Jiaquan Zhang, Pablo Gutierrez-Marques (extern)	PD Dr. Mayutan Arumathurai (DB), Prof. Dr. Xu Chen (SYSU), Assoc. Prof. Dr. Yang Chen (Fudan), Prof. Dr. Noel Crespi (Telecom SudParis), Assoc. Prof. Dr. Hong Huang (HUST), Assist. Prof. Dr. Lei Jiao (Oregon), Assoc. Prof. Dr. Sameer Kulkarni (IIT), Prof. Dr. Wenzhong Li (Nanjing), Prof. Dr. Jar-Der Luo (Tsinghua), Assoc. Prof. Dr. Lingjun Pu (Nankai), Dr. Hannes Tschofenig (ARM), Assist. Prof. Dr. Shuai Xu (NUAA) Assoc. Prof. Dr. Song Yang (Beijing I. Tech)

## Teaching and Supervision

During 2020 the Group has provided the following courses:

### Lectures:

Computer Networks, 4 ECTS

Advanced Computer Networks, 5 ECTS

Computer Networks, 4 ECTS (exam only)

*NOTE: WS – Winter Semester, SS – Summer Semester*

WS2019/20, WS2020/21

SS2020 (contributed by Dr. Hannes Tschofenig, ARM Ltd.)

SS2020

### Exercise classes:

Computer Networks

WS2019/20, WS2020/21

### Lab courses:

Practicum Advanced Networking (Data Science Edition), 6 ECTS

SS2020, WS2020/21

Practicum Networking Lab, 6 ECTS

SS2020

Smart Cities (in cooperation with City Göttingen), 6 ECTS

WS2020/21

### Seminars:

Adv. Topics in Mobile and Social Communications, 6 ECTS

WS2020/21

Adv. Topics in Computer Networking, 6 ECTS

SS2020

Internet Technologies, 4 ECTS

SS2020, WS2020/21

## Research Areas and Projects

The Computer Networks group is committed to explore innovative networking technologies and utilize its full potential, knowledge and experience in the analysis, design, and evaluation of emerging and future network technologies, systems, and applications. Its current main research areas include:

- Architectures, protocols, mechanisms and applications for cloud computing and data centers, including resource and service management, energy efficiency, data delivery, software-defined networks, network function virtualization, cloud systems, applications and services. This has been conducted in collaboration with Microsoft Research, Deutsche Telekom, Nokia Bell Labs, Huawei, Cisco, Ericsson, NEC, UC Riverside, U. Oregon, Sorbonne University, BUPT, Fudan University, Tsinghua University, Nanjing University, and Landesforschungsinstitut des Freistaats Bayern (FORTISS) etc.
- Future Internet architectures and protocols, including information-centric networking, software-defined networking, reliability and congestion control, pub/sub architecture, disaster management, measurement, and related security mechanisms for supporting large-scale content delivery and other applications over the Internet. This area has been in collaboration with UC Riverside, UCLA, Columbia University, University College London, University of Rome “Tor Vergata”, Swedish Institute of Computer Science, KDDI, Panasonic, Cisco, Ericsson, Huawei, NEC, Bell Labs, Osaka University, University of Tokyo, Waseda University, NICT, Fudan University, Tsinghua University, and Nanjing University, etc.
- Social networks/social computing, including socio-aware networking/computing infrastructure, mobile social networks, as well as social behavior studies and social influence, in collaboration with researchers from Göttingen (including sociologists, socio-psychologists, economist, physicists and epidemiologists), nationally (MPI-DS, MPI-SWS, L3S/University of Hannover, University of Frankfurt) and internationally (University Oregon, University of Chicago, University of Cambridge, Bell Labs, Tsinghua University, Fudan University, Nanjing University,

University of Science and Technology of China, Huazhong University of Science and Technology, China Telecom, Tcent, TAL, etc).

- Mobile computing, pervasive/social sensing and applications e.g., in smart cities and smart mobility/transport scenarios, leveraging machine learning (in particular compressive sensing) and data mining techniques where appropriate, in cooperation with Aalto University, University of Helsinki (Finland), Uppsala University (Sweden), University of Aston, University of Essex, Ranplan Ltd (UK), IMT Telecom-SudParis, Cisco (France), Hong Kong University of Science and Technology, Tsinghua University, Nankai University, Nanjing University, University of Science and Technology of China (China), NEC, National Institute of Informatics (Japan), as well as the Chair of Bioclimatology, Chair of Information Management, Chair of Human Resource Management, and Institute of Geography at the University of Göttingen, University Medical Center Göttingen, City Göttingen, Wolfsburg AG, Landesforschungsinstitut des Freistaats Bayern (FORTISS) and Birmingham City Council.

