

**Special Topic: AI for Biology**

|                                                                                                              |            |
|--------------------------------------------------------------------------------------------------------------|------------|
| Large language models transform biological research: from architecture to utilization .....                  | 170101(25) |
| Tao WANG & Zeyu LUO                                                                                          |            |
| AI in drug development: advances in response, combination therapy, repositioning, and molecular design ..... | 170102(17) |
| Ren QI, Shujia LIU, Xingqi HUI, Alexey K. SHAYTAN & Bin LIU                                                  |            |
| Self-supervised learning in drug discovery .....                                                             | 170103(16) |
| Yangyang CHEN, Zixu WANG, Jianmin WANG, Yanyi CHU, Qingpeng ZHANG, Zhong Alan LI & Xiangxiang ZENG           |            |
| Molecular pretraining models towards molecular property prediction.....                                      | 170104(19) |
| Jianbo QIAO, Wenjia GAO, Junru JIN, Ding WANG, Xu GUO, Balachandran MANAVALAN & Leyi WEI                     |            |
| From intention to implementation: automating biomedical research via LLMs .....                              | 170105(18) |
| Yi LUO, Linghang SHI, Yihao LI, Aobo ZHUANG, Yeyun GONG, Ling LIU & Chen LIN                                 |            |
| OntoGene: knowledge-enhanced BERT for promoter identification .....                                          | 170106(13) |
| Yang LI, Mengli GAO, Jilong BIAN, Kaiqi ZHAO, Dan LI & Guohua WANG                                           |            |

**Special Topic: Integration of Large AI Model and 6G**

|                                                                                                                    |            |
|--------------------------------------------------------------------------------------------------------------------|------------|
| On privacy, security, and trustworthiness in distributed wireless large AI models.....                             | 170301(15) |
| Zhaohui YANG, Wei XU, Le LIANG, Yuanhao CUI, Zhijin QIN & M  rouane DEBBAH                                         |            |
| Satellite edge artificial intelligence with large models: architectures and technologies .....                     | 170302(15) |
| Yuanming SHI, Jingyang ZHU, Chunxiao JIANG, Linling KUANG & Khaled Ben LETAIEF                                     |            |
| Towards wireless native big AI model: the mission and approach differ from large language model .....              | 170303(12) |
| Zirui CHEN, Zhaoyang ZHANG, Chenyu LIU & Ziqing XING                                                               |            |
| FAS-assisted federated learning over wireless communication systems.....                                           | 170304(17) |
| Hao XU, Kai-Kit WONG, Yongxu ZHU, Chongwen HUANG, Chao WANG, Wee Kiat NEW, Farshad Rostami GHADI & Gui ZHOU        |            |
| Personalizing rate-splitting in vehicular communication via large multi-modal model.....                           | 170305(16) |
| Shengyu ZHANG, Shiyao ZHANG, Weijie YUAN, Jia SHI, Zan LI & Tony Q.S. QUEK                                         |            |
| Large AI model for delay-Doppler domain channel prediction in 6G OTFS-based vehicular networks .....               | 170306(15) |
| Jianzhe XUE, Dongcheng YUAN, Zhanxi MA, Tiankai JIANG, Yu SUN, Haibo ZHOU & Xuemin SHEN                            |            |
| Diffusion-based auction mechanism for efficient resource management in 6G-enabled vehicular metaverses.....        | 170307(16) |
| Jiawen KANG, Yongju TONG, Yue ZHONG, Junlong CHEN, Minrui XU, Dusit NIYATO, Runrong DENG & Shiwen MAO              |            |
| Let RFF do the talking: large language model enabled lightweight RFFI for 6G edge intelligence .....               | 170308(16) |
| Ning GAO, Yi LIU, Qifan ZHANG, Xiao LI & Shi JIN                                                                   |            |
| Enhanced channel estimation for near-field IRS-aided multi-user MIMO system via a large deep residual network..... | 170309(18) |
| Yan WANG, Yongqiang LI, Minghao CHEN, Yu YAO, Feng SHU & Jiangzhou WANG                                            |            |

**REVIEW**

|                                                                                                                                                                                                                                                                                                                                              |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Overview of AI and communication for 6G network: fundamentals, challenges, and future research opportunities.....                                                                                                                                                                                                                            | 171301(61) |
| Qimei CUI, Xiaohu YOU, Ni WEI, Guoshun NAN, Xuefei ZHANG, Jianhua ZHANG, Xinchun LYU, Ming AI, Xiaofeng TAO, Zhiyong FENG, Ping ZHANG, Qingqing WU, Meixia TAO, Yongming HUANG, Chongwen HUANG, Guangyi LIU, Chenghui PENG, Zhiwen PAN, Tao SUN, Dusit NIYATO, Tao CHEN, Muhammad Khurram KHAN, Abbas JAMALIPOUR, Mohsen GUIZANI & Chau YUEN |            |

