

@INPROCEEDINGSzulhasnine, author=M. Zulhasnine and C. Huang and A. Srinivasan, booktitle=Wireless and Mobile Computing, Networking and Communications (WiMob), 2010 IEEE 6th International Conference on, title=Efficient resource allocation for device-to-device communication underlying LTE network, year=2010, pages=368-375, keywords=cellular radio;greedy algorithms;integer programming;nonlinear programming;D2D communication;D2D transmitter;alternative greedy heuristic algorithm;cellular network;channel gain information;device-to-device communication;long term evolution network;mixed integer nonlinear programming;network efficient offloading eNodeB traffic;optimization problem;primary cell user equipment;radio resource allocation;user-driven rich multimedia application;Gain;Interference;Land mobile radio cellular systems;Radio transmitters;Resource management;Signal to noise ratio, month=Oct., @articleorlin, author = James B. Orlin and Abraham P. Punnen and Andreas S. Schulz, title = Approximate Local Search in Combinatorial Optimization, journal = SIAM Journal on Computing, volume = 33, number = 5, pages = 1201-1214, year = 2004

@miscgurobi, title=Gurobi Optimization - The Best Mathematical Programming Solver , url=www.gurobi.com, urldate=2014-07-15,

@INPROCEEDINGSlte, author=M. Yang and K. Jung and S. Lim and J. Shin, booktitle=2014 IEEE International Conference on Consumer Electronics (ICCE), title=Development of device-to-device communication in LTE-Advanced system, year=2014, pages=448-449, keywords=Long Term Evolution;cellular radio;energy consumption;3GPP LTE- advanced cellular network;D2D communication;device-to-device communication;mobile consumer equipments;power consumption;Data communication;Delays;Long Term Evolution;Mobile communication;Mobile handsets;Power demand;Servers, ISSN=2158-3994, month=Jan,

@miscns3, title=Ns-3 retrieved on 10th April, 2015 , url=http://www.nsnam.org/,

@bookforouzan, author = Forouzan, Behrouz A., title = Data Communications and Networking, year = 2003, isbn = 0072923547, edition = 3, publisher = McGraw-Hill, Inc., address = New York, NY, USA,

@inproceedingslora, author = M. T. Islam and A. M. Taha and S. G. Akl and S. Choudhury, title = A Local Search Algorithm for Resource Allocation for Underlying Device-to-Device Communications, booktitle = 2015 IEEE Global Communications Conference, GLOBECOM 2015, San Diego, CA, USA, December 6-10, 2015, pages = 1-6, year = 2015 ,

@InProceedingsdara, author = Islam, Mohammad Tauhidul and Taha, Abd-Elhamid M and Akl, Selim and Abu-Elkheir, Mervat, title = A stable matching algorithm for resource allocation for underlying device-to-device communications, booktitle = Communications (ICC), 2016 IEEE International Conference on, year = 2016, pages = 1-6, organization = IEEE, ,

@bookghosh, title=Fundamentals of LTE, author=A. Ghosh and J. Zhang and J. G. Andrews and R. Muhamed, isbn=9780137033898, series=Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport, year=2010, publisher=Pearson Education

@articlestefania, title=LTE-the UMTS long term evolution: From theory to practice, author=S. Stefania and T. Issam and B. Matthew, journal=A John Wiley and Sons, Ltd, volume=6, pages=136-144, year=2009

@INPROCEEDINGSoverlaid, author=K. Huang and Yan Chen and Bin Chen and X. Yang and V. K. N. Lau, booktitle=Communication Systems, 2008. ICCS 2008. 11th IEEE Singapore International Conference on, title=Overlaid cellular and mobile ad hoc networks, year=2008, pages=1560-1564, keywords=Internet;ad hoc networks;cellular radio;diversity reception;frequency division multiplexing;radio links;telecommunication traffic;Internet services;frequency division duplex;frequency separation;mobile ad hoc networks;overlaid cellular uplink networks;spatial reuse efficiency;stochastic geometry;transmission capacities;uplink spectrum utilization;uplink-downlink traffic;Ad hoc networks;Base stations;Cellular networks;Computer networks;Downlink;Frequency conversion;Mobile ad hoc networks;Mobile communication;Telecommunication traffic;Web and internet services, month=Nov,

