

# 2016 Index

## IEEE Transactions on Services Computing

### Vol. 9

This index covers all technical items — papers, correspondence, reviews, etc. — that appeared in this periodical during 2016, and items from previous years that were commented upon or corrected in 2016. Departments and other items may also be covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and inclusive pages. Note that the item title is found only under the primary entry in the Author Index.

#### AUTHOR INDEX

##### A

- Akkaya, I.**, Liu, Y., and Lee, E.A., Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications; *TSC March-April 2016 174-185*
- Alamri, A.**, see Hossain, M.S., *TSC Sept.-Oct. 2016 806-817*
- An, W.**, see Fan, L., *TSC March-April 2016 227-240*
- Andreadis, S.**, see Stavropoulos, T.G., *TSC Nov.-Dec. 2016 954-967*
- Appice, A.**, and Malerba, D., A Co-Training Strategy for Multiple View Clustering in Process Mining; *TSC Nov.-Dec. 2016 832-845*
- Ardagna, C.A.**, Damiani, E., Frati, F., and Rebecani, D., A Configuration-Independent Score-Based Benchmark for Distributed Databases; *TSC Jan.-Feb. 2016 123-137*

##### B

- Bai, Q.**, see Moustafa, A., *TSC March-April 2016 317-329*
- Bao, F.**, see Chen, I., *TSC May-June 2016 482-495*
- Barnaghi, P.**, see Liu, X., *TSC July-Aug. 2016 580-593*
- Bassiliades, N.**, see Stavropoulos, T.G., *TSC Nov.-Dec. 2016 954-967*
- Bastani, F.**, see She, W., *TSC Nov.-Dec. 2016 940-953*
- Bentahar, J.**, see Mehdi, M., *TSC Nov.-Dec. 2016 968-981*
- Bhiri, S.**, see Sellami, R., *TSC Jan.-Feb. 2016 59-71*
- Bouguettaya, A.**, see Ye, Z., *TSC May-June 2016 382-393*
- Bouguila, N.**, see Mehdi, M., *TSC Nov.-Dec. 2016 968-981*

##### C

- Cai, Z.**, Li, X., and Gupta, J.N., Heuristics for Provisioning Services to Workflows in XaaS Clouds; *TSC March-April 2016 250-263*
- Cao, B.**, see Kang, G., *TSC July-Aug. 2016 566-579*
- Carver, D.**, Chan, W.K., Chang, C.K., and Yang, H., Editorial: Software Engineering and Applications for Cloud-Based Mobile Systems; *TSC Sept.-Oct. 2016 742-744*
- Chan, W.K.**, see Carver, D., *TSC Sept.-Oct. 2016 742-744*
- Chang, C.K.**, see Carver, D., *TSC Sept.-Oct. 2016 742-744*
- Chang, V.**, and Ramachandran, M., Towards Achieving Data Security with the Cloud Computing Adoption Framework; *TSC Jan.-Feb. 2016 138-151*
- Chang, X.**, Wang, B., Muppala, J.K., and Liu, J., Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue; *TSC May-June 2016 408-420*
- Charrada, F.B.**, and Tata, S., An Efficient Algorithm for the Bursting of Service-Based Applications in Hybrid Clouds; *TSC May-June 2016 357-367*
- Chauhan, D.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*
- Chen, H.**, see Wang, H., *TSC Jan.-Feb. 2016 84-95*
- Chen, I.**, Guo, J., and Bao, F., Trust Management for SOA-Based IoT and Its Application to Service Composition; *TSC May-June 2016 482-495*

- Chen, L.**, see Wu, Z., *TSC Sept.-Oct. 2016 664-671*
- Chen, M.**, see Hwang, K., *TSC Sept.-Oct. 2016 784-785*
- Chen, Q.**, see Zheng, Y., *TSC July-Aug. 2016 594-607*
- Chen, Y.**, see Shapira, G., *TSC Jan.-Feb. 2016 152-160*
- Chen, Z.**, see Zhang, Q., *TSC Jan.-Feb. 2016 161-171*
- Cheng, B.**, see Liu, X., *TSC July-Aug. 2016 580-593*
- Cheng, J.**, see Xu, Y., *TSC Jan.-Feb. 2016 110-122*
- Chiang, Y.**, Ouyang, Y., and Hsu, C., Performance and Cost-Effectiveness Analyses for Cloud Services Based on Rejected and Impatient Users; *TSC May-June 2016 446-455*
- Cho, J.**, Ko, H., and Ko, I., Adaptive Service Selection According to the Service Density in Multiple Qos Aspects; *TSC Nov.-Dec. 2016 883-894*
- Chow, C.**, see Zhang, J., *TSC July-Aug. 2016 633-646*
- Chow, C.**, see Xu, W., *TSC Nov.-Dec. 2016 846-861*
- Colman, A.**, see Nguyen, T., *TSC July-Aug. 2016 496-510*

##### D

- Damiani, E.**, see Ardagna, C.A., *TSC Jan.-Feb. 2016 123-137*
- de Freitas, A.**, see Yousfi, A., *TSC July-Aug. 2016 621-632*
- Dede, E.**, Sendir, B., Kuzlu, P., Weachock, J., Govindaraju, M., and Ramakrishnan, L., Processing Cassandra Datasets with Hadoop-Streaming Based Approaches; *TSC Jan.-Feb. 2016 46-58*
- Defude, B.**, see Sellami, R., *TSC Jan.-Feb. 2016 59-71*
- Deng, S.**, Wu, H., Hu, D., and Leon Zhao, J., Service Selection for Composition with QoS Correlations; *TSC March-April 2016 291-303*
- Deng, S.**, Huang, L., Hu, D., Zhao, J.L., and Wu, Z., Mobility-Enabled Service Selection for Composite Services; *TSC May-June 2016 394-407*
- Deng, S.**, see Wu, Z., *TSC Sept.-Oct. 2016 664-671*
- Deters, R.**, see Lomotey, R.K., *TSC Sept.-Oct. 2016 757-770*
- Dey, A.K.**, see Yousfi, A., *TSC July-Aug. 2016 621-632*
- Ding, Z.**, see Wang, P., *TSC July-Aug. 2016 551-565*
- Ding, Z.**, see Wu, Y., *TSC May-June 2016 330-342*
- Dong, B.**, Liu, R., and Wang, H.W., Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm; *TSC Jan.-Feb. 2016 18-32*
- Dong, H.**, see Ye, Z., *TSC May-June 2016 382-393*
- Dong, M.**, see Liu, X., *TSC March-April 2016 186-198*
- Du, Z.**, see Wang, H., *TSC Jan.-Feb. 2016 84-95*
- Dustdar, S.**, see Hoenisch, P., *TSC Sept.-Oct. 2016 700-713*

##### E

- Evermann, J.**, Scalable Process Discovery Using Map-Reduce; *TSC May-June 2016 469-481*

##### F

- Fan, L.**, Gao, B., Wang, Z., An, W., and Wang, Y., A Semi-Automatic Approach of Transforming Applications to be Multi-Tenancy Enabled; *TSC March-April 2016 227-240*
- Fankhauser, T.**, Wang, Q., Gerlicher, A., Grecos, C., and Wang, X., Web Scaling Frameworks for Web Services in the Cloud; *TSC Sept.-Oct. 2016 728-741*
- Fernandez, H.**, Tedeschi, C., and Priol, T., A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution; *TSC March-April 2016 213-226*
- Fong, S.**, Wong, R., and Vasilakos, A.V., Accelerated PSO Swarm Search Feature Selection for Data Stream Mining Big Data; *TSC Jan.-Feb. 2016 33-45*
- Frati, F.**, see Ardagna, C.A., *TSC Jan.-Feb. 2016 123-137*
- Fu, A.W.**, see Xu, Y., *TSC Jan.-Feb. 2016 110-122*

## G

- Gambi, A.**, Pezze, M., and Toffetti, G., Kriging-Based Self-Adaptive Cloud Controllers; *TSC May-June 2016* 368-381
- Ganapathy, G.**, see Surianarayanan, C., *TSC July-Aug. 2016* 524-536
- Gao, B.**, see Fan, L., *TSC March-April 2016* 227-240
- Garraghan, P.**, McKee, D., Ouyang, X., Webster, D., and Xu, J., SEED: A Scalable Approach for Cyber-Physical System Simulation; *TSC March-April 2016* 199-212
- Gerlicher, A.**, see Fankhauser, T., *TSC Sept.-Oct. 2016* 728-741
- Ghoneim, A.**, see Hossain, M.S., *TSC Sept.-Oct. 2016* 806-817
- Gibson, C.**, see Shah, S.Y., *TSC March-April 2016* 304-316
- Govindaraju, M.**, see Dede, E., *TSC Jan.-Feb. 2016* 46-58
- Grecos, C.**, see Fankhauser, T., *TSC Sept.-Oct. 2016* 728-741
- Gudemann, M.**, Poizat, P., Salaun, G., and Ye, L., VerChor: A Framework for the Design and Verification of Choreographies; *TSC July-Aug. 2016* 647-660
- Guo, J.**, see Chen, I., *TSC May-June 2016* 482-495
- Gupta, J.N.**, see Cai, Z., *TSC March-April 2016* 250-263