**RESEARCH PAPER**

|                                           |            |
|-------------------------------------------|------------|
| Learning to represent code semantics..... | 172101(21) |
| Fang LIU, Ge LI, Qianhui ZHAO & Li ZHANG  |            |

|                                                                                                                                     |            |
|-------------------------------------------------------------------------------------------------------------------------------------|------------|
| Improving cross-task generalization with step-by-step instructions.....                                                             | 172102(15) |
| Yang WU, Yanyan ZHAO, Zhongyang LI, Bing QIN & Kai XIONG                                                                            |            |
| Data-driven optimal tuning of PID controller parameters .....                                                                       | 172201(21) |
| Ning LIU, Tianyou CHAI, Yajun ZHANG & Weinan GAO                                                                                    |            |
| Composite disturbance filtering and full actuation control for fully observed systems .....                                         | 172202(13) |
| Chenliang WANG, Zhihui WANG, Wenshuo LI, Aiguo WU & Lei GUO                                                                         |            |
| A deep reinforcement learning model for large-scale traffic signal control based on graph meta-learning using local subgraphs ..... | 172203(18) |
| Zhicheng ZHOU, Ya ZHANG & Xinde LI                                                                                                  |            |

## MOOP

|                                                                                             |             |
|---------------------------------------------------------------------------------------------|-------------|
| Mobile wireless light communication network .....                                           | 174301( 3 ) |
| Ziqian QI, Linning WANG, Yingze LIANG, Jiayao ZHOU, Pengzhan LIU, Hongbo ZHU & Yongjin WANG |             |

## NEWS & VIEWS

|                                                                                                                       |             |
|-----------------------------------------------------------------------------------------------------------------------|-------------|
| First three-dimensional imaging experiment of Chinese commercial SAR satellite Fucheng-1 .....                        | 177301( 2 ) |
| Hui BI, Shuang JIN, Weihao XU, Jin XU, Qi GUO, Feng YANG, Daiyin ZHU, Jingjing ZHANG, Qian GUO, Weijia REN & Wen HONG |             |

## LETTER

|                                                                                                                                                    |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| A parental emotion coaching dialogue assistant for better parent–child interaction.....                                                            | 179101( 2 ) |
| Weixiang ZHAO, Shilong WANG, Yanpeng TONG, Xin LU, Zhuojun LI, Yanyan ZHAO, Chenxue WANG, Tian ZHENG & Bing QIN                                    |             |
| Prediction of Budd-Chiari syndrome based on attention mechanisms of high-risk factors in multi-hop graph learning.....                             | 179102( 2 ) |
| Lei WANG, Shengli LI, Xiaorui SU, Zhengwei LI, Mengmeng WEI, Bowei ZHAO, Maoheng ZU, Qingqiao ZHANG & Zhuhong YOU                                  |             |
| Time-delay effects on the dynamical behavior of switched nonlinear time-delay systems .....                                                        | 179201( 2 ) |
| Zhichuang WANG, Wei HE, Jian SUN & Gang WANG                                                                                                       |             |
| Cost-effective 200-Gbps/λ coherent PON enabled by DFB lasers and a pilot-based carrier recovery .....                                              | 179301( 2 ) |
| Yifan CHEN, Jianjun YU, Chen WANG, Jianyu LONG, Bohan SANG, Wen ZHOU, Kaihui WANG & Fan LI                                                         |             |
| A D-band CMOS eight-channel I/Q transmitter with enhanced LO feed-through suppression .....                                                        | 179401( 2 ) |
| Ning JIANG, Pingyang HE, Huiqi LIU, Guohua ZHAO, Ming ZHAO, Dalong ZHU & Dixian ZHAO                                                               |             |
| A reference-free and derivative-insensitive all-digital calibration technique for timing-skew in TI-ADCs .....                                     | 179402( 2 ) |
| Li DANG, Shubin LIU, Ruixue DING, Chengyuan LIU, Hongzhi LIANG, Haolin HAN, Yue CAO & Zhangming ZHU                                                |             |
| Dielectric metasurface enhanced performance in multilayer WS <sub>2</sub> photodetector .....                                                      | 179403( 2 ) |
| Huijuan ZHAO, Weiqi WANG, Huanlin DING, Sumei WANG, Zemin TANG, Shuhan LI, Jiakuan WANG, Yufan WANG, Qiyuan ZHOU, Anran WANG, Yuanfang YU & Li GAO |             |
| High-sensitivity piezoelectric composite ultrasonic transducers based on Fresnel lenses for high-resolution imaging .....                          | 179404( 2 ) |
| Zhaoxi LI, Yiheng YANG, Chenxue HOU, Xiongwei WEI, Yi QUAN, Xiaozhou LÜ, Chunlong FEI, Weimin BAO & Yintang YANG                                   |             |