@ARTICLEfodor, author=G. Fodor and E. Dahlman and G. Mildh and S. Parkvall and N. Reider and G. Mikls and Z. Turnyi, journal=IEEE Communications Magazine, title=Design aspects of network assisted device-to-device communications, year=2012, volume=50, number=3, pages=170-177, keywords=3G mobile communication;Long Term Evolution;cellular radio;mobile handsets;mobility management (mobile radio);radio spectrum management;3GPP Long Term Evolution system;cellular coverage improvement;cellular infrastructure;cellular network device;communicating device proximity;energy efficiency;network assisted D2D communication;network assisted device-to-device communication;peer discovery method;physical layer procedure;radio resource management algorithm;resource utilization;spectrum resource;Channel estimation;Interference;Peer

to peer computing;Power control;Resource management;Servers;Time frequency analysis, month=March,

@articlestable, author = D. Gale, L. S. Shapley, journal = The American Mathematical Monthly, number = 1, pages = 9-15, publisher = Mathematical Association of America, title = College Admissions and the Stability of Marriage, volume = 69, year = 1962

@articlehungarian, author = H. W. Kuhn, title = The Hungarian method for the assignment problem, journal = Naval Research Logistics Quarterly, volume = 2, number = 1-2, publisher = Wiley Subscription Services, Inc., A Wiley Company, pages = 83-97, year = 1955,

@INPROCEEDINGSzhang, author=H. Zhang and T. Wang and L. Song and Z. Han, booktitle=Communications in China - Workshops (CIC/ICCC), 2013 IEEE/CIC International Conference on, title=Graph-based resource allocation for D2D communications underlying cellular networks, year=2013, pages=187-192, keywords=cellular radio;graph theory;D2D communications;D2D pairs;cellular UE;cellular networks;cellular user equipments;channel sharing scheme;data traffic;device-to-device communications;graph theory;graph-based resource allocation;uplink channel;Channel capacity;Conferences;Interference;Labeling;Resource management;Simulation; month=Aug,,

@INPROCEEDINGScai, author=X. Cai and J. Zheng and Y. Zhang, booktitle=Communications (ICC), 2015 IEEE International Conference on, title=A Graph-coloring based resource allocation algorithm for D2D communication in cellular networks, year=2015, pages=5429-5434, keywords=cellular radio;graph colouring;integer programming;nonlinear programming;radiofrequency interference;resource allocation;D2D communication;GOAL algorithm;cellular networks;device-to-device communication;heuristic graph coloring;interference negligible distance;mixed integer nonlinear programming problem;multiple D2D pairs;multiple cellular users;resource allocation;signal to interference ratio;spectrum resources;Color;Interference;Next generation networking;Receivers;Resource management;Signal to noise ratio;Transmitters;D2D;cellular network;device-to-device communication;graph coloring;resource allocation, month=June,,

@INPROCEEDINGScai_{cap}, author = X.Cai and J.Zheng and Y.Zhang and H.Murata, booktitle = Communications (ICC), 2014, pages = 2233 - 2238, keywords = cellular radio; computational complexity; radio frequency interference; resource allocation, month=June,,

@ARTICLEfeng, author=D. Feng and L. Lu and Y. Yuan-Wu and G. Y. Li and G. Feng and S. Li, journal=IEEE Transactions on Communications, title=Device-to-Device Communications Underlying Cellular Networks, year=2013, volume=61, number=8, pages=3541-3551, keywords=cellular radio;quality of service;radio spectrum management;resource allocation;CU partner;D2D communication;QoS;admission control;base station;cellular network;cellular user;device-to-device communication;maximum weight bipartite matching based scheme;power constraint;quality-of-service;resource allocation problem;spectral efficiency improvement;Admission control;Interference;Optimization;Resource management;Signal to noise ratio;Throughput;Device-to-device communications;maximum weighted bipartite matching;spectrum sharing, month=August,,