## H

- Han, J.**, see Nguyen, T., *TSC July-Aug. 2016* 496-510
- He, B.**, see Tang, S., *TSC Jan.-Feb. 2016* 4-17
- He, W.**, Sedigh Sarvestani, S., Yen, I., and Zhang, J., Guest Editorial: Special Issue on Cyber-Physical Systems and Services; *TSC March-April 2016* 172-173
- He, Z.**, see Tan, H., *TSC Nov.-Dec. 2016* 982-995
- Hochreiner, C.**, see Hoenisch, P., *TSC Sept.-Oct. 2016* 700-713
- Hoenisch, P.**, Schuller, D., Schulte, S., Hochreiner, C., and Dustdar, S., Optimization of Complex Elastic Processes; *TSC Sept.-Oct. 2016* 700-713
- Honiden, S.**, see Wagner, F., *TSC March-April 2016* 277-290
- Hossain, M.S.**, Moniruzzaman, M., Muhammad, G., Ghoneim, A., and Alamri, A., Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment; *TSC Sept.-Oct. 2016* 806-817
- Hsu, C.**, see Ma, Y., *TSC July-Aug. 2016* 511-523
- Hsu, C.**, see Chiang, Y., *TSC May-June 2016* 446-455
- Hu, D.**, see Deng, S., *TSC March-April 2016* 291-303
- Hu, D.**, see Deng, S., *TSC May-June 2016* 394-407
- Hu, F.**, see Wang, H., *TSC Jan.-Feb. 2016* 84-95
- Huang, H.**, see Zhao, F., *TSC July-Aug. 2016* 608-620
- Huang, J.**, see Xu, F., *TSC Sept.-Oct. 2016* 796-805
- Huang, L.**, see Deng, S., *TSC May-June 2016* 394-407
- Huh, J.**, see Seol, J., *TSC May-June 2016* 343-356
- Hung, P.**, see Sobolevsky, S., *TSC Jan.-Feb. 2016* 2-3
- Hung, P.**, see Liu, X., *TSC March-April 2016* 186-198
- Hung, P.C.**, see Ma, Y., *TSC July-Aug. 2016* 511-523
- Hung, P.C.**, see Zeng, C., *TSC Sept.-Oct. 2016* 672-685
- Hwang, K.**, see Zhang, F., *TSC Jan.-Feb. 2016* 72-83
- Hwang, K.**, Chen, M., and Wu, J., Special Issue on Mobile Big Data Management and Innovative Applications; *TSC Sept.-Oct. 2016* 784-785
- Hwang, K.**, see Tan, H., *TSC Nov.-Dec. 2016* 982-995

## I

- Ishikawa, F.**, see Wagner, F., *TSC March-April 2016* 277-290
- Islam, M.A.**, Ren, S., Mahmud, A.H., and Quan, G., Online Energy Budgeting for Cost Minimization in Virtualized Data Center; *TSC May-June 2016* 421-432

## J

- Jacobsen, H.**, see Song, W., *TSC Sept.-Oct. 2016* 714-727
- Jiang, B.**, FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications; *TSC Sept.-Oct. 2016* 745-756
- Jiang, C.**, see Wang, P., *TSC July-Aug. 2016* 551-565
- Jiang, C.**, see Wu, Y., *TSC May-June 2016* 330-342

- Jiang, H.**, see Nie, L., *TSC Sept.-Oct. 2016* 771-783
- Jiang, H.**, see Tian, C., *TSC Nov.-Dec. 2016* 926-939
- Jin, A.**, Song, W., Wang, P., Niyato, D., and Ju, P., Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing; *TSC Nov.-Dec. 2016* 895-909
- Jin, H.**, see Zhao, F., *TSC July-Aug. 2016* 608-620
- Jin, S.**, see Seol, J., *TSC May-June 2016* 343-356
- Jin, T.**, Wang, J., Yang, Y., Wen, L., and Li, K., Refactor Business Process Models with Maximized Parallelism; *TSC May-June 2016* 456-468
- Ju, P.**, see Jin, A., *TSC Nov.-Dec. 2016* 895-909

## K

- Kang, G.**, Tang, M., Liu, J., Liu, X.F., and Cao, B., Diversifying Web Service Recommendation Results via Exploring Service Usage History; *TSC July-Aug. 2016* 566-579
- Khan, S.U.**, see Zhang, F., *TSC Jan.-Feb. 2016* 72-83
- Khan, S.U.**, see Tziritas, N., *TSC Sept.-Oct. 2016* 818-831
- Kim, I.K.**, see Lee, S., *TSC March-April 2016* 241-249
- Ko, H.**, see Cho, J., *TSC Nov.-Dec. 2016* 883-894
- Ko, I.**, see Cho, J., *TSC Nov.-Dec. 2016* 883-894
- Kuzlu, P.**, see Dede, E., *TSC Jan.-Feb. 2016* 46-58

## L

- Laili, Y.**, see Tao, F., *TSC Nov.-Dec. 2016* 910-925
- Lama, M.**, see Rodriguez-Mier, P., *TSC July-Aug. 2016* 537-550
- Lee, B.**, see Tang, S., *TSC Jan.-Feb. 2016* 4-17
- Lee, D.**, see Seol, J., *TSC May-June 2016* 343-356
- Lee, E.A.**, see Akkaya, I., *TSC March-April 2016* 174-185
- Lee, S.**, Song, J.H., and Kim, I.K., CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System; *TSC March-April 2016* 241-249
- Leon Zhao, J.**, see Deng, S., *TSC March-April 2016* 291-303
- Li, C.**, see Tao, F., *TSC Nov.-Dec. 2016* 910-925
- Li, C.**, see Tan, H., *TSC Nov.-Dec. 2016* 982-995
- Li, K.**, see Jin, T., *TSC May-June 2016* 456-468
- Li, K.**, see Tan, H., *TSC Nov.-Dec. 2016* 982-995
- Li, X.**, see Cai, Z., *TSC March-April 2016* 250-263
- Li, X.**, see Nie, L., *TSC Sept.-Oct. 2016* 771-783
- Li, Y.**, see Wu, Z., *TSC Sept.-Oct. 2016* 664-671
- Li, Y.**, see Xu, F., *TSC Sept.-Oct. 2016* 796-805
- Liao, J.**, see Liu, X., *TSC July-Aug. 2016* 580-593
- Liao, T.W.**, see Tao, F., *TSC Nov.-Dec. 2016* 910-925
- Lin, Y.**, see Xu, F., *TSC Sept.-Oct. 2016* 796-805
- Ling, H.**, see Zheng, Y., *TSC July-Aug. 2016* 594-607
- Liu, A.**, see Liu, X., *TSC March-April 2016* 186-198
- Liu, G.**, see Wu, Y., *TSC May-June 2016* 330-342
- Liu, J.**, see Kang, G., *TSC July-Aug. 2016* 566-579
- Liu, J.**, see Chang, X., *TSC May-June 2016* 408-420
- Liu, J.**, Tang, M., Zheng, Z., Liu, X.F., and Lyu, S., Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation; *TSC Sept.-Oct. 2016* 686-699
- Liu, L.**, Editorial: Services Computing in 2016; *TSC Jan.-Feb. 2016* 1
- Liu, L.**, Services Computing: From Cloud Services, Mobile Services to Internet of Services; *TSC Sept.-Oct. 2016* 661-663
- Liu, R.**, see Dong, B., *TSC Jan.-Feb. 2016* 18-32
- Liu, W.**, see Tian, C., *TSC Nov.-Dec. 2016* 926-939
- Liu, X.**, Dong, M., Ota, K., Hung, P., and Liu, A., Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory; *TSC March-April 2016* 186-198
- Liu, X.**, Cheng, B., Liao, J., Barnaghi, P., Wan, L., and Wang, J., OMI-DL: An Ontology Matching Framework; *TSC July-Aug. 2016* 580-593
- Liu, X.F.**, see Kang, G., *TSC July-Aug. 2016* 566-579
- Liu, X.F.**, see Liu, J., *TSC Sept.-Oct. 2016* 686-699
- Liu, Y.**, see Akkaya, I., *TSC March-April 2016* 174-185
- Lomotey, R.K.**, Nilson, J., Mulder, K., Wittmeier, K., Schachter, C., and Deters, R., Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform; *TSC Sept.-Oct. 2016* 757-770
- Loukopoulos, T.**, see Tziritas, N., *TSC Sept.-Oct. 2016* 818-831
- Lu, Q.**, Zhu, L., Xu, X., Tosic, V., Chauhan, D., Zhang, W., and Sun, D., A Unified Business-Driven Cloud Management Framework; *TSC Nov.-Dec. 2016* 872-882

**Luo, Y.**, see Tian, C., *TSC Nov.-Dec. 2016 926-939*  
**Lyu, S.**, see Liu, J., *TSC Sept.-Oct. 2016 686-699*

## M

**Ma, X.**, see Song, W., *TSC Sept.-Oct. 2016 714-727*  
**Ma, Y.**, Wang, S., Hung, P.C., Hsu, C., Sun, Q., and Yang, F., A Highly Accurate Prediction Algorithm for Unknown Web Service QoS Values; *TSC July-Aug. 2016 511-523*  
**Maeng, S.**, see Seol, J., *TSC May-June 2016 343-356*  
**Mahmud, A.H.**, see Islam, M.A., *TSC May-June 2016 421-432*  
**Malerba, D.**, see Appice, A., *TSC Nov.-Dec. 2016 832-845*  
**Malluhi, Q.M.**, see Zhang, F., *TSC Jan.-Feb. 2016 72-83*  
**McIntosh, S.**, see Sobolevsky, S., *TSC Jan.-Feb. 2016 2-3*  
**McKee, D.**, see Garraghan, P., *TSC March-April 2016 199-212*  
**Mehdi, M.**, Bouguila, N., and Bentahar, J., Trust and Reputation of Web Services Through QoS Correlation Lens; *TSC Nov.-Dec. 2016 968-981*  
**Mistry, S.**, see Ye, Z., *TSC May-June 2016 382-393*  
**Moniruzzaman, M.**, see Hossain, M.S., *TSC Sept.-Oct. 2016 806-817*  
**Moustafa, A.**, Zhang, M., and Bai, Q., Trustworthy Stigmergic Service Composition and Adaptation in Decentralized Environments; *TSC March-April 2016 317-329*  
**Mucientes, M.**, see Rodriguez-Mier, P., *TSC July-Aug. 2016 537-550*  
**Muhammad, G.**, see Hossain, M.S., *TSC Sept.-Oct. 2016 806-817*  
**Mulder, K.**, see Lomotey, R.K., *TSC Sept.-Oct. 2016 757-770*  
**Muppala, J.K.**, see Chang, X., *TSC May-June 2016 408-420*