Some funded projects in 2020 include:

- COSAFE – “Cooperative Connected Intelligent Vehicles for Safe and Efficient Road Transport”, sponsored by EU H2020 MCSA-RISE program
- “Zero-Touch/Automated Network Management with Artificial Intelligence”, funded by Lower Saxony Ministry of Education and Culture (MWK)
- Gift funding on “HTTP2.0+ over 5G/B5G Networks”, sponsored by Huawei Technologies
- Gift funding on “Future Networks”, sponsored by Huawei Technologies
- “Virtual Network Embedding”, sponsored by CSC Scholarship program
- “Smart Health”, sponsored by CSC Scholarship program
- “Socioeconomic Big Data”, sponsored by CSC Scholarship program
- “Mobile Smart Sensing and Analytics”, sponsored by CSC Scholarship program

## Publications, Technical Reports and Theses

### Editorials

1. James Evans, Xiaoming Fu, Jar-Der Luo, Inaugural Message from Editors-in-Chief, *Journal of Social Computing*, IEEE, 1:i-iv, Sept 2020.
2. Raouf Boutaba, Guy Pujolle, Xiaoming Fu, Silvia Giordano, Christian Jacquenet (eds.), *Proceedings of IFIP Networking 2020*, June 2020.

### Papers in Peer-Reviewed Journals

3. \* Song Yang, Fan Li, Stojan Trajanovski, Xu Chen, Yu Wang, Xiaoming Fu, Delay-Aware Virtual Network Function Placement and Routing in Edge Clouds, **IEEE Transactions on Mobile Computing**, early access, DOI: 10.1109/TMC.2019.2942306
4. \* Wang, W., H. Dai, C. Dong, X. Fu, J. Zheng, X. Chen, G. Chen, and X. Fu, "Deployment of Unmanned Aerial Vehicles for Anisotropic Monitoring Tasks", **IEEE Transactions on Mobile Computing**, early access, DOI: 10.1109/TMC.2020.3012791
5. \* Song Yang, Fan Li, Ramin Yahyapour, Xiaoming Fu, Delay-Sensitive and Availability-Aware Virtual Network Function Scheduling for NFV. **IEEE Transactions on Services Computing**, early access, DOI: 10.1109/TSC.2019.2927339

