Special Focus on Brain Machine Interfaces and Applications
Guest Editor: Hu TAO
Recent advances in wireless epicortical and intracortical neuronal recording systems ..............................................................140401(18)
Bowen JI, Zekai LIANG, Xichen YUAN, Honglai XU, Minhao WANG, Erwei YIN, Zhejun GUO, Longchun WANG,
Yuhao ZHOU, Huicheng FENG, Honglong CHENG & Jingquan LIU
A 124 dB dynamic range sigma-delta modulator applied to non-invasive EEG acquisition using chopper-modulated input-
scaling-down technique ...........................................................................................................................................................................140402(15)
Ziyu JIA, Junyi JI, Xintiang ZHOU & Yuhua ZHOU
Amplitude-frequency-averse deep fusion network for optimal contact selection on STN-DBS electrodes.................................140404(16)
Linxia XIAO, Caizi LI, Yanjiang WANG, Weixin SI, Hai LIN, Doudou ZHANG, Xiaodong CAI & Pheng-Ann HENG
Robust interval stability/stabilization and ..................................................140405(16)
Chang LI, Yimeng HOU, Rencheng SONG, Juan CHENG, Yu LIU & Xun CHEN
HYVEP-based brain-computer interfaces are vulnerable to square wave attacks .................................................................140406(13)
Rui BIAN, Lubin MENG & Dongrui WU

Special Focus on Theory and Applications of Models of Computation
Guest Editors: Jianer CHEN, Qilong FENG & Jinhui XU
An approximation algorithm for lower-bounded k-median with constant factor .................................................................140601(9)
Xiaoliang WU, Feng SHI, Yutian GUO, Zhen ZHANG, Junyu HUANG & Jianxin WANG
Regularized two-stage submodular maximization under streaming ..........................................................................................140602(10)
Ruqi YANG, Dachuan XU, Longkun GUO & Dongmei ZHANG
On book thickness parameterized by the vertex cover number ..............140603(2)
Yunlong LIU, Jie CHEN & Jingui HUANG

REVIEW
Neuromorphic sensory computing .................................................................141401(14)
Tianqiang WAN, Sijie MA, Fuyou LIAO, Lingwei FAN & Yang CHAI

RESEARCH PAPER
RGBT tracking via reliable feature configuration ...............................................142101(13)
Zhengzheng TU, Wenli PAN, Yunsheng DUAN, Jin TANG & Chenglong LI
How does working from home affect developer productivity?—A case study of Baidu during the COVID-19 pandemic ...........................................................................................................................................................................142102(15)
Lingfeng BAO, Tao LI, Xin XIA, Kaiya ZHU, Hui LI & Xiaohu YANG
New design of active disturbance rejection control for nonlinear uncertain systems with unknown control input gain ..........142201(13)
Sen CHEN, Zhixiang ZAKO, Yi HUANG & Zhi-Liang ZHAO
Robust interval stability/stabilization and $H_{\infty}$ feedback control for uncertain stochastic Markovian jump systems based on the linear operator .................................................................................................................................142202(13)
Huasheng ZHANG, Jianwei XIA, Guangming HUANG & Hao SHEN
Resilient observer-based event-triggered control for cyber-physical systems under asynchronous denial-of-service attacks ..........142203(15)
Yifang ZHANG, Zheng-Guang WU, Zongze WU & Deyuan MENG
Constructability of a causal/impulse free NDS using descriptor form subsystems..................................................................................142204(15)
Tong ZHOU
Randomized difference-based gradient-free algorithm for distributed resource allocation .................................................................142205(17)
Xiaoju GENG & Wenzhao ZHAO
A high-efficient triboelectric-electromagnetic hybrid nanogenerator for vibration energy harvesting and wireless monitoring ........142401(9)
Yifang ZHANG, Zheng-Guang WU, Min CUI, Bing HAN, Xiaojuan HOU & Xiujian CHOU
Mode-localized accelerometer with ultrahigh sensitivity ........................................142402(13)
Hao KANG, Bing RUAN, Yongcun HAO & Honglong CHENG
Femtosecond laser-assisted switching in perpendicular magnetic tunnel junctions with double-interface free layer .................142403(7)
Luding WANG, Wenlong CAI, Kaikua CAO, Kewen SHI, Bert KOOPMANS & Weisheng ZHAO

MOOP
Distributed unmanned flocking inspired by the collective motion of pigeon flocks .................................................................144201(3)
Huaxin QIU, Qingrui ZHOU, Changhao SUN & Xiaochu WANG
LETTER

On the bit-based division property of S-boxes................................................................. 140401(3)
Zejun Xiang, Xiangrong ZENG & Shasha ZHANG

Constant-round auction with insulated bidders.................................................................. 140102(3)
Jie MA, Bin QI & Kewei LV

Example-guided stylized response generation in zero-shot setting..................................... 140103(2)
Guirong BAI, Shizhu HE, Kang LIU & Jun ZHAO

Leveraging implicit social structures for recommendation via a Bayesian generative model.................................................. 140104(3)
Huafeng LIU, Jingxuan WEN, Liping JING & Jian YU

Industrial process fault detection based on locally linear embedded latent mapping................. 140201(3)
Yuan LI & Chengchong FENG

Finite-time boundedness analysis and composite anti-disturbance control for uncertain semi-Markovian jump systems with time delay................................................................................................. 140202(3)
Tianbo XU, Xianwen GAO & Wenhai QI

Stabilization of a class of congestion games via intermittent control.................................. 140203(2)
Kaichen JIANG & Jinhuang WANG

Achieving geometric convergence for distributed optimization with Barzilai-Borwein step sizes........................................................................................................... 140204(2)
Juan GAO, Xin-Wei LIU, Yu-Hong DAI, Yukai HUANG & Peng YANG

A centripetal collection image sensor (CCIS) based