## N

**Nguyen, T.**, Colman, A., and Han, J., A Feature-Based Framework for Developing and Provisioning Customizable Web Services; *TSC July-Aug. 2016 496-510*  
**Nie, C.**, see Zhao, F., *TSC July-Aug. 2016 608-620*  
**Nie, L.**, Jiang, H., Ren, Z., Sun, Z., and Li, X., Query Expansion Based on Crowd Knowledge for Code Search; *TSC Sept.-Oct. 2016 771-783*  
**Nilson, J.**, see Lomotey, R.K., *TSC Sept.-Oct. 2016 757-770*  
**Niyato, D.**, see Jin, A., *TSC Nov.-Dec. 2016 895-909*

## O

**Ota, K.**, see Liu, X., *TSC March-April 2016 186-198*  
**Ouyang, X.**, see Garraghan, P., *TSC March-April 2016 199-212*  
**Ouyang, Y.**, see Chiang, Y., *TSC May-June 2016 446-455*

## P

**Pedrinaci, C.**, see Rodriguez-Mier, P., *TSC July-Aug. 2016 537-550*  
**Peng, S.**, Zhou, F., Xu, J., and Xu, Z., Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage"; *TSC Nov.-Dec. 2016 996-998*  
**Pezze, M.**, see Gambi, A., *TSC May-June 2016 368-381*  
**Poizat, P.**, see Gudemann, M., *TSC July-Aug. 2016 647-660*  
**Priol, T.**, see Fernandez, H., *TSC March-April 2016 213-226*

## Q

**Qiao, K.**, see Zhao, D., *TSC Jan.-Feb. 2016 96-109*  
**Quan, G.**, see Islam, M.A., *TSC May-June 2016 421-432*

## R

**Raicu, I.**, see Zhao, D., *TSC Jan.-Feb. 2016 96-109*  
**Ramachandran, M.**, see Chang, V., *TSC Jan.-Feb. 2016 138-151*  
**Ramakrishnan, L.**, see Dede, E., *TSC Jan.-Feb. 2016 46-58*  
**Rebecani, D.**, see Ardagna, C.A., *TSC Jan.-Feb. 2016 123-137*

**Ren, S.**, see Islam, M.A., *TSC May-June 2016 421-432*  
**Ren, Z.**, see Nie, L., *TSC Sept.-Oct. 2016 771-783*  
**Rodriguez-Mier, P.**, Pedrinaci, C., Lama, M., and Mucientes, M., An Integrated Semantic Web Service Discovery and Composition Framework; *TSC July-Aug. 2016 537-550*

## S

**Saidi, R.**, see Yousfi, A., *TSC July-Aug. 2016 621-632*  
**Salaun, G.**, see Gudemann, M., *TSC July-Aug. 2016 647-660*  
**Schachter, C.**, see Lomotey, R.K., *TSC Sept.-Oct. 2016 757-770*  
**Schuller, D.**, see Hoenisch, P., *TSC Sept.-Oct. 2016 700-713*  
**Schulte, S.**, see Hoenisch, P., *TSC Sept.-Oct. 2016 700-713*  
**Sedigh Sarvestani, S.**, see He, W., *TSC March-April 2016 172-173*  
**Sellami, R.**, Bhiri, S., and Defude, B., Supporting Multi Data Stores Applications in Cloud Environments; *TSC Jan.-Feb. 2016 59-71*  
**Sendir, B.**, see Dede, E., *TSC Jan.-Feb. 2016 46-58*  
**Seol, J.**, Jin, S., Lee, D., Huh, J., and Maeng, S., A Trusted IaaS Environment with Hardware Security Module; *TSC May-June 2016 343-356*  
**Shah, S.Y.**, Szymanski, B.K., Zerfos, P., and Gibson, C., Towards Relevancy Aware Service Oriented Systems in WSNs; *TSC March-April 2016 304-316*  
**Shapira, G.**, and Chen, Y., Common Pitfalls of Benchmarking Big Data Systems; *TSC Jan.-Feb. 2016 152-160*  
**She, W.**, Zhu, W., Yen, I., Bastani, F., and Thuraisingham, B., Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems; *TSC Nov.-Dec. 2016 940-953*  
**Shen, J.**, see Wang, L., *TSC March-April 2016 264-276*  
**Shi, H.**, see Xu, F., *TSC Sept.-Oct. 2016 796-805*  
**Sobolevsky, S.**, McIntosh, S., and Hung, P., Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications; *TSC Jan.-Feb. 2016 2-3*  
**Song, J.**, see Xu, F., *TSC Sept.-Oct. 2016 796-805*  
**Song, J.H.**, see Lee, S., *TSC March-April 2016 241-249*  
**Song, L.**, Tekin, C., and van der Schaar, M., Online Learning in Large-Scale Contextual Recommender Systems; *TSC May-June 2016 433-445*  
**Song, W.**, Jacobsen, H., Ye, C., and Ma, X., Process Discovery from Dependence-Complete Event Logs; *TSC Sept.-Oct. 2016 714-727*  
**Song, W.**, see Jin, A., *TSC Nov.-Dec. 2016 895-909*  
**Stavropoulos, T.G.**, Andreadis, S., Bassiliades, N., Vrakas, D., and Vlahavas, I., The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services; *TSC Nov.-Dec. 2016 954-967*  
**Sun, D.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*  
**Sun, Q.**, see Ma, Y., *TSC July-Aug. 2016 511-523*  
**Sun, Z.**, see Nie, L., *TSC Sept.-Oct. 2016 771-783*  
**Surianarayanan, C.**, and Ganapathy, G., An Approach to Computation of Similarity, Inter-Cluster Distance and Selection of Threshold for Service Discovery Using Clusters; *TSC July-Aug. 2016 524-536*  
**Szymanski, B.K.**, see Shah, S.Y., *TSC March-April 2016 304-316*

## T

**Tan, H.**, Li, C., He, Z., Li, K., and Hwang, K., VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines; *TSC Nov.-Dec. 2016 982-995*  
**Tang, M.**, see Kang, G., *TSC July-Aug. 2016 566-579*  
**Tang, M.**, see Liu, J., *TSC Sept.-Oct. 2016 686-699*  
**Tang, M.**, see Xu, X., *TSC Nov.-Dec. 2016 862-871*  
**Tang, S.**, Lee, B., and He, B., Dynamic Job Ordering and Slot Configurations for MapReduce Workloads; *TSC Jan.-Feb. 2016 4-17*  
**Tao, F.**, Li, C., Liao, T.W., and Laili, Y., BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing; *TSC Nov.-Dec. 2016 910-925*  
**Tata, S.**, see Charrada, F.B., *TSC May-June 2016 357-367*  
**Tedeschi, C.**, see Fernandez, H., *TSC March-April 2016 213-226*  
**Tekin, C.**, see Song, L., *TSC May-June 2016 433-445*  
**Thuraisingham, B.**, see She, W., *TSC Nov.-Dec. 2016 940-953*  
**Tian, C.**, Wang, Y., Luo, Y., Jiang, H., Liu, W., Wu, J., and Yin, H., Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services; *TSC Nov.-Dec. 2016 926-939*  
**Toffetti, G.**, see Gambi, A., *TSC May-June 2016 368-381*  
**Tosic, V.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*

**Tziritas, N.**, Loukopoulos, T., Khan, S.U., Xu, C., and Zomaya, A.Y., On Improving Constrained Single and Group Operator Placement Using Evictions in Big Data Environments; *TSC Sept.-Oct. 2016 818-831*

## V

**van der Schaar, M.**, see Song, L., *TSC May-June 2016 433-445*  
**Vasilakos, A.V.**, see Fong, S., *TSC Jan.-Feb. 2016 33-45*  
**Vlahavas, I.**, see Stavropoulos, T.G., *TSC Nov.-Dec. 2016 954-967*  
**Vrakas, D.**, see Stavropoulos, T.G., *TSC Nov.-Dec. 2016 954-967*

## W

**Wagner, F.**, Ishikawa, F., and Honiden, S., Robust Service Compositions with Functional and Location Diversity; *TSC March-April 2016 277-290*  
**Wan, L.**, see Liu, X., *TSC July-Aug. 2016 580-593*  
**Wang, B.**, see Chang, X., *TSC May-June 2016 408-420*  
**Wang, H.**, Chen, H., Du, Z., and Hu, F., BeTL: MapReduce Checkpoint Tactics Beneath the Task Level; *TSC Jan.-Feb. 2016 84-95*  
**Wang, H.W.**, see Dong, B., *TSC Jan.-Feb. 2016 18-32*  
**Wang, J.**, see Liu, X., *TSC July-Aug. 2016 580-593*  
**Wang, J.**, see Jin, T., *TSC May-June 2016 456-468*  
**Wang, L.**, and Shen, J., Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision; *TSC March-April 2016 264-276*  
**Wang, P.**, Ding, Z., Jiang, C., Zhou, M., and Zheng, Y., Automatic Web Service Composition Based on Uncertainty Execution Effects; *TSC July-Aug. 2016 551-565*  
**Wang, P.**, see Wu, Y., *TSC May-June 2016 330-342*  
**Wang, P.**, see Jin, A., *TSC Nov.-Dec. 2016 895-909*  
**Wang, Q.**, see Fankhauser, T., *TSC Sept.-Oct. 2016 728-741*  
**Wang, S.**, see Ma, Y., *TSC July-Aug. 2016 511-523*  
**Wang, X.**, see Fankhauser, T., *TSC Sept.-Oct. 2016 728-741*  
**Wang, Y.**, see Fan, L., *TSC March-April 2016 227-240*  
**Wang, Y.**, see Tian, C., *TSC Nov.-Dec. 2016 926-939*  
**Wang, Z.**, see Fan, L., *TSC March-April 2016 227-240*  
**Weachock, J.**, see Dede, E., *TSC Jan.-Feb. 2016 46-58*  
**Webster, D.**, see Garraghan, P., *TSC March-April 2016 199-212*  
**Wen, L.**, see Jin, T., *TSC March-April 2016 456-468*  
**Wittmeier, K.**, see Lomotey, R.K., *TSC Sept.-Oct. 2016 757-770*  
**Wong, R.**, see Fong, S., *TSC Jan.-Feb. 2016 33-45*  
**Wu, D.**, see Xu, F., *TSC Sept.-Oct. 2016 796-805*  
**Wu, H.**, see Deng, S., *TSC March-April 2016 291-303*  
**Wu, J.**, see Wu, Z., *TSC Sept.-Oct. 2016 664-671*  
**Wu, J.**, see Hwang, K., *TSC Sept.-Oct. 2016 784-785*  
**Wu, J.**, see Tian, C., *TSC Nov.-Dec. 2016 926-939*  
**Wu, Y.**, Yan, C., Ding, Z., Liu, G., Wang, P., Jiang, C., and Zhou, M., A Multi-level Index Model to Expedite Web Service Discovery and Composition in Large-Scale Service Repositories; *TSC May-June 2016 330-342*  
**Wu, Z.**, see Deng, S., *TSC May-June 2016 394-407*  
**Wu, Z.**, Yin, J., Deng, S., Wu, J., Li, Y., and Chen, L., Modern Service Industry and Crossover Services: Development and Trends in China; *TSC Sept.-Oct. 2016 664-671*