6. \* Yang, S., N. He, F. Li, S. Trajanovski, X. Chen, Y. Wang, and X. Fu, "Survivable Task Allocation in Cloud Radio Access Networks with Mobile Edge Computing", **IEEE Internet of Things Journal**, early access, DOI: 10.1109/JIOT.2020.3010533
7. \* Hong Huang, Wei Zhou, Huaqian Sheng, Dongxiao Yu, Hai Jin, Core Decomposition and Maintenance in Weighted Graph, **World Wide Web** (Springer), early access, DOI: 10.1007/s11280-020-00857-0
8. \* Song Yang, Fan Li, Stojan Trajanovski, Xiaoming Fu, Recent Advances of Resource Allocation in Network Function Virtualization, **IEEE Transactions on Parallel and Distributed Systems**, 32(2): 295-314, Feb 2021.
9. Shichang Ding, Xin Gao, Yufan Dong, Xiaoming Fu, Estimating Multiple Socioeconomic Attributes via Home location – A Case Study in China, **Journal of Social Computing**, 1(2), IEEE, Dec 2020.
10. \* Dong, E., X. Fu, M. Xu, and Y. Yang, "Low-Cost Datacenter Load Balancing with Multipath Transport and Top-of-Rack Switches", **IEEE Transactions on Parallel and Distributed Systems**, 31(10): 2232-2247, Oct 2020
11. \* Tong Wu, Pan Zhou, Kai Liu, Yali Yuan, Xiumin Wang, Huawei Huang, Dapeng Oliver Wu, Multi-Agent Deep Reinforcement Learning for Urban Traffic Light Control in Vehicular Networks. **IEEE Transactions on Vehicular Technology**, 69(8): 8243-8256, Aug 2020
12. \* Ruidong Li, Kazuhisa Matsuzono, Hitoshi Asaeda, Xiaoming Fu, Achieving High Throughput for Heterogeneous Networks with Consecutive Caching and Adaptive Retrieval, **IEEE Transactions on Network Science and Engineering**, DOI: 10.1109/TNSE.2020.3010939, 7(4): 2443-2455, Oct 2020.
13. \* Yali Yuan, Robert Tasik, Sripriya Srikant Adhatarao, Yachao Yuan, Zheli Liu, Xiaoming Fu, RACE: Reinforced Cooperative Autonomous Vehicle Collision Avoidance. **IEEE Transactions on Vehicular Technology** 69(9): 9279-9291, Sept 2020
14. Yang, S., F. Li, S. Trajanovski, and X. Fu, "Traffic routing in stochastic network function virtualization networks", **Journal of Network and Computer Applications**, 169: 102765, July 2020.
15. \* Gong, Q., Y. Chen, X. He, Y. Xiao, P. Hui, X. Wang, and X. Fu, "Cross-Site Prediction on Social Influence for Cold-Start Users in Online Social Networks", **ACM Transactions on the Web** (accepted), June 2020.
16. \* Kulkarni, S. G., G. Liu, K.. K. Ramakrishnan, M. Arumathurai, T. Wood, and X. Fu, "Achieving Efficient Failure Resiliency for Network Function Virtualization based Services", **IEEE/ACM Transactions on Networking**, 28(2): 639-652, Apr 2020.
17. \* Kulkarni, S. G., W. Zhang, J. Hwang, S. Rajagopalan, K.. K. Ramakrishnan, T. Wood, M. Arumathurai, and X. Fu, "NFVnice: Dynamic Backpressure and Scheduling for NFV Service Chains", **IEEE/ACM Transactions on Networking**, 28(2): 695-708, Apr 2020.
18. \* Wang, X., C. Wang, X. Chen, X. Fu, X. Wang, and J. Han, "Measurement and Analysis on Large-Scale Offline Mobile App Dissemination over Device-to-Device Sharing in Mobile Social Networks", **World Wide Web** (Springer), 23: 2363–2389, Mar 2020
19. Xin Gao, Jar-Der Luo, Kunhao Yang, Xiaoming Fu, Loring Liu, Weiwei Gu, Predicting Tie Strength of Chinese Guanxi by Using Big Data of Social Networks, **Journal of Social Computing**, IEEE, 1: 40-52, Sept 2020.
20. Tao Zhao, Hong Huang, Xiaoming Yao, Jar-der Luo, Xiaoming Fu, Predicting individual socioeconomic status from mobile phone data: a semi-supervised hypergraph-based factor graph approach, **International Journal of Data Science and Analytics** (Springer). Vol. 9, pp. 361-372, Apr 2020.
21. \* Shuai Xu, Xiaoming Fu, Jiuxin Cao, Bo Liu, Zhixiao Wang, Survey on User Location Prediction Based on Geo-Social Networking Data, **World Wide Web Journal** (Springer), vol. 23, pp. 1621–1664, Jan 2020.

### Papers in Peer-Reviewed International Conferences and Workshops

22. Jiaying Kou, Jiahua Du, Xiaoming Fu, Geordie Zhang, Hua Wang and Yanchun Zhang, "The Effect of Regional Economic Clusters on Housing Price", 32<sup>nd</sup> Australasian Database Conference (**ADC 2021**), Feb. 2021.
23. Adhatarao, S. Srikant, H. Wang, M. Arumathurai, and X. Fu, "COPSS-lite: A Lightweight ICN based Pub/Sub System for IoT Environments", 16<sup>th</sup> IEEE International Conference on Mobility, Sensing and Networking (**MSN 2020**), Dec 2020.

24. Zhang, J., X. Yao, and X. Fu, "Identifying unfamiliar callers' professions from privacy-preserving mobile phone data", 16<sup>th</sup> IEEE International Conference on Mobility, Sensing and Networking (**MSN 2020**), Dec 2020.
25. Shao, Y., T. Zhao, X. Wang, X. Zou, and X. Fu, "Multiple Balance Subsets Stacking for Imbalanced Healthcare Dataset", 26<sup>th</sup> IEEE International Conference on Parallel and Distributed Systems (**ICPADS 2020**), Dec 2020.
26. \* Zhenhua Han, Haisheng Tan, Shaofeng Jiang, Xiaoming Fu, Wanli Cao, Francis C.M. Lau, Scheduling Placement-Sensitive BSP Jobs with Inaccurate Execution Time Estimation, IEEE **INFOCOM 2020**, July 2020
27. \* Yali Yuan, Sripriya Srikant Adhatarao, Mingkai Lin, Yachao Yuan, Zheli Liu, Xiaoming Fu, ADA: Adaptive Deep Log Anomaly Detector, **IEEE INFOCOM 2020**, July 2020

