%%%%%%% cite labels are the same as **file names**.pdf

%%%%%%%%% the following four mentioned by the reviewers

@ARTICLE{**0-2008**-avg-path-length, author={F. {Chen} and Z. { Chen } and X. {Wang} and Z. {Yuan}}, journal={Communications in Nonlinear Science and Numerical Simulation}, title={ The average path length of scale free networks}, publisher={Elsevier}, year={2008}, month={September}, volume={13}, number={7}, pages={1405-1410},} % ref for path length is O(log(n))

@INPROCEEDINGS{**0-2016**-Dinh-mpls-te-sdn, author={ K.T. {Dinh} and S. {Kukliński} and W.{Kujawa} and M. {Ulaski}}, title={{MSDN-TE}: M6ultipath Based Traffic Engineering for {SDN}}, editors={ N.T. {Nguyen} and B. {Trawiński} and H. {Fujita} and TP. {Hong}}, booktitle={Intelligent Information and Database Systems. {ACIIDS} 2016}, year={2016}, note={Lecture Notes in Computer Science}, volume={9622}, publisher={Springer, Berlin, Heidelberg}, web={https://doi-org.libweb.lib.utsa.edu/10.1007/978-3-662-49390-8\_61},} % multipath forwarding, dynamic selecting of the best path among several, whole network topology is known, to manipulate flows in real-time for TE.

SEC3: computing k-paths available to forward flows between any Source-Destination pair (S-D) and to select the least loaded path to handle an incoming flow. BUT it seems they keep computing k paths based on monitored info, and they assign the best path to a flow but it is not clear what information they maintain in each switch? Flow id, path id?

@INPROCEEDINGS{**0-2016**-Rodolfo-kar-sdn, author={R. R. {Gomes} and A. B. {Liberato} and C. K. {Dominicini} and M. R. N. {Ribeiro} and M. {Martinello}}, booktitle={2016 46th Annual IEEE/IFIP International Conference on Dependable Systems and Networks Workshop (DSN-W)}, title={KAR: Key-for-Any-Route, a Resilient Routing System}, year={2016}, volume={}, number={}, pages={120-127},} %related: … re-routing packets based on by using special properties of Residue Number System as their encoding technique, considers source routing, (link failure is a problem), talks about reactive and proactive recovery, then they propose KAR *KAR switch realizes a link failure, it randomly deflects packets that would go through that link instead of dropping them. Those packets, then, pass through a diverse set of switches carrying driven deflections forwarding paths embedded in a route ID at packet header (loop-free for safety condition). The KAR coding technique is designed by exploiting special properties from Residue Number System (RNS) [7], [8], [9].* *Thus, the KAR approach addresses link failures keeping the network connectivity allowing inflight packets along the failed path to reach their destination (liveness condition).*

@ARTICLE{**0-2018**-Liberato-RDNA-data-center, author={A. {Liberato} and M. {Martinello} and R. L. {Gomes} and A. F. {Beldachi} and E. {Salas} and R. {Villaca} and M. R. N. {Ribeiro} and K. {Kondepu} and G. {Kanellos} and R. {Nejabati} and A. {Gorodnik} and D. {Simeonidou}}, journal={IEEE Transactions on Network and Service Management}, title={RDNA: Residue-Defined Networking Architecture Enabling Ultra-Reliable Low-Latency Datacenters}, year={2018}, volume={15}, number={4}, pages={1473-1487},} % not directly related, … *RDNA explores the programmability of residues number system as a fundamental concept to define a minimalist forwarding model for core nodes. Instead of forwarding packets based on classical table lookup operations, core nodes are tableless switches that forward packets using merely remainder of the division (modulo) operations. By solving a residue congruence system representing a network topology, we found out the algorithms and their mathematical properties to design RDNA’s routing system that: 1) supports unicast and multicast communication; 2) provides resilient routes with protection for the entire route; and 3) is scalable for 2-tier Clos topologies*

%%%%%% followings are related recent papers ------------------------------

@INPROCEEDINGS{**linkfail**-2019-Guo-retroflow-sdn-5g-wan, author={Z. {Guo} and W. {Feng} and S. {Liu} and W. {Jiang} and Y. {Xu} and Z. {Zhang}}, booktitle={2019 IEEE/ACM 27th International Symposium on Quality of Service (IWQoS)}, title={RetroFlow: Maintaining Control Resiliency and Flow Programmability for Software-Defined WANs}, year={2019}, volume={}, number={}, pages={1-10},} % not directly related: considers multiple controller, and how to map failed controllers load to new ones? controller resilience

@ARTICLE{**linkfail**-2020-Avallone-sdn-wan-link-failure, author={S. {Avallone} and U. {Ashraf}}, journal={IEEE Transactions on Network and Service Management}, **title={A DAG-Based Forwarding Paradigm for Large Scale Software Defined Networks},** year={2020}, volume={17}, number={1}, pages={577-591},} % very related ,… , *The DAG-based forwarding paradigm requires to compute a DAG between every pair of ingress-egress switches and to design an index-based hashing scheme to balance the load across the paths in the DAG while avoiding TCP reordering issues.*

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@INPROCEEDINGS{**mpls**-2017-Ali-mpls-source-route-sdn, author={E. K. {Ali} and M. {Manel} and Y. {Habib}}, booktitle={2017 IEEE/ACS 14th International Conference on Computer Systems and Applications (AICCSA)}, title={An Efficient MPLS-Based Source Routing Scheme in Software-Defined Wide Area Networks (SD-WAN)}, year={2017}, volume={}, number={}, pages={1205-1211},} % related. Considers **source routing**, mpls and dividing network into clusters, inspired by jumpflow, MPLS labels are used to encode path ??? not as path…?? We use them as path

@INPROCEEDINGS{**mpls**-2019-Seremet-mpls-sdn-wan, author={I. {Šeremet} and S. {Čaušević}}, booktitle={2019 International Workshop on Fiber Optics in Access Networks (FOAN)}, title={Advancing IP/IMPLS with Software Defined Network in Wide Area Network}, year={2019}, volume={}, number={}, pages={56-61},} % might be cited?? … policy based routing, classical ip/mpls performance compared against sdn controlled wan, I am not sure what they propose, it sems performance measurement study that sdn can measure network state and accordingly select low latency path to meat policy???

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@INPROCEEDINGS{**sdwan**-2016-Al-Sadi-routing-alg-sdn-wan, author={A. M. {Al-Sadi} and A. {Al-Sherbaz} and J. {Xue} and S. {Turner}}, booktitle={2016 Al-Sadeq International Conference on Multidisciplinary in IT and Communication Science and Applications (AIC-MITCSA)}, title={Routing algorithm optimization for software defined network WAN}, year={2016}, volume={}, number={}, pages={1-6},}

@INPROCEEDINGS{**sdwan**-2017-Kouicem-sdn-wan-qos-path-comp, author={D. E. {Kouicem} and I. {Fajjari} and N. {Aitsaadi}}, booktitle={2017 IFIP/IEEE Symposium on Integrated Network and Service Management (IM)}, title={An enhanced Path Computation for Wide Area Networks based on Software Defined Networking}, year={2017}, volume={}, number={}, pages={664-667},}

@INPROCEEDINGS{**sdwan**-2018-Golani-fault-te-sd-wan, author={K. {Golani} and K. {Goswami} and K. {Bhatt} and Y. {Park}}, booktitle={2018 IEEE Symposium on Computers and Communications (ISCC)}, title={Fault Tolerant Traffic Engineering in Software-defined WAN}, year={2018}, volume={}, number={}, pages={01205-01210},}

**@ARTICLE{sdwan-**2020-Sahoo-sdn-wan**, author={K. S. {Sahoo} and P. {Mishra} and M. {Tiwary} and S. {Ramasubbareddy} and B. {Balusamy} and A. H. {Gandomi}}, journal={IEEE Transactions on Network and Service Management}, title={Improving End-Users Utility in Software-Defined Wide Area Network Systems}, year={2020}, volume={17}, number={2}, pages={696-707},}**

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@INPROCEEDINGS{**seg**-2015-Filsfils-segment-routing, author={C. {Filsfils} and N. K. {Nainar} and C. {Pignataro} and J. C. {Cardona} and P. {Francois}}, booktitle={2015 IEEE Global Communications Conference (GLOBECOM)}, title={The Segment Routing Architecture}, year={2015}, volume={}, number={}, pages={1-6},}

@INPROCEEDINGS{**seg**-2017-Li-segment-routing-hybrid-sdn, author={Z. {Li} and L. {Huang} and H. {Xu} and G. {Zhao}}, booktitle={2017 IEEE 9th International Conference on Communication Software and Networks (ICCSN)}, title={Segment routing in hybrid software-defined networking}, year={2017}, volume={}, number={}, pages={160-165},}

@INPROCEEDINGS{**seg**-2018-Salazar-sdn-seg-route-mpls, author={G. D. {Salazar Ch.} and E. F. {Naranjo} and L. {Marrone}}, booktitle={2018 9th IEEE Annual Ubiquitous Computing, Electronics Mobile Communication Conference (UEMCON)}, title={SDN-Ready WAN networks: Segment Routing in MPLS-Based Environments}, year={2018}, volume={}, number={}, pages={173-178},}

@ARTICLE{**seg**-2018-Ventre-ipv6-segment-routing-wan, author={P. L. {Ventre} and M. M. {Tajiki} and S. {Salsano} and C. {Filsfils}}, journal={IEEE Transactions on Network and Service Management}, title={SDN Architecture and Southbound APIs for IPv6 Segment Routing Enabled Wide Area Networks}, year={2018}, volume={15}, number={4}, pages={1378-1392},}

@INPROCEEDINGS{**seg**-2019-Zhou-segment-list-mng, author={J. {Zhou} and Z. {Zhang} and N. {Zhou}}, booktitle={2019 IEEE 11th International Conference on Communication Software and Networks (ICCSN)}, title={A Segment List Management Algorithm Based on Segment Routing}, year={2019}, volume={}, number={}, pages={297-302},}

@INPROCEEDINGS{**seg**-2020-Dominicini-polka-source-routing, author={C. {Dominicini} and D. {Mafioletti} and A. C. {Locateli} and R. {Villaca} and M. {Martinello} and M. {Ribeiro} and A. {Gorodnik}}, booktitle={2020 6th IEEE Conference on Network Softwarization (NetSoft)}, title={PolKA: Polynomial Key-based Architecture for Source Routing in Network Fabrics}, year={2020}, volume={}, number={}, pages={326-334},}

**@ARTICLE{seg-**2020-Pereira-segment-r-te-sdn**, author={V. {Pereira} and M. {Rocha} and P. {Sousa}}, journal={IEEE Transactions on Network and Service Management}, title={Traffic Engineering With Three-Segments Routing}, year={2020}, volume={17}, number={3}, pages={1896-1909},}**

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@ARTICLE{**survey**-2015-Kreutz-sdn-comp-survey, author={D. {Kreutz} and F. M. V. {Ramos} and P. E. {Veríssimo} and C. E. {Rothenberg} and S. {Azodolmolky} and S. {Uhlig}}, journal={Proceedings of the IEEE}, title={Software-Defined Networking: A Comprehensive Survey}, year={2015}, volume={103}, number={1}, pages={14-76},}

@INPROCEEDINGS{**survey**-2017-Michel-sdn-wan-survey, author={O. {Michel} and E. {Keller}}, booktitle={2017 Fourth International Conference on Software Defined Systems (SDS)}, title={SDN in wide-area networks: A survey}, year={2017}, volume={}, number={}, pages={37-42},}

@INPROCEEDINGS{**survey-**2019-Yang-sdn-wan-arch-adv-opp-survey, author={Z. {Yang} and Y. {Cui} and B. {Li} and Y. {Liu} and Y. {Xu}}, booktitle={2019 28th International Conference on Computer Communication and Networks (ICCCN)}, title={Software-Defined Wide Area Network (SD-WAN): Architecture, Advances and Opportunities}, year={2019}, volume={}, number={}, pages={1-9},}

========================== SOME MORE RELATED WORK FOR TUTURE TOO

T. Hu, Z. Guo, P. Yi, T. Baker and J. Lan, "Multi-controller based software-defined networking: A survey", IEEE Access, vol. 6, pp. 15980-15996, 2018.

Z. Guo, M. Su, Y. Xu, Z. Duan, L. Wang, S. Hui, et al., "Improving the performance of load balancing in software-defined networks through load variance-based synchronization", Computer Networks, vol. 68, pp. 95-109, 2014.

**D. Advanced Techniques for Softwarized Switching and Routing**

Switching and routing constitute core network functions. Novel techniques are presented that consider new routing paradigms as well as softwarized switching mechanisms and their performance modeling.

In “SDN Architecture and Southbound APIs for IPv6 Segment Routing Enabled Wide Area Networks”, Ventre *et al.* [item 18) in the Appendix] describe the implementation of a Linux-based node for IPv6 Segment Routing (SRv6) supported by Software-Defined Networking and the realization of the controller to SRv6 node interface, in particular.

In “Automated Inter-Domain Cut-Through Switching for the Future Internet”, Lara *et al.* [item 19) in the Appendix] present a control plane design for the MobilityFirst Future Internet architecture aiming at replacing the Internet Protocol to improve content delivery and mobility. In that work, the focus is on cut-through switching to be able to automatically bypass certain functions for flows that do not need them.

In “An Accurate and Efficient Modeling Framework for the Performance Evaluation of DPDK-Based Virtual Switches”, Begin *et al.* [item 20) in the Appendix] present an analytical queueing model to evaluate the performance of a DPDK-based vSwitch and demonstrate its accuracy.

In “An Efficient Route Management Framework for Load Balance and Overhead Reduction in SDN-Based Data Center Networks”, Wang and You [item 21) in the Appendix] propose their L2RM framework to adaptively optimize the flow routes in data centers based on an SDN controller that configures the switches dynamically.

In “An SDN-Based Traffic Matrix Estimation Framework”, Tian *et al.* [item 22) in the Appendix] present an approach for traffic matrix estimation in SDN-based