## X

**Xu, C.**, see Tziritas, N., *TSC Sept.-Oct. 2016 818-831*  
**Xu, F.**, Lin, Y., Huang, J., Wu, D., Shi, H., Song, J., and Li, Y., Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach; *TSC Sept.-Oct. 2016 796-805*  
**Xu, J.**, see Garraghan, P., *TSC March-April 2016 199-212*  
**Xu, J.**, see Peng, S., *TSC Nov.-Dec. 2016 996-998*  
**Xu, W.**, and Chow, C., A Location- and Diversity-Aware News Feed System for Mobile Users; *TSC Nov.-Dec. 2016 846-861*  
**Xu, X.**, and Tang, M., A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem; *TSC Nov.-Dec. 2016 862-871*  
**Xu, X.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*  
**Xu, Y.**, Cheng, J., and Fu, A.W., Distributed Maximal Clique Computation and Management; *TSC Jan.-Feb. 2016 110-122*  
**Xu, Z.**, see Peng, S., *TSC Nov.-Dec. 2016 996-998*  
**Xue, J.**, see Zheng, Y., *TSC July-Aug. 2016 594-607*

## Y

**Yan, C.**, see Wu, Y., *TSC May-June 2016 330-342*  
**Yang, F.**, see Ma, Y., *TSC July-Aug. 2016 511-523*  
**Yang, H.**, see Carver, D., *TSC Sept.-Oct. 2016 742-744*  
**Yang, L.T.**, see Zhang, Q., *TSC Jan.-Feb. 2016 161-171*  
**Yang, Y.**, see Jin, T., *TSC May-June 2016 456-468*  
**Ye, C.**, see Song, W., *TSC Sept.-Oct. 2016 714-727*  
**Ye, L.**, see Gudemann, M., *TSC July-Aug. 2016 647-660*  
**Ye, Z.**, Mistry, S., Bouguettaya, A., and Dong, H., Long-Term QoS-Aware Cloud Service Composition Using Multivariate Time Series Analysis; *TSC May-June 2016 382-393*  
**Yen, I.**, see He, W., *TSC March-April 2016 172-173*  
**Yen, I.**, see She, W., *TSC Nov.-Dec. 2016 940-953*  
**Yin, H.**, see Tian, C., *TSC Nov.-Dec. 2016 926-939*  
**Yin, J.**, see Zhao, D., *TSC Jan.-Feb. 2016 96-109*  
**Yin, J.**, see Wu, Z., *TSC Sept.-Oct. 2016 664-671*  
**Yousfi, A.**, de Freitas, A., Dey, A.K., and Saidi, R., The Use of Ubiquitous Computing for Business Process Improvement; *TSC July-Aug. 2016 621-632*

## Z

**Zeng, C.**, Zhang, T., and Hung, P.C., Fast Service Process Fragment Indexing and Ranking; *TSC Sept.-Oct. 2016 672-685*  
**Zerfos, P.**, see Shah, S.Y., *TSC March-April 2016 304-316*  
**Zhang, F.**, Hwang, K., Khan, S.U., and Malluhi, Q.M., Skyline Discovery and Composition of Multi-Cloud Mashup Services; *TSC Jan.-Feb. 2016 72-83*  
**Zhang, J.**, see He, W., *TSC March-April 2016 172-173*  
**Zhang, J.**, and Chow, C., TICRec: A Probabilistic Framework to Utilize Temporal Influence Correlations for Time-Aware Location Recommendations; *TSC July-Aug. 2016 633-646*  
**Zhang, M.**, see Moustafa, A., *TSC March-April 2016 317-329*  
**Zhang, Q.**, Yang, L.T., and Chen, Z., Deep Computation Model for Unsupervised Feature Learning on Big Data; *TSC Jan.-Feb. 2016 161-171*  
**Zhang, T.**, see Zeng, C., *TSC Sept.-Oct. 2016 672-685*  
**Zhang, W.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*  
**Zhang, Y.**, GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies; *TSC Sept.-Oct. 2016 786-795*  
**Zhao, D.**, Qiao, K., Yin, J., and Raicu, I., Dynamic Virtual Chunks: On Supporting Efficient Accesses to Compressed Scientific Data; *TSC Jan.-Feb. 2016 96-109*  
**Zhao, F.**, Zhou, J., Nie, C., Huang, H., and Jin, H., SmartCrawler: A Two-Stage Crawler for Efficiently Harvesting Deep-Web Interfaces; *TSC July-Aug. 2016 608-620*  
**Zhao, J.L.**, see Deng, S., *TSC May-June 2016 394-407*  
**Zheng, Y.**, Chen, Q., Ling, H., and Xue, J., Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue; *TSC July-Aug. 2016 594-607*  
**Zheng, Y.**, see Wang, P., *TSC July-Aug. 2016 551-565*  
**Zheng, Z.**, see Liu, J., *TSC Sept.-Oct. 2016 686-699*  
**Zhou, F.**, see Peng, S., *TSC Nov.-Dec. 2016 996-998*  
**Zhou, J.**, see Zhao, F., *TSC July-Aug. 2016 608-620*  
**Zhou, M.**, see Wang, P., *TSC July-Aug. 2016 551-565*  
**Zhou, M.**, see Wu, Y., *TSC May-June 2016 330-342*  
**Zhu, L.**, see Lu, Q., *TSC Nov.-Dec. 2016 872-882*  
**Zhu, W.**, see She, W., *TSC Nov.-Dec. 2016 940-953*  
**Zomaya, A.Y.**, see Tziritas, N., *TSC Sept.-Oct. 2016 818-831*

## SUBJECT INDEX

## A

**Access control**  
 Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems. *She, W., +, TSC Nov.-Dec. 2016 940-953*

**Adaptive control**  
 Kriging-Based Self-Adaptive Cloud Controllers. *Gambi, A., +, TSC May-June 2016 368-381*

**Algorithm design and analysis**

A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X.*, +, *TSC Nov.-Dec. 2016 862-871*

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

**Android (operating system)**

FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B.*, *TSC Sept.-Oct. 2016 745-756*

**Ant colony optimization**

Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision. *Wang, L.*, +, *TSC March-April 2016 264-276*

**Application program interfaces**

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

Supporting Multi Data Stores Applications in Cloud Environments. *Sellami, R.*, +, *TSC Jan.-Feb. 2016 59-71*

**Approximation algorithms**

A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X.*, +, *TSC Nov.-Dec. 2016 862-871*

Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

**Authorization**

Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*

**B****Backpropagation**

Deep Computation Model for Unsupervised Feature Learning on Big Data. *Zhang, Q.*, +, *TSC Jan.-Feb. 2016 161-171*

**Bandwidth**

Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

**Benchmark testing**

Common Pitfalls of Benchmarking Big Data Systems. *Shapira, G.*, +, *TSC Jan.-Feb. 2016 152-160*

Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*

**Big data**

A Configuration-Independent Score-Based Benchmark for Distributed Databases. *Ardagna, C.A.*, +, *TSC Jan.-Feb. 2016 123-137*

Accelerated PSO Swarm Search Feature Selection for Data Stream Mining Big Data. *Fong, S.*, +, *TSC Jan.-Feb. 2016 33-45*

BeTL: MapReduce Checkpoint Tactics Beneath the Task Level. *Wang, H.*, +, *TSC Jan.-Feb. 2016 84-95*

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*

Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S.*, +, *TSC Sept.-Oct. 2016 806-817*

Common Pitfalls of Benchmarking Big Data Systems. *Shapira, G.*, +, *TSC Jan.-Feb. 2016 152-160*

Deep Computation Model for Unsupervised Feature Learning on Big Data. *Zhang, Q.*, +, *TSC Jan.-Feb. 2016 161-171*

Dynamic Virtual Chunks: On Supporting Efficient Accesses to Compressed Scientific Data. *Zhao, D.*, +, *TSC Jan.-Feb. 2016 96-109*

Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*

GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y.*, *TSC Sept.-Oct. 2016 786-795*

On Improving Constrained Single and Group Operator Placement Using Evictions in Big Data Environments. *Tziritas, N.*, +, *TSC Sept.-Oct. 2016 818-831*

Processing Cassandra Datasets with Hadoop-Streaming Based Approaches. *Dede, E.*, +, *TSC Jan.-Feb. 2016 46-58*

Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K.*, +, *TSC Sept.-Oct. 2016 784-785*