### (Extended) Abstracts, Posters and Demos

28. Weijun Wang, Tingting Yuan, Minghao Han, Han Zhang, Yu Ma, Meng Li, Sripriya S. Adhatarao and Xiaoming Fu, A Real-time Social Distance Measurement and Record System for COVID-19, poster session, 18<sup>th</sup> ACM International Conference on Embedded Wireless Systems and Networks (EWSN 2021), Feb 2021

### Technical Reports

29. Yali Yuan, Robert Tasik, Sripriya Srikant Adhatarao, Yachao Yuan, Zheli Liu, Xiaoming Fu, RACE: Reinforced Cooperative Autonomous Vehicle Collision Avoidance. CoRR abs/2004.01286, 2020

### PhD Dissertations

30. Shichang Ding, "User Attribute Inference via Mining User-Generated Data", PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, December 2020
31. Sripriya Srikant Adhatarao, "PHOENIX: A Premise to Reinforce Heterogeneous and Evolving Internet Architectures with Exemplary Applications", PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, September 2020
32. Shuai Xu, "Key Techniques of User Geo-Location Prediction with Big Data", PhD Dissertation, School of Computer Science, Southeast University, Nanjing, China, Nov 2020 (co-supervised with Prof. Jiuxin Cao)

### Master Theses

33. Yufan Dong, Inferring People's Socioeconomic Status via Home Location, bachelor thesis, Institute of Computer Science, University of Göttingen, Göttingen, Sept 2020
34. Yifan Chen, A multi-task deep learning approach to improve recommendation with incomplete user profiles, master thesis, Institute of Computer Science, University of Göttingen, Göttingen, July 2020
35. Disha Purohit, Longitudinal Multiomics Analysis, master thesis, Institute of Computer Science, University of Göttingen, Göttingen, Mar 2020

### Bachelor Theses

36. Ding Zhou, Analysis and comparison of several neural network architectures, bachelor thesis, Institute of Computer Science, University of Göttingen, Göttingen, Oct 2020
37. Immo Hellwig, Theoretical and Experimental Investigation on Recent Advances in HTTP from Transportation View, bachelor thesis, Institute of Computer Science, University of Göttingen, Göttingen, June 2020

### Scientific Contacts

#### Incoming short/mid-term researcher visits

Incoming visitors	Institution (from)	Detailed information	Date
Prof. Matthias Wählisch	Freie Universität Berlin	Visiting NET group, attended a PhD disputation and discussed collaborations	Sept 2020
Dr. Hui Zheng	Ranplan Co. Ltd., UK	Visited NET group for 8 months	June 2019 -Mar 2020

Xin Gao	Tsinghua University, China	Visited NET group for 5 months	Dec 2019-May 2020
Yi Li	Tsinghua University, China	Visited NET group for 3 months	Dec 2019-Mar 2020
Dr. Jinxu Zhao	Tsinghua University, China	Visiting NET group for 3 months	Dec 2019-Mar 2020

### Outgoing research visits

Out-going visitors	Institution visited	Detailed information	Date
X. Fu	University of Oregon, USA	Visiting Profs. Jun Li and Lei Jiao for collaboration on advanced networks	Feb-Mar 2020

### Conferences, events and meeting participations and presentations

Participant	Conference/event	Detailed information	Date
X. Fu	2 <sup>nd</sup> International Conference on Social Computing (ICSC 2020), Beijing & virtual	Giving a keynote	Dec 2020
Y. Shao	IEEE ICPADS 2020, virtual	Presenting a paper	Dec 2020
S. Adhatarao	IEEE MSN 2020, virtual	Presenting a paper	Dec 2020
J. Zhang	IEEE MSN 2020, virtual	Presenting a paper	Dec 2020
X. Fu	EAI QShine 2020, virtual	Giving the keynote speech	Nov 2020
X. Fu	IEEE ICNP 2020, virtual	Chairing a session at ICNP 2020; TPC Co-Chair and chairing a session at NIPAA 2020 workshop	Sept 2020
X. Fu	ACM MOBICOM 2020-MobiArch, virtual	Chairing a session at MobiArch 2020 workshop	Sept 2020
X. Fu	5 <sup>th</sup> China National Conference on Big Data and Social Computing (BDSC'20), Beijing & virtual	Giving a keynote	Aug 2020
Y. Yuan	IEEE INFOCOM 2020, virtual	Presented a paper	July 2020
X. Fu	IFIP Networking 2020, virtual	TPC Chair	May 2020
X. Fu	Project meetings for a DFG CRC proposal on Data Heterogeneity, Göttingen & virtual	Discussing collaborations on data science	Jan-May, Dec 2020
X. Fu, F. Wölk, W. Wang	Meeting City Göttingen leaders and public transport company (GöVB), Göttingen	Discussing collaborations on smart cities	Apr-July 2020

### News Press Releases

Source	Detailed information	Date/Edition
University of Chicago Knowledge Lab news	<a href="#">Journal of Social Computing Launch</a>	Dec 2020
State and University Library (SUB) Göttingen press news	<a href="#">New 'Journal of Social Computing'</a>	Dec 2020
Tsinghua University Press news	<a href="#">《社会计算（英文）》创刊号出版</a> (in Chinese)	Nov 2020

### Awards

- Sripriya Srikant Adhatarao, Outstanding Dissertation (Summa Cum Laude) at the Faculty of Mathematics and Computer Science, University of Göttingen, September 2020.