@INPROCEEDINGSshuang, author=K. Huang and V. K. N. Lau and Y. Chen, booktitle=Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks, 2009. WiOPT 2009. 7th International Symposium on, title=Spectrum sharing between cellular and mobile ad hoc networks: Transmission-capacity tradeoff, year=2009, pages=1-10, keywords=Poisson distribution;ad hoc networks;cellular radio;channel allocation;frequency allocation;interference suppression;radiofrequency interference;set theory;stochastic processes;Poisson distributed transmitter;cellular network;disjoint subsets;linear equation;mobile ad hoc network;radio spectrum usage efficiency;small target outage probability;spectrum sharing method;stochastic geometry;successive interference cancellation;transmission-capacity tradeoff;uplink frequency subchannel;wireless network;Cellular networks;Equations;Frequency;Information geometry;Interference constraints;Mobile ad hoc networks;Radio transmitters;Silicon carbide;Stochastic processes;Wireless networks, month=June,,

@INPROCEEDINGSyu, author=C. H. Yu and O. Tirkkonen and K. Doppler and C. Ribeiro, booktitle=Vehicular Technology Conference, 2009. VTC Spring 2009. IEEE 69th, title=On the Performance of Device-to-Device Underlay Communication with Simple Power Control, year=2009, pages=1-5, keywords=cellular radio;power control;radiofrequency interference;telecommunication congestion control;cellular link;cellular network;device-to-device underlay communication;interference channel;power control;scheduling gain;signal-to-interference-plus-noise ratio;Bandwidth;Cognitive radio;Communication system control;Interference constraints;Land mobile radio cellular systems;Mobile communication;Power control;Signal to noise ratio;Statistics;White spaces, month=April,,

@INPROCEEDINGSshuanggame, author = J.HuangandY.YinandY.SunandY.ZhaoandC.c.XingandQ.Duan, booktitle=Communications(ICC), 2015IEEEInternationalConferenceon, title = Gametheoreticresourceallocationformulticell, 2015, pages = 3039 – 3044, keywords = cellularradio; gametheory; mobilecommunication; resourceallocation; D2Dlink June,,

@INPROCEEDINGSjanis, author=P. Janis and V. Koivunen and C. Ribeiro and J. Korhonen and K. Doppler and K. Hugl, booktitle=Vehicular Technology Conference, 2009. VTC Spring 2009. IEEE 69th, title=Interference-Aware Resource Allocation for Device-to-Device Radio Underlying Cellular Networks, year=2009, pages=1-5, keywords=cellular radio;resource allocation;telecommunication network management;D2D links;IMT-Advanced;base station;cellular networks;device-to-device communication;device-to-device radio;multiuser diversity;radio resource management;resource allocation;Base stations;Cellular networks;Frequency synchronization;Interference;Laboratories;Land mobile radio cellular systems;Performance gain;Resource management;Signal processing;Telecommunication traffic, month=April,,

@ARTICLEmin, author=H. Min and W. Seo and J. Lee and S. Park and D. Hong, journal=IEEE Transactions on Wireless Communications, title=Reliability Improvement Using Receive Mode Selection in the Device-to-Device Uplink Period Underlying Cellular Networks, year=2011, volume=10, number=2, pages=413-418, keywords=cellular radio;demodulation;mobility management (mobile radio);probability;radiofrequency interference;telecommunication network reliability;BS;D2D communication receiver;MODE;UL;base station;device-to-device uplink period underlying cellular networks;interference;outage probability;receive mode selection;reliability improvement;uplink;Device-to-device (D2D) communication;outage probability;receive mode selection, month=February,,