**Business**

A Unified Business-Driven Cloud Management Framework. *Lu, Q.*, +, *TSC Nov.-Dec. 2016 872-882*

**Business data processing**

Optimization of Complex Elastic Processes. *Hoensch, P.*, +, *TSC Sept.-Oct. 2016 700-713*

Refactor Business Process Models with Maximized Parallelism. *Jin, T.*, +, *TSC May-June 2016 456-468*

The Use of Ubiquitous Computing for Business Process Improvement. *Yousfi, A.*, +, *TSC July-Aug. 2016 621-632*

VerChor: A Framework for the Design and Verification of Choreographies. *Gudemann, M.*, +, *TSC July-Aug. 2016 647-660*

**C****C++ language**

Processing Cassandra Datasets with Hadoop-Streaming Based Approaches. *Dede, E.*, +, *TSC Jan.-Feb. 2016 46-58*

**Channel allocation**

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

**Checkpointing**

BeTL: MapReduce Checkpoint Tactics Beneath the Task Level. *Wang, H.*, +, *TSC Jan.-Feb. 2016 84-95*

**Ciphers**

Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S.*, +, *TSC Nov.-Dec. 2016 996-998*

**Classification algorithms**

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

**Cloud computing**

A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution. *Fernandez, H.*, +, *TSC March-April 2016 213-226*

A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X.*, +, *TSC Nov.-Dec. 2016 862-871*

A Semi-Automatic Approach of Transforming Applications to be Multi-Tenancy Enabled. *Fan, L.*, +, *TSC March-April 2016 227-240*

A Trusted IaaS Environment with Hardware Security Module. *Seol, J.*, +, *TSC May-June 2016 343-356*

A Unified Business-Driven Cloud Management Framework. *Lu, Q.*, +, *TSC Nov.-Dec. 2016 872-882*

An Efficient Algorithm for the Bursting of Service-Based Applications in Hybrid Clouds. *Charrada, F.B.*, +, *TSC May-June 2016 357-367*

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A.*, +, *TSC Nov.-Dec. 2016 895-909*

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

Common Pitfalls of Benchmarking Big Data Systems. *Shapira, G.*, +, *TSC Jan.-Feb. 2016 152-160*

Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*

Editorial: Software Engineering and Applications for Cloud-Based Mobile Systems. *Carver, D.*, +, *TSC Sept.-Oct. 2016 742-744*

Heuristics for Provisioning Services to Workflows in XaaS Clouds. *Cai, Z.*, +, *TSC March-April 2016 250-263*

Kriging-Based Self-Adaptive Cloud Controllers. *Gambi, A.*, +, *TSC May-June 2016 368-381*

Long-Term QoS-Aware Cloud Service Composition Using Multivariate Time Series Analysis. *Ye, Z.*, +, *TSC May-June 2016 382-393*

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K.*, +, *TSC Sept.-Oct. 2016 757-770*

Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue. *Chang, X.*, +, *TSC May-June 2016 408-420*

Modern Service Industry and Crossover Services: Development and Trends in China. *Wu, Z.*, +, *TSC Sept.-Oct. 2016 664-671*

Optimization of Complex Elastic Processes. *Hoensch, P.*, +, *TSC Sept.-Oct. 2016 700-713*

Performance and Cost-Effectiveness Analyses for Cloud Services Based on Rejected and Impatient Users. *Chiang, Y.*, +, *TSC May-June 2016 446-455*

Skyline Discovery and Composition of Multi-Cloud Mashup Services. *Zhang, F.*, +, *TSC Jan.-Feb. 2016 72-83*

- Supporting Multi Data Stores Applications in Cloud Environments. *Sellami, R.*, +, *TSC Jan.-Feb. 2016 59-71*
- Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*
- Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm. *Dong, B.*, +, *TSC Jan.-Feb. 2016 18-32*
- Web Scaling Frameworks for Web Services in the Cloud. *Fankhauser, T.*, +, *TSC Sept.-Oct. 2016 728-741*
- Clustering algorithms**
- A Co-Training Strategy for Multiple View Clustering in Process Mining. *Appice, A.*, +, *TSC Nov.-Dec. 2016 832-845*
- Collaborative filtering**
- A Highly Accurate Prediction Algorithm for Unknown Web Service QoS Values. *Ma, Y.*, +, *TSC July-Aug. 2016 511-523*
- Diversifying Web Service Recommendation Results via Exploring Service Usage History. *Kang, G.*, +, *TSC July-Aug. 2016 566-579*
- Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J.*, +, *TSC Sept.-Oct. 2016 686-699*
- Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, I.*, +, *TSC May-June 2016 482-495*
- Computational complexity**
- An Efficient Algorithm for the Bursting of Service-Based Applications in Hybrid Clouds. *Charrada, F.B.*, +, *TSC May-June 2016 357-367*
- Distributed Maximal Clique Computation and Management. *Xu, Y.*, +, *TSC Jan.-Feb. 2016 110-122*
- Computational modeling**
- A Co-Training Strategy for Multiple View Clustering in Process Mining. *Appice, A.*, +, *TSC Nov.-Dec. 2016 832-845*
- Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*
- Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems. *She, W.*, +, *TSC Nov.-Dec. 2016 940-953*
- Computer aided instruction**
- Mobility-Enabled Service Selection for Composite Services. *Deng, S.*, +, *TSC May-June 2016 394-407*
- Online Learning in Large-Scale Contextual Recommender Systems. *Song, L.*, +, *TSC May-June 2016 433-445*
- Computer applications**
- Editorial: Software Engineering and Applications for Cloud-Based Mobile Systems. *Carver, D.*, +, *TSC Sept.-Oct. 2016 742-744*
- Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K.*, +, *TSC Sept.-Oct. 2016 784-785*
- Computer centers**
- Dynamic Job Ordering and Slot Configurations for MapReduce Workloads. *Tang, S.*, +, *TSC Jan.-Feb. 2016 4-17*
- Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue. *Chang, X.*, +, *TSC May-June 2016 408-420*
- Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*
- Computer network security**
- Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, I.*, +, *TSC May-June 2016 482-495*
- Computer science**
- GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y.*, *TSC Sept.-Oct. 2016 786-795*
- Computer security**
- Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*
- Computer viruses**
- Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*
- Concurrency (computers)**
- Process Discovery from Dependence-Complete Event Logs. *Song, W.*, +, *TSC Sept.-Oct. 2016 714-727*
- Configuration management**
- Dynamic Job Ordering and Slot Configurations for MapReduce Workloads. *Tang, S.*, +, *TSC Jan.-Feb. 2016 4-17*
- Constraint handling**
- Performance and Cost-Effectiveness Analyses for Cloud Services Based on Rejected and Impatient Users. *Chiang, Y.*, +, *TSC May-June 2016 446-455*
- Contracts**
- Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision. *Wang, L.*, +, *TSC March-April 2016 264-276*
- VerChor: A Framework for the Design and Verification of Choreographies. *Gudemann, M.*, +, *TSC July-Aug. 2016 647-660*
- Convergence**
- Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, I.*, +, *TSC May-June 2016 482-495*
- Cost accounting**
- Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A.*, +, *TSC Nov.-Dec. 2016 895-909*
- Cost reduction**
- Performance and Cost-Effectiveness Analyses for Cloud Services Based on Rejected and Impatient Users. *Chiang, Y.*, +, *TSC May-June 2016 446-455*
- Costing**
- Towards Relevancy Aware Service Oriented Systems in WSNs. *Shah, S.Y.*, +, *TSC March-April 2016 304-316*
- Cryptography**
- Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*
- Cyber-physical systems**
- GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y.*, *TSC Sept.-Oct. 2016 786-795*
- Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W.*, +, *TSC March-April 2016 172-173*
- SEED: A Scalable Approach for Cyber-Physical System Simulation. *Garraghan, P.*, +, *TSC March-April 2016 199-212*
- Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory. *Liu, X.*, +, *TSC March-April 2016 186-198*

## D

**Data analysis**

A Configuration-Independent Score-Based Benchmark for Distributed Databases. *Ardagna, C.A.*, +, *TSC Jan.-Feb. 2016 123-137*

GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y.*, *TSC Sept.-Oct. 2016 786-795*

**Data compression**

Dynamic Virtual Chunks: On Supporting Efficient Accesses to Compressed Scientific Data. *Zhao, D.*, +, *TSC Jan.-Feb. 2016 96-109*

**Data handling**

Scalable Process Discovery Using Map-Reduce. *Evermann, J.*, *TSC May-June 2016 469-481*

**Data mining**

A Co-Training Strategy for Multiple View Clustering in Process Mining. *Appice, A.*, +, *TSC Nov.-Dec. 2016 832-845*

Accelerated PSO Swarm Search Feature Selection for Data Stream Mining Big Data. *Fong, S.*, +, *TSC Jan.-Feb. 2016 33-45*

Process Discovery from Dependence-Complete Event Logs. *Song, W.*, +, *TSC Sept.-Oct. 2016 714-727*

Scalable Process Discovery Using Map-Reduce. *Evermann, J.*, *TSC May-June 2016 469-481*

Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm. *Dong, B.*, +, *TSC Jan.-Feb. 2016 18-32*

**Data models**

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems. *She, W.*, +, *TSC Nov.-Dec. 2016 940-953*

**Data processing**

Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K.*, +, *TSC Sept.-Oct. 2016 784-785*

**Data protection**

Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*

**Database systems**

Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K.*, +, *TSC Sept.-Oct. 2016 784-785*

**Decision making**

Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory. *Liu, X.*, +, *TSC March-April 2016 186-198*

**Decision support systems**

Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W.*, +, *TSC March-April 2016 172-173*

**Delays**

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

**Digital simulation**

SEED: A Scalable Approach for Cyber-Physical System Simulation. *Garraghan, P.*, +, *TSC March-April 2016 199-212*

**Disasters**

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y.*, +, *TSC July-Aug. 2016 594-607*