## Professional Services (X. Fu unless noted)

### University Services

- International Officer - Computer Science, Faculty of Mathematics & Computer Science, University of Göttingen
- Substitution Member of Faculty Board, Faculty of Mathematics & Computer Science, University of Göttingen
- Board member, Institute of Computer Science, University of Göttingen
- Director, [Sino-German Institute of Social Computing](#), University of Göttingen
- Member, [Center for Computational Sciences](#), University of Göttingen
- Member, [Centre for Statistics](#), University of Göttingen
- Member, [Campus Institute Data Science \(CIDAS\)](#), University of Göttingen
- Steering Board Member of International Master/PhD program “Internet Technology and Information Systems (ITIS)”, University of Göttingen
- Speaker of Doctoral program “PhD in Computer Science” (PCS) program, University of Göttingen
- Chair of Admission Committee for “Master in Applied Computer Science” program, University of Göttingen
- Examiner for Master’s program of “Economics and Business Management”, University of Göttingen
- Coordinator of Planet-Lab membership for University of Göttingen

### Elected, Appointed or Adjunct Positions

- Vice Director, Center for Social Network Research, Tsinghua University, Beijing, China
- Board Member, [Tsinghua-NRI China Research Center](#), Beijing, China
- Guest Professor, Nanjing University, China
- Guest Professor, Northeastern University, China
- Guest Professor, Shanghai University of Finance and Economics, China
- Guest Professor, University of Oregon, Eugene, OR, USA
- Grant Evaluator: DFG, Fulbright Programs, NSFC, RGC, etc.
- Board Member, GDPCH (Gesellschaft für Deutsche Professoren Chinesischer Herkunft e.V.)

### Conference organization

- General Chair, [5<sup>th</sup> ACM SIGCOMM Asia-Pacific Workshop on Networking \(APNet 2021\)](#), Shenzhen, China, June 2021
- Steering Committee Chair, ACM/IEEE SIGMOBILE International Workshop on Mobility in the Evolving Internet Architecture (MobiArch)
- Steering Committee, IEEE INFOCOM 2019-2021 International Workshop on Intelligent Cloud Computing & Networking (ICCN)



- Steering Committee, IEEE ICDCS 2019-2020 International Workshop on Network Meets Intelligent Computations (NMIC)
- Steering Committee, IEEE HotICN 2020

### Technical Program Committees

- TPC Co-Chair, [IFIP Networking 2020](#)
- TPC Co-Chair, [IEEE Workshop on New Internetworking Protocols Architectures, and Algorithms \(NIPAA 2020\) at ICNP 2020](#)
- TPC Co-Chair, [IEEE INFOCOM 2020 Workshop on New IP: The Next Step](#)
- TPC Member, IEEE INFOCOM 2020
- TPC Member, Elsevier Computer Communications (COMCOM) Journal (Mayutan Arumaiturai)

### Journal Editorship

- Founding Co-Editor-in-Chief, [Journal of Social Computing](#) (IEEE and Tsinghua University Press)
- Technical Editor, IEEE Communications Magazine
- Technical Editor, IEEE Network
- Associate Editor, IEEE Transactions on Network and Service Management
- Associate Editor, IEEE Transactions on Network Science and Engineering
- Associate Editor, IEEE Networking Letters
- Area Editor, Elsevier Computer Communications Journal
- Associate Editor, Springer-Nature Computer Science
- Associate Editor, Chinese Journal of Electronics
- Guest Co-Editor, IEEE Transactions on Network and Service Management Special Issue of Selected Papers of IFIP Networking 2020
- Guest Co-Editor, [IEEE Network Special Issue on Interplay between Machine Learning and Networking Systems, 2021](#)

### Previous (Bi)Annual Reports of NET Group

- [2019](#), [2018](#), [2016-2017](#), [2015](#), [2014](#), [2013](#), [2012](#), [2011](#), [2010](#), [2009](#), [2007-2008](#)

*Enjoy reading and look forward to seeing you in 2021!*