@INPROCEEDINGSkaufman, author=B. Kaufman and B. Aazhang, booktitle=Signals, Systems and Computers, 2008 42nd Asilomar Conference on, title=Cellular networks with an overlaid device to device network, year=2008, pages=1537-1541, keywords=ad hoc networks;cellular radio;cognitive radio;radio spectrum management;telecommunication network topology;ad-hoc multihop access;network topology;spectral efficiency;spectrum sharing;wireless cellular network;Base stations;Communication standards;Downlink;Frequency;Interference;Land mobile radio cellular systems;Network topology;Signal to noise ratio;Spread spectrum communication;Wireless networks, month=Oct,

@articledoppler2009device, title=Device-to-device communication as an underlay to LTE-advanced networks, author=Doppler, Klaus and Rinne, Mika and Wijting, Carl and Ribeiro, Cássio B and Hugl, Klaus, journal=IEEE Communications Magazine, volume=47, number=12, pages=42–49, year=2009, publisher=IEEE

@inproceedingsjanis2009interference, title=Interference-avoiding MIMO schemes for device-to-device radio underlying cellular networks, author=P. Janis and V. Koivunen and C. Ribeiro and J. Korhonen and K. Doppler and K. Hugl, booktitle=2009 IEEE 20th International Symposium on Personal, Indoor and Mobile Radio Communications, pages=2385–2389, year=2009, organization=IEEE

@inproceedingsyin2013distributed, title=Distributed resource allocation for D2D communication underlying cellular networks, author=Yin, Rui and Yu, Guanding and Zhong, Caijun and Zhang, Zhaoyang, booktitle=2013 IEEE International Conference on Communications Workshops (ICC), pages=138–143, year=2013, organization=IEEE

@inproceedingsshalmashi2013interference, title=Interference management for multiple device-to-device communications underlying cellular networks, author=Shalmashi, Serveh and Miao, Guowang and Slimane, Ben, booktitle=2013 IEEE 24th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications, PIMRC 2013; London; United Kingdom; 8 September 2013 through 11 September 2013, pages=223–227, year=2013, organization=IEEE

@miscguo2014interference, title=Interference Management for D2D Communications Underlying Cellular Networks at Cell Edge, author=Guo, Bin and Sun, Shaohui and Gao, Qiubin, year=2014, publisher=ICWMC

@inproceedingszhou2013interference, title=An interference coordination mechanism based on resource allocation for network controlled Device-to-Device communication, author=Zhou, Wei and Sun, Xiaodong and Ma, Chuan and Yue, Jianting and Yu, Hui and Luo, Hanwen, booktitle=Communications in China-Workshops (CIC/ICCC), 2013 IEEE/CIC International Conference on, pages=109–114, year=2013, organization=IEEE

@inproceedingsxu2012resource, title=Resource allocation using a reverse iterative combinatorial auc-

tion for device-to-device underlay cellular networks, author=Xu, Chen and Song, Lingyang and Han, Zhu and Li, Dou and Jiao, Bingli, booktitle=Global Communications Conference (GLOBECOM), 2012 IEEE, pages=4542–4547, year=2012, organization=IEEE

@inproceedingsxu2012interference, title=Interference-aware resource allocation for device-to-device communications as an underlay using sequential second price auction, author=Xu, Chen and Song, Lingyang and Han, Zhu and Zhao, Qun and Wang, Xiaoli and Jiao, Bingli, booktitle=2012 IEEE International Conference on Communications (ICC), pages=445–449, year=2012, organization=IEEE

@miscseries2009guidelines, title=Guidelines for evaluation of radio interface technologies for IMT-Advanced, author=Series, M, journal=Report ITU, number=2135-1, year=2009

@bookxu2014resource, title=Resource management for device-to-device underlay communication, author=Xu, Chen and Song, Lingyang and Han, Zhu, year=2014, publisher=Springer

@InProceedingsislam2015reducing, author = Islam, MohammadTahidulandTaha, Abd – ElhamidMandAkl, S, title=Reducing the complexity of Resource Allocation for underlaying Device – to – Device communications, booktitle = 2015 International Wireless Communications and Mobile Computing Conference (IWCMC), year = 2015, pages = 61 – 66, organization = IEEE,

@INPROCEEDINGSislam2016radio, author=M. T. Islam and A. E. M. Taha and S. Akl and S. Choudhury, booktitle=2016 IEEE International Conference on Communications (ICC), title=A two-phase auction-based fair resource allocation for underlaying D2D communications, year=2016, pages=1-6, keywords=Long Term Evolution;cellular radio;interference;resource allocation;telecommunication scheduling;LTE scheduling;MIKIRA;TAFIRA;cellular radio resources;evolved Node B;fair allocation;interference coordination;minimum knapsack based interference resource allocation algorithm;random allocation technique;two-phase auction based fair and interference aware resource allocation algorithm;two-phase auction-based fair resource allocation;underlaying D2D communications;Channel models;Complexity theory;Interference;Receivers;Resource management;Transmitters;Uplink;D2D;LTE;auction-based;cellular network;fair;interference;resource allocation, month=May,

@inproceedingsxu2010effective, title=Effective interference cancellation scheme for device-to-device communication underlaying cellular networks, author=Xu, Shaoyi and Wang, Haiming and Chen, Tao and Huang, Qing and Peng, Tao, booktitle=Vehicular Technology Conference Fall (VTC 2010-Fall), 2010 IEEE 72nd, pages=1–5, year=2010, organization=IEEE

@articleasadi2014survey, title=A survey on device-to-device communication in cellular networks, author=Asadi, Arash and Wang, Qing and Mancuso, Vincenzo, journal=IEEE Communications Surveys & Tutorials, volume=16, number=4, pages=1801–1819, year=2014, publisher=IEEE

@inproceedingspeng2009interference, title=Interference avoidance mechanisms in the hybrid cellular and device-to-device systems, author=Peng, Tao and Lu, Qianxi and Wang, Haiming and Xu, Shaoyi and Wang, Wenbo, booktitle=2009 IEEE 20th International Symposium on Personal, Indoor and Mobile Radio Communications, pages=617–621, year=2009, organization=IEEE

@INPROCEEDINGSccnc, AUTHOR="Faisal Hussain and Md Yeakub Hassan and Md Sakhawat Hossen and Salimur Choudhury", TITLE="An Optimal Resource Allocation Algorithm for D2D Communication Underlaying Cellular Networks", BOOKTITLE="14th Annual IEEE Consumer Communications & Networking Conference (CCNC 2017)", ADDRESS="Las Vegas, USA", DAYS=8, MONTH=jan, YEAR=2017, KEYWORDS="D2D; resource allocation; weighted bipartite matching; system sum rate; interference; LTE.", ABSTRACT="In a device to device (D2D) communication underlaying cellular network, total system sum rate can be improved if cellular user equipments (UEs) and D2D pairs share resource blocks. We consider such an optimization problem where the objective is to maximize the total sum rate of the system while sharing resource blocks (RBs) between cellular UEs and D2D pairs and maintaining some quality of service (QoS) requirements. Most of the existing algorithms consider that sharing can only improve the sum rate. However, a particular sharing can also decrease the sum rate. Considering this observation, we design an optimal algorithm based on weighted bipartite matching which avoids such sharing and maximize the total system sum rate. We prove that our algorithm is optimal and validate the results through simulations which shows that our algorithm outperforms other existing heuristics in terms of maximizing system sum rate. Our algorithm also performs better in terms of total interference introduced through the sharing of resource blocks between cellular equipments and D2D pairs."

@INPROCEEDINGSicc, AUTHOR="Md Yeakub Hassan and Faisal Hussain and Md Sakhawat Hossen

and Salimur Choudhury and Muhammad Mahbub Alam”, TITLE=”A Near Optimal Interference Minimization Resource Allocation Algorithm for D2D Communication”, BOOKTITLE=”IEEE ICC 2017 Communications QoS, Reliability, and Modeling Symposium (ICC’17 CQRM)”, ADDRESS=”Paris, France”, DAYS=20, MONTH=may, YEAR=2017, KEYWORDS=”D2D;Interference Minimization;Sum rate;LTE;Hungarian;LP”, ABSTRACT=”Interference minimization while maintaining a target system sum rate by sharing resource among cellular User Equipments (UEs) and Device-to-Device pairs (D2D) is an important research question in Long Term Evolution (LTE). We propose a two phase resource allocation algorithm for this research problem. In the first phase, we use the bipartite matching algorithm to minimize the interference which also avoids matching that can decrease the total system sum rate. In some cases, after the first phase, the solution may not be the optimal one. Therefore, in the second phase, we use a local search algorithm to improve the solution. We compare our algorithm with two other existing algorithms (MIKIRA and TAFIRA) which address the same research problem. We prove that MIKIRA fails to provide feasible solutions in most of the cases. We also show that the performance ratio of TAFIRA can be unbounded in the worst case. Moreover, in some cases, TAFIRA can not provide any solution of the problem where solutions exist. We prove that, our algorithm always provides the solution whenever it exists. We perform extensive simulations of the algorithms and find that in all cases, our solution is either optimal or very close to the optimal.”

@ARTICLEErzhang, author=R. Zhang and X. Cheng and L. Yang and B. Jiao, journal=IEEE Transactions on Vehicular Technology, title=Interference Graph-Based Resource Allocation (InGRA) for D2D Communications Underlying Cellular Networks, year=2015, volume=64, number=8, pages=3844-3850, keywords=Complexity theory;Data communication;Indexes;Interference;Resource management;Throughput;Vectors;Device-to-device (D2D) communication;interference graph;resource sharing, ISSN=0018-9545, month=Aug,

@ARTICLEjiang, author=J. Han and Q. Cui and C. Yang and X. Tao, journal=Electronics Letters, title=Bipartite matching approach to optimal resource allocation in device to device underlying cellular network, year=2014, volume=50, number=3, pages=212-214, keywords=cellular radio;polynomials;D2D communication;D2D users;bipartite matching approach;cellular users;device to device underlying cellular network;graph theory;optimal resource allocation;polynomial complexity, ISSN=0013-5194, month=January,

@ARTICLEyang, author=C. Yang and X. Xu and J. Han and X. Tao, journal=Electronics Letters, title=Energy efficiency-based device-to-device uplink resource allocation with multiple resource reusing, year=2015, volume=51, number=3, pages=293-294, keywords=Long Term Evolution;computational complexity;genetic algorithms;multiplexing;resource allocation;LTE standardisation process;Long-Term Evolution;NP-hard problem;certain system throughput insurance;device energy efficiency;device-to-device communication;energy efficiency-based D2D uplink resource allocation;modified GA-based scheme;modified genetic algorithm;multiple-resource pool multiplexing;nondeterministic polynomial-time hard problem;one-time reusing;optimisation target;resource reusing;resource utilisation;traditional system throughput, ISSN=0013-5194, month=,

@INPROCEEDINGSchithra, author=R. Chithra and R. Bestak and S. K. Patra, booktitle=2015 8th IFIP Wireless and Mobile Networking Conference (WMNC), title=Hungarian Method Based Joint Transmission Mode and Relay Selection in Device-to-Device Communication, year=2015, pages=261-268, keywords=cellular radio;mobile communication;radio spectrum management;relay networks (telecommunication);D2D transmission modes;Hungarian algorithm;cellular spectrum utilization;device-to-device communication;joint transmission mode;local area connectivity;relay selection;relay-assisted D2D communication;user equipments;Bipartite graph;Interference;Manganese;Relays;Resource management;Signal to noise ratio;Throughput;Device-to-device (D2D) communication;Hungarian algorithm;Maximum weighted matching;Relaying;Transmission mode allocation, month=Oct,

@inproceedingsxu, author = Chen Xu and Lingyang Song and Zhu Han and Qun Zhao and Xiaoli Wang and Bingli Jiao, title = Interference-aware resource allocation for device-to-device communications as an underlay using sequential second price auction, booktitle = Proceedings of IEEE International Conference on Communications, ICC 2012, Ottawa, ON, Canada, June 10-15, 2012, pages = 445-449, year = 2012, bibsource = dblp computer science bibliography, <http://dblp.org>

@InProceedingsosseiran, author = A. Osseiran and J. F. Monserrat and W. Mohr, title = Mobile and Wireless Communications for IMT-Advanced and Beyond, booktitle = Wiley Publishing, year = 2011,

@ARTICLEmin2011capacity, author=Min, Hyunkee and Lee, Jemin and Park, Sungsoo and Hong, Daesik, journal=Wireless Communications, IEEE Transactions on, title=Capacity enhancement using an interference limited area for device-to-device uplink underlying cellular networks, year=2011, volume=10,

number=12, pages=3995–4000, publisher=IEEE,

@ARTICLEgu, author=Y. Gu and Y. Zhang and M. Pan and Z. Han, journal=IEEE Journal on Selected Areas in Communications, title=Matching and Cheating in Device to Device Communications Underlying Cellular Networks, year=2015, volume=33, number=10, pages=2156-2166, keywords=cellular radio;quality of service;radio spectrum management;resource allocation;CU;D2D communication;QoS;cellular network;cellular user;cheating mechanism;device-to-device communication;matching theory;mobile user;quality of service;resource allocation problem;resource sharing;social welfare;Base stations;Interference;Proposals;Quality of service;Resource management;Signal to noise ratio;Throughput;Device-to-device (D2D) communication;cheating;matching theory;resource allocation, ISSN=0733-8716, month=Oct,

@miscfujitsu, author=Fujitsu, title=High-capacity indoor wireless solutions: Picocellor femtocell?, journal = White paper, 2013, url=http://www.fujitsu.com/us/Images/High-Capacity-Indoor-Wireless.pdf,

@Articledu, author="Du, Qinghe and Song, Houbing and Xu, Qian and Ren, Pinyi and Sun, Li", title="Interference-controlled D2D routing aided by knowledge extraction at cellular infrastructure towards ubiquitous CPS", journal="Personal and Ubiquitous Computing", year="2015", volume="19", number="7", pages="1033–1043", abstract="Device-to-device (D2D) networks underlying cellular networks are widely recognized as one of the major approaches for ubiquitous information acquisition and exchange, which features the future cyber-physical systems (CPSs). In this paper, we propose the interference-controlled D2D routing designs underlying cellular networks, i.e. sharing/reusing the cellular spectrum, to support multi-hop D2D transmissions and thus enhancing the flexibility of CPS. The unique feature and challenge for this task include threefolds. First, the huge density of device nodes in future cellular networks yields huge amount of information to process. Second, as device nodes in cellular networks do not maintain the routing table, the route selection via low-complexity knowledge-extraction approach over huge amount of information needs to be performed by the base station (BS). Third, the interference generated by reusing cellular spectrum needs to be thoroughly controlled. To address these issues, we in this work consider two D2D networking scenarios that allow D2D users to share the uplink and downlink spectrum of cellular networks, respectively. Our objective for routing is hop-count minimization such that the delay and power consumptions can be decreased. In particular, we propose a maximum rate towards destination (MR-D) routing algorithm for the scenario sharing uplink spectrum and a MR-D advanced (MR-DA) routing algorithm for the scenario sharing downlink spectrum, respectively. Both algorithms have low computational complexity and thus meaningful for practical systems. Furthermore, our routing designs can avoid the violation of tolerable interferences to cellular users as well as to fulfil the rate requirement of D2D services. Also conducted are abundant simulation evaluations to demonstrate the advantages of our proposed schemes as compared to the baseline schemes including the farthest neighbour routing and closest to destination routing scheme.", issn="1617-4917",

@ARTICLE5g, author=M. N. Tehrani and M. Uysal and H. Yanikomeroglu, journal=IEEE Communications Magazine, title=Device-to-device communication in 5G cellular networks: challenges, solutions, and future directions, year=2014, volume=52, number=5, pages=86-92, keywords=4G mobile communication;cellular radio;data privacy;radiofrequency interference;relay networks (telecommunication);resource allocation;telecommunication network routing;telecommunication security;5G cellular networks;base stations;cellular architecture;device terminal relaying;device tier network;device-to-device communication;licensed cellular bandwidth;macrocell tier network;massive ad hoc mesh network;pricing models;resource allocation schemes;smart interference management strategy;transmission relays;two-tier cellular network;user data routing;Bandwidth;Cellular networks;Interference;Macrocell networks;Next generation networking;Pricing;Relays;Resource management;Security, ISSN=0163-6804, month=May,

@inproceedingswang2017power, title=Power control for multiple interfering D2D communications underlying cellular networks: An approximate interior point approach, author=Wang, Haichao and Ding, Guoru and Wang, Jinlong and Wang, Shaowei and Wang, Le, booktitle=Communications Workshops (ICC Workshops), 2017 IEEE International Conference on, pages=1346–1351, year=2017, organization=IEEE

@articleding2016cellular, title=Cellular-base-station-assisted device-to-device communications in TV white space, author=Ding, Guoru and Wang, Jinlong and Wu, Qihui and Yao, Yu-Dong and Song, Fei and Tsiftsis, Theodoros A, journal=IEEE Journal on Selected Areas in Communications, volume=34, number=1, pages=107–121, year=2016, publisher=IEEE

@articlezhang2017interference, title=Interference Graph Construction for Cellular D2D Communications, author=Zhang, Yuan and Zheng, Jun and Lu, Pen-Shun and Sun, Chen, journal=IEEE Transactions

on Vehicular Technology, volume=66, number=4, pages=3293–3305, year=2017, publisher=IEEE

@articlemach2015band, title=In-band device-to-device communication in OFDMA cellular networks: A survey and challenges, author=Mach, Pavel and Becvar, Zdenek and Vanek, Tomas, journal=IEEE Communications Surveys & Tutorials, volume=17, number=4, pages=1885–1922, year=2015, publisher=IEEE

@articlemarsch2016preliminary, title=Preliminary views and initial considerations on 5G RAN architecture and functional designs, author=Marsch, P and Silva, ID and ELAYOUBI, SE and others, journal=5G PPP METIS II Project White Paper, year=2016

@articlechen2016user, title=User-centric ultra-dense networks for 5G: challenges, methodologies, and directions, author=Chen, Shanzhi and Qin, Fei and Hu, Bo and Li, Xi and Chen, Zhonglin, journal=IEEE Wireless Communications, volume=23, number=2, pages=78–85, year=2016, publisher=IEEE

@articletang2017user, title=User-centric joint admission control and resource allocation for 5G d2d extreme mobile broadband: A sequential convex programming approach, author=Tang, Rui and Zhao, Jihong and Qu, Hua and Zhang, Zhenwei, journal=IEEE Communications Letters, year=2017, publisher=IEEE

@articletangcapacity, title=Capacity-Oriented Resource Allocation for Device-to-Device Communication Underlying Cellular Networks, author=Tang, Rui and Zhao, Jihong and Qu, Hua, journal=Wireless Personal Communications, pages=1–24, publisher=Springer

@Articleislam2015reducing, author = Islam, Mohammad Tauhidul and Taha, Abd-Elhamid M and Akl, Selim, title = A minimum knapsack based resource allocation for underlying device-to-device communication, journal = in press, International Journal of Autonomous and Adaptive Communications Systems,

@Commentjabref-meta: databaseType:bibtex;