**Distributed algorithms**

Distributed Maximal Clique Computation and Management. *Xu, Y.*, +, *TSC Jan.-Feb. 2016 110-122*

On Improving Constrained Single and Group Operator Placement Using Evictions in Big Data Environments. *Tziritas, N.*, +, *TSC Sept.-Oct. 2016 818-831*

**Distributed databases**

A Configuration-Independent Score-Based Benchmark for Distributed Databases. *Ardagna, C.A.*, +, *TSC Jan.-Feb. 2016 123-137*

Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S.*, +, *TSC Nov.-Dec. 2016 996-998*

Deep Computation Model for Unsupervised Feature Learning on Big Data. *Zhang, Q.*, +, *TSC Jan.-Feb. 2016 161-171*

Dynamic Virtual Chunks: On Supporting Efficient Accesses to Compressed Scientific Data. *Zhao, D.*, +, *TSC Jan.-Feb. 2016 96-109*

**Distributed processing**

SEED: A Scalable Approach for Cyber-Physical System Simulation. *Garraghan, P.*, +, *TSC March-April 2016 199-212*

Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

**Document handling**

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

**Dynamic scheduling**

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

**E****Electricity**

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

**Electronic health records**

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K.*, +, *TSC Sept.-Oct. 2016 757-770*

**Emergency management**

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y.*, +, *TSC July-Aug. 2016 594-607*

**Encoding**

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

**Energy consumption**

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

**F****Fault tolerant computing**

BeTL: MapReduce Checkpoint Tactics Beneath the Task Level. *Wang, H.*, +, *TSC Jan.-Feb. 2016 84-95*

**Feature selection**

Accelerated PSO Swarm Search Feature Selection for Data Stream Mining Big Data. *Fong, S.*, +, *TSC Jan.-Feb. 2016 33-45*

**Firewalls**

Towards Achieving Data Security with the Cloud Computing Adoption Framework. *Chang, V.*, +, *TSC Jan.-Feb. 2016 138-151*

**Flow graphs**

A Semi-Automatic Approach of Transforming Applications to be Multi-Tenancy Enabled. *Fan, L.*, +, *TSC March-April 2016 227-240*

**Formal specification**

A Feature-Based Framework for Developing and Provisioning Customizable Web Services. *Nguyen, T.*, +, *TSC July-Aug. 2016 496-510*

VerChor: A Framework for the Design and Verification of Choreographies. *Gudemann, M.*, +, *TSC July-Aug. 2016 647-660*

**Formal verification**

Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm. *Dong, B.*, +, *TSC Jan.-Feb. 2016 18-32*

VerChor: A Framework for the Design and Verification of Choreographies. *Gudemann, M.*, +, *TSC July-Aug. 2016 647-660*

**G****Game theory**

Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory. *Liu, X.*, +, *TSC March-April 2016 186-198*

**Generators**

Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S.*, +, *TSC Nov.-Dec. 2016 996-998*

**Genetic algorithms**

Adaptive Service Selection According to the Service Density in Multiple QoS Aspects. *Cho, J.*, +, *TSC Nov.-Dec. 2016 883-894*

**Graph theory**

Distributed Maximal Clique Computation and Management. *Xu, Y.*, +, *TSC Jan.-Feb. 2016 110-122*

Diversifying Web Service Recommendation Results via Exploring Service Usage History. *Kang, G.*, +, *TSC July-Aug. 2016 566-579*

**Graphical user interfaces**

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y.*, +, *TSC July-Aug. 2016 594-607*

Robust Service Compositions with Functional and Location Diversity. *Wagner, F.*, +, *TSC March-April 2016 277-290*

**H****Heuristic algorithms**

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F.*, +, *TSC Nov.-Dec. 2016 910-925*

Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

**Hospitals**

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

**I****Indexing**

Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*

**Information systems**

Process Discovery from Dependence-Complete Event Logs. *Song, W.*, +, *TSC Sept.-Oct. 2016 714-727*

**Internet**

FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B.*, *TSC Sept.-Oct. 2016 745-756*

SmartCrawler: A Two-Stage Crawler for Efficiently Harvesting Deep-Web Interfaces. *Zhao, F.*, +, *TSC July-Aug. 2016 608-620*

**Internet of Things**

Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, I.*, +, *TSC May-June 2016 482-495*

**J****Java**

A Semi-Automatic Approach of Transforming Applications to be Multi-Tenancy Enabled. *Fan, L.*, +, *TSC March-April 2016 227-240*

Processing Cassandra Datasets with Hadoop-Streaming Based Approaches. *Dede, E., +, TSC Jan.-Feb. 2016 46-58*

## K

### Knowledge management

Modern Service Industry and Crossover Services: Development and Trends in China. *Wu, Z., +, TSC Sept.-Oct. 2016 664-671*

## L

### Linear programming

Adaptive Service Selection According to the Service Density in Multiple Qos Aspects. *Cho, J., +, TSC Nov.-Dec. 2016 883-894*

### Location-based services

A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W., +, TSC Nov.-Dec. 2016 846-861*

## M

### Markov processes

Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue. *Chang, X., +, TSC May-June 2016 408-420*

### Mechanical factors

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A., +, TSC Nov.-Dec. 2016 895-909*

### Medical computing

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K., +, TSC Sept.-Oct. 2016 757-770*

### Memory management

A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X., +, TSC Nov.-Dec. 2016 862-871*

### Middleware

A Feature-Based Framework for Developing and Provisioning Customizable Web Services. *Nguyen, T., +, TSC July-Aug. 2016 496-510*

A Unified Business-Driven Cloud Management Framework. *Lu, Q., +, TSC Nov.-Dec. 2016 872-882*

Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S., +, TSC Nov.-Dec. 2016 996-998*

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K., +, TSC Sept.-Oct. 2016 757-770*

Modern Service Industry and Crossover Services: Development and Trends in China. *Wu, Z., +, TSC Sept.-Oct. 2016 664-671*

Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I., +, TSC March-April 2016 174-185*

### Mobile communication

A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W., +, TSC Nov.-Dec. 2016 846-861*

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A., +, TSC Nov.-Dec. 2016 895-909*

Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W., +, TSC March-April 2016 172-173*

### Mobile computing

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A., +, TSC Nov.-Dec. 2016 895-909*

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F., +, TSC Sept.-Oct. 2016 796-805*

Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S., +, TSC Sept.-Oct. 2016 806-817*

FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B., TSC Sept.-Oct. 2016 745-756*

GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y., TSC Sept.-Oct. 2016 786-795*

Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W., +, TSC March-April 2016 172-173*

Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J., +, TSC Sept.-Oct. 2016 686-699*

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K., +, TSC Sept.-Oct. 2016 757-770*

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y., +, TSC July-Aug. 2016 594-607*

Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K., +, TSC Sept.-Oct. 2016 784-785*

TICRec: A Probabilistic Framework to Utilize Temporal Influence Correlations for Time-Aware Location Recommendations. *Zhang, J., +, TSC July-Aug. 2016 633-646*

### Mobile handsets

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A., +, TSC Nov.-Dec. 2016 895-909*

### Mobile learning

Mobility-Enabled Service Selection for Composite Services. *Deng, S., +, TSC May-June 2016 394-407*

### Mobility management (mobile radio)

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K., +, TSC Sept.-Oct. 2016 757-770*

### Monitoring

A Unified Business-Driven Cloud Management Framework. *Lu, Q., +, TSC Nov.-Dec. 2016 872-882*

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H., +, TSC Nov.-Dec. 2016 982-995*

### Monte Carlo methods

Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I., +, TSC March-April 2016 174-185*

### Multi-agent systems

Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision. *Wang, L., +, TSC March-April 2016 264-276*

Trustworthy Stigmatic Service Composition and Adaptation in Decentralized Environments. *Moustafa, A., +, TSC March-April 2016 317-329*

## O

### Online services

A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W., +, TSC Nov.-Dec. 2016 846-861*

### Ontologies

OMI-DL: An Ontology Matching Framework. *Liu, X., +, TSC July-Aug. 2016 580-593*

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G., +, TSC Nov.-Dec. 2016 954-967*

### Open systems

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S., +, TSC March-April 2016 241-249*

Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, L., +, TSC May-June 2016 482-495*

### Optimization

Adaptive Service Selection According to the Service Density in Multiple Qos Aspects. *Cho, J., +, TSC Nov.-Dec. 2016 883-894*

BGM-BLA: A New Algorithm for Dynamic Migration of Virtual Machines in Cloud Computing. *Tao, F., +, TSC Nov.-Dec. 2016 910-925*

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A., +, TSC May-June 2016 421-432*

Optimization of Complex Elastic Processes. *Hoensch, P., +, TSC Sept.-Oct. 2016 700-713*

Robust Service Compositions with Functional and Location Diversity. *Wagner, F., +, TSC March-April 2016 277-290*

## P

### Parallel processing

BeTL: MapReduce Checkpoint Tactics Beneath the Task Level. *Wang, H., +, TSC Jan.-Feb. 2016 84-95*

Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S., +, TSC Sept.-Oct. 2016 806-817*

Dynamic Job Ordering and Slot Configurations for MapReduce Workloads. *Tang, S., +, TSC Jan.-Feb. 2016 4-17*

Processing Cassandra Datasets with Hadoop-Streaming Based Approaches. *Dede, E., +, TSC Jan.-Feb. 2016 46-58*

### Pareto optimization

Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory. *Liu, X., +, TSC March-April 2016 186-198*



**Particle swarm optimization**

- Accelerated PSO Swarm Search Feature Selection for Data Stream Mining Big Data. *Fong, S.*, +, *TSC Jan.-Feb. 2016 33-45*
- Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S.*, +, *TSC Sept.-Oct. 2016 806-817*

**Partitioning algorithms**

- A Co-Training Strategy for Multiple View Clustering in Process Mining. *Appice, A.*, +, *TSC Nov.-Dec. 2016 832-845*

**Pattern clustering**

- An Approach to Computation of Similarity, Inter-Cluster Distance and Selection of Threshold for Service Discovery Using Clusters. *Surianarayanan, C.*, +, *TSC July-Aug. 2016 524-536*
- Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S.*, +, *TSC Sept.-Oct. 2016 806-817*
- Processing Cassandra Datasets with Hadoop-Streaming Based Approaches. *Dede, E.*, +, *TSC Jan.-Feb. 2016 46-58*

**Pattern matching**

- An Approach to Computation of Similarity, Inter-Cluster Distance and Selection of Threshold for Service Discovery Using Clusters. *Surianarayanan, C.*, +, *TSC July-Aug. 2016 524-536*

**Performance evaluation**

- Web Scaling Frameworks for Web Services in the Cloud. *Fankhauser, T.*, +, *TSC Sept.-Oct. 2016 728-741*

**Planning (artificial intelligence)**

- Automatic Web Service Composition Based on Uncertainty Execution Effects. *Wang, P.*, +, *TSC July-Aug. 2016 551-565*

**Power aware computing**

- FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B.*, *TSC Sept.-Oct. 2016 745-756*
- Optimization of Complex Elastic Processes. *Hoensch, P.*, +, *TSC Sept.-Oct. 2016 700-713*

**Power engineering computing**

- Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I.*, +, *TSC March-April 2016 174-185*

**Prediction algorithms**

- A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W.*, +, *TSC Nov.-Dec. 2016 846-861*
- Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

**Prediction theory**

- Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J.*, +, *TSC Sept.-Oct. 2016 686-699*

**Pricing**

- Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*
- Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*
- Service Pricing Decision in Cyber-Physical Systems: Insights from Game Theory. *Liu, X.*, +, *TSC March-April 2016 186-198*

**Probability**

- TICRec: A Probabilistic Framework to Utilize Temporal Influence Correlations for Time-Aware Location Recommendations. *Zhang, J.*, +, *TSC July-Aug. 2016 633-646*
- Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm. *Dong, B.*, +, *TSC Jan.-Feb. 2016 18-32*

**Procurement**

- A Configuration-Independent Score-Based Benchmark for Distributed Databases. *Ardagna, C.A.*, +, *TSC Jan.-Feb. 2016 123-137*

**Protocols**

- Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision. *Wang, L.*, +, *TSC March-April 2016 264-276*

**Public key**

- Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S.*, +, *TSC Nov.-Dec. 2016 996-998*

**Q****Quality of service**

- A Highly Accurate Prediction Algorithm for Unknown Web Service QoS Values. *Ma, Y.*, +, *TSC July-Aug. 2016 511-523*

- A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X.*, +, *TSC Nov.-Dec. 2016 862-871*
- Adaptive Service Selection According to the Service Density in Multiple QoS Aspects. *Cho, J.*, +, *TSC Nov.-Dec. 2016 883-894*
- Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*
- Kriging-Based Self-Adaptive Cloud Controllers. *Gambi, A.*, +, *TSC May-June 2016 368-381*
- Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J.*, +, *TSC Sept.-Oct. 2016 686-699*
- Long-Term QoS-Aware Cloud Service Composition Using Multivariate Time Series Analysis. *Ye, Z.*, +, *TSC May-June 2016 382-393*
- Optimization of Complex Elastic Processes. *Hoensch, P.*, +, *TSC Sept.-Oct. 2016 700-713*
- Robust Service Compositions with Functional and Location Diversity. *Wagner, F.*, +, *TSC March-April 2016 277-290*
- Service Selection for Composition with QoS Correlations. *Deng, S.*, +, *TSC March-April 2016 291-303*
- Skyline Discovery and Composition of Multi-Cloud Mashup Services. *Zhang, F.*, +, *TSC Jan.-Feb. 2016 72-83*
- Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

**Query processing**

- Distributed Maximal Clique Computation and Management. *Xu, Y.*, +, *TSC Jan.-Feb. 2016 110-122*
- Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*
- On Improving Constrained Single and Group Operator Placement Using Evictions in Big Data Environments. *Tziritas, N.*, +, *TSC Sept.-Oct. 2016 818-831*
- Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*
- Skyline Discovery and Composition of Multi-Cloud Mashup Services. *Zhang, F.*, +, *TSC Jan.-Feb. 2016 72-83*
- Supporting Multi Data Stores Applications in Cloud Environments. *Sellami, R.*, +, *TSC Jan.-Feb. 2016 59-71*
- Question answering (information retrieval)**
- Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

**R****Recommender systems**

- A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W.*, +, *TSC Nov.-Dec. 2016 846-861*
- GroRec: A Group-Centric Intelligent Recommender System Integrating Social, Mobile and Big Data Technologies. *Zhang, Y.*, *TSC Sept.-Oct. 2016 786-795*
- Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J.*, +, *TSC Sept.-Oct. 2016 686-699*
- Online Learning in Large-Scale Contextual Recommender Systems. *Song, L.*, +, *TSC May-June 2016 433-445*
- TICRec: A Probabilistic Framework to Utilize Temporal Influence Correlations for Time-Aware Location Recommendations. *Zhang, J.*, +, *TSC July-Aug. 2016 633-646*

**Regression analysis**

- Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I.*, +, *TSC March-April 2016 174-185*

**Relational databases**

- A Multilevel Index Model to Expedite Web Service Discovery and Composition in Large-Scale Service Repositories. *Wu, Y.*, +, *TSC May-June 2016 330-342*
- Supporting Multi Data Stores Applications in Cloud Environments. *Sellami, R.*, +, *TSC Jan.-Feb. 2016 59-71*

**Relevance feedback**

- Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

**Reliability**

- Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems. *She, W.*, +, *TSC Nov.-Dec. 2016 940-953*
- Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

**Resource allocation**

- A Feature-Based Framework for Developing and Provisioning Customizable Web Services. *Nguyen, T.*, +, *TSC July-Aug. 2016 496-510*

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*

Kriging-Based Self-Adaptive Cloud Controllers. *Gambi, A.*, +, *TSC May-June 2016 368-381*

Optimization of Complex Elastic Processes. *Hoenisch, P.*, +, *TSC Sept.-Oct. 2016 700-713*

#### Resource management

A New Approach to the Cloud-Based Heterogeneous MapReduce Placement Problem. *Xu, X.*, +, *TSC Nov.-Dec. 2016 862-871*

Auction Mechanisms Toward Efficient Resource Sharing for Cloudlets in Mobile Cloud Computing. *Jin, A.*, +, *TSC Nov.-Dec. 2016 895-909*

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

#### Robot sensing systems

Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W.*, +, *TSC March-April 2016 172-173*

## S

#### Scheduling

A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W.*, +, *TSC Nov.-Dec. 2016 846-861*

Optimization of Complex Elastic Processes. *Hoenisch, P.*, +, *TSC Sept.-Oct. 2016 700-713*

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y.*, +, *TSC July-Aug. 2016 594-607*

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

#### Scheduling algorithms

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

#### Scientific information systems

Dynamic Virtual Chunks: On Supporting Efficient Accesses to Compressed Scientific Data. *Zhao, D.*, +, *TSC Jan.-Feb. 2016 96-109*

#### Search engines

SmartCrawler: A Two-Stage Crawler for Efficiently Harvesting Deep-Web Interfaces. *Zhao, F.*, +, *TSC July-Aug. 2016 608-620*

#### Search problems

An Integrated Semantic Web Service Discovery and Composition Framework. *Rodriguez-Mier, P.*, +, *TSC July-Aug. 2016 537-550*

Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

#### Security of data

A Trusted IaaS Environment with Hardware Security Module. *Seol, J.*, +, *TSC May-June 2016 343-356*

#### Semantic Web

An Integrated Semantic Web Service Discovery and Composition Framework. *Rodriguez-Mier, P.*, +, *TSC July-Aug. 2016 537-550*

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

#### Semantics

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

#### Sensors

Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I.*, +, *TSC March-April 2016 174-185*

#### Servers

A Unified Business-Driven Cloud Management Framework. *Lu, Q.*, +, *TSC Nov.-Dec. 2016 872-882*

Comments on "Identity-Based Distributed Provable Data Possession in Multicloud Storage". *Peng, S.*, +, *TSC Nov.-Dec. 2016 996-998*

Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

Online Energy Budgeting for Cost Minimization in Virtualized Data Center. *Islam, M.A.*, +, *TSC May-June 2016 421-432*

#### Service industries

Modern Service Industry and Crossover Services: Development and Trends in China. *Wu, Z.*, +, *TSC Sept.-Oct. 2016 664-671*

#### Service-oriented architecture

A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution. *Fernandez, H.*, +, *TSC March-April 2016 213-226*

A Feature-Based Framework for Developing and Provisioning Customizable Web Services. *Nguyen, T.*, +, *TSC July-Aug. 2016 496-510*

Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*

Rescue Wings: Mobile Computing and Active Services Support for Disaster Rescue. *Zheng, Y.*, +, *TSC July-Aug. 2016 594-607*

Robust Service Compositions with Functional and Location Diversity. *Wagner, F.*, +, *TSC March-April 2016 277-290*

Towards Relevancy Aware Service Oriented Systems in WSNs. *Shah, S.Y.*, +, *TSC March-April 2016 304-316*

Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, L.*, +, *TSC May-June 2016 482-495*

#### Set theory

Distributed Maximal Clique Computation and Management. *Xu, Y.*, +, *TSC Jan.-Feb. 2016 110-122*

#### Smart phones

Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S.*, +, *TSC Sept.-Oct. 2016 806-817*

FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B.*, *TSC Sept.-Oct. 2016 745-756*

#### Smart power grids

Uncertainty Analysis of Middleware Services for Streaming Smart Grid Applications. *Akkaya, I.*, +, *TSC March-April 2016 174-185*

#### Social networking (online)

TICRec: A Probabilistic Framework to Utilize Temporal Influence Correlations for Time-Aware Location Recommendations. *Zhang, J.*, +, *TSC July-Aug. 2016 633-646*

Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, L.*, +, *TSC May-June 2016 482-495*

Web Scaling Frameworks for Web Services in the Cloud. *Fankhauser, T.*, +, *TSC Sept.-Oct. 2016 728-741*

#### Software architecture

Web Scaling Frameworks for Web Services in the Cloud. *Fankhauser, T.*, +, *TSC Sept.-Oct. 2016 728-741*

#### Software engineering

Editorial: Software Engineering and Applications for Cloud-Based Mobile Systems. *Carver, D.*, +, *TSC Sept.-Oct. 2016 742-744*

Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

Refactor Business Process Models with Maximized Parallelism. *Jin, T.*, +, *TSC May-June 2016 456-468*

#### Software fault tolerance

FLANDROID: Energy-Efficient Recommendations of Reliable Context Providers for Android Applications. *Jiang, B.*, *TSC Sept.-Oct. 2016 745-756*

#### Software maintenance

A Semi-Automatic Approach of Transforming Applications to be Multi-Tenancy Enabled. *Fan, L.*, +, *TSC March-April 2016 227-240*

#### Software performance evaluation

Dynamic Job Ordering and Slot Configurations for MapReduce Workloads. *Tang, S.*, +, *TSC Jan.-Feb. 2016 4-17*

#### Software prototyping

A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution. *Fernandez, H.*, +, *TSC March-April 2016 213-226*

#### Special issues and sections

Editorial Preface: Special Issue on Big Data Analytics, Infrastructure, and Applications. *Sobolevsky, S.*, +, *TSC Jan.-Feb. 2016 2-3*

Guest Editorial: Special Issue on Cyber-Physical Systems and Services. *He, W.*, +, *TSC March-April 2016 172-173*

Special Issue on Mobile Big Data Management and Innovative Applications. *Hwang, K.*, +, *TSC Sept.-Oct. 2016 784-785*

#### SQL

A Configuration-Independent Score-Based Benchmark for Distributed Databases. *Ardagna, C.A.*, +, *TSC Jan.-Feb. 2016 123-137*

#### Standards

CDA Generation and Integration for Health Information Exchange Based on Cloud Computing System. *Lee, S.*, +, *TSC March-April 2016 241-249*

#### Statistical analysis

Big Data-Driven Service Composition Using Parallel Clustered Particle Swarm Optimization in Mobile Environment. *Hossain, M.S.*, +, *TSC Sept.-Oct. 2016 806-817*

Kriging-Based Self-Adaptive Cloud Controllers. *Gambi, A.*, +, *TSC May-June 2016 368-381*

#### Statistical distributions

Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue. *Chang, X.*, +, *TSC May-June 2016 408-420*

**Streaming media**

Minimizing Content Reorganization and Tolerating Imperfect Workload Prediction for Cloud-Based Video-on-Demand Services. *Tian, C.*, +, *TSC Nov.-Dec. 2016 926-939*

**Syntactics**

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

**Systems modeling**

A Unified Business-Driven Cloud Management Framework. *Lu, Q.*, +, *TSC Nov.-Dec. 2016 872-882*

**T****Telecommunication computing**

Towards Relevancy Aware Service Oriented Systems in WSNs. *Shah, S.Y.*, +, *TSC March-April 2016 304-316*

**Telecommunication network planning**

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*

**Telecommunication traffic**

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*

**Tensors**

Deep Computation Model for Unsupervised Feature Learning on Big Data. *Zhang, Q.*, +, *TSC Jan.-Feb. 2016 161-171*

**Text analysis**

Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

**Throughput**

Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

VMCD: A Virtual Multi-Channel Disk I/O Scheduling Method for Virtual Machines. *Tan, H.*, +, *TSC Nov.-Dec. 2016 982-995*

**Time complexity**

Adaptive Service Selection According to the Service Density in Multiple QoS Aspects. *Cho, J.*, +, *TSC Nov.-Dec. 2016 883-894*

**Time factors**

Adaptive Service Selection According to the Service Density in Multiple QoS Aspects. *Cho, J.*, +, *TSC Nov.-Dec. 2016 883-894*

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

**Time series**

Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *Xu, F.*, +, *TSC Sept.-Oct. 2016 796-805*

Long-Term QoS-Aware Cloud Service Composition Using Multivariate Time Series Analysis. *Ye, Z.*, +, *TSC May-June 2016 382-393*

**Training**

A Co-Training Strategy for Multiple View Clustering in Process Mining. *Appice, A.*, +, *TSC Nov.-Dec. 2016 832-845*

**Trees (mathematics)**

Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*

**Trusted computing**

A Trusted IaaS Environment with Hardware Security Module. *Seol, J.*, +, *TSC May-June 2016 343-356*

Trust Management for SOA-Based IoT and Its Application to Service Composition. *Chen, I.*, +, *TSC May-June 2016 482-495*

Trust-but-Verify: Verifying Result Correctness of Outsourced Frequent Itemset Mining in Data-Mining-As-a-Service Paradigm. *Dong, B.*, +, *TSC Jan.-Feb. 2016 18-32*

Trustworthy Stigmergic Service Composition and Adaptation in Decentralized Environments. *Moustafa, A.*, +, *TSC March-April 2016 317-329*

**U****Ubiquitous computing**

The Use of Ubiquitous Computing for Business Process Improvement. *Yousfi, A.*, +, *TSC July-Aug. 2016 621-632*

**Unsupervised learning**

Deep Computation Model for Unsupervised Feature Learning on Big Data. *Zhang, Q.*, +, *TSC Jan.-Feb. 2016 161-171*

**V****Virtual machines**

Modeling Active Virtual Machines on IaaS Clouds Using an M/G/m/m+K Queue. *Chang, X.*, +, *TSC May-June 2016 408-420*

**W****Web search**

A Location- and Diversity-Aware News Feed System for Mobile Users. *Xu, W.*, +, *TSC Nov.-Dec. 2016 846-861*

**Web services**

A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution. *Fernandez, H.*, +, *TSC March-April 2016 213-226*

A Feature-Based Framework for Developing and Provisioning Customizable Web Services. *Nguyen, T.*, +, *TSC July-Aug. 2016 496-510*

A Highly Accurate Prediction Algorithm for Unknown Web Service QoS Values. *Ma, Y.*, +, *TSC July-Aug. 2016 511-523*

A Multilevel Index Model to Expedite Web Service Discovery and Composition in Large-Scale Service Repositories. *Wu, Y.*, +, *TSC May-June 2016 330-342*

Adaptive Service Selection According to the Service Density in Multiple QoS Aspects. *Cho, J.*, +, *TSC Nov.-Dec. 2016 883-894*

An Integrated Semantic Web Service Discovery and Composition Framework. *Rodriguez-Mier, P.*, +, *TSC July-Aug. 2016 537-550*

Automatic Web Service Composition Based on Uncertainty Execution Effects. *Wang, P.*, +, *TSC July-Aug. 2016 551-565*

Diversifying Web Service Recommendation Results via Exploring Service Usage History. *Kang, G.*, +, *TSC July-Aug. 2016 566-579*

Fast Service Process Fragment Indexing and Ranking. *Zeng, C.*, +, *TSC Sept.-Oct. 2016 672-685*

Location-Aware and Personalized Collaborative Filtering for Web Service Recommendation. *Liu, J.*, +, *TSC Sept.-Oct. 2016 686-699*

Multi-Phase Ant Colony System for Multi-Party Data-Intensive Service Provision. *Wang, L.*, +, *TSC March-April 2016 264-276*

Role-Based Integrated Access Control and Data Provenance for SOA Based Net-Centric Systems. *She, W.*, +, *TSC Nov.-Dec. 2016 940-953*

Service Selection for Composition with QoS Correlations. *Deng, S.*, +, *TSC March-April 2016 291-303*

Skyline Discovery and Composition of Multi-Cloud Mashup Services. *Zhang, F.*, +, *TSC Jan.-Feb. 2016 72-83*

The Tomaco Hybrid Matching Framework for SAWSDL Semantic Web Services. *Stavropoulos, T.G.*, +, *TSC Nov.-Dec. 2016 954-967*

Trust and Reputation of Web Services Through QoS Correlation Lens. *Mehdi, M.*, +, *TSC Nov.-Dec. 2016 968-981*

Trustworthy Stigmergic Service Composition and Adaptation in Decentralized Environments. *Moustafa, A.*, +, *TSC March-April 2016 317-329*

Web Scaling Frameworks for Web Services in the Cloud. *Fankhauser, T.*, +, *TSC Sept.-Oct. 2016 728-741*

**Web sites**

A Multilevel Index Model to Expedite Web Service Discovery and Composition in Large-Scale Service Repositories. *Wu, Y.*, +, *TSC May-June 2016 330-342*

Online Learning in Large-Scale Contextual Recommender Systems. *Song, L.*, +, *TSC May-June 2016 433-445*

SmartCrawler: A Two-Stage Crawler for Efficiently Harvesting Deep-Web Interfaces. *Zhao, F.*, +, *TSC July-Aug. 2016 608-620*

**Wireless channels**

Mobile Medical Data Synchronization on Cloud-Powered Middleware Platform. *Lomotey, R.K.*, +, *TSC Sept.-Oct. 2016 757-770*

**Wireless sensor networks**

Towards Relevancy Aware Service Oriented Systems in WSNs. *Shah, S.Y.*, +, *TSC March-April 2016 304-316*

**Word processing**

Query Expansion Based on Crowd Knowledge for Code Search. *Nie, L.*, +, *TSC Sept.-Oct. 2016 771-783*

**Workflow management software**

A Chemistry-Inspired Workflow Management System for Decentralizing Workflow Execution. *Fernandez, H.*, +, *TSC March-April 2016 213-226*

**Workstation clusters**

SEED: A Scalable Approach for Cyber-Physical System Simulation. *Garraghan, P.*, +, *TSC March-April 2016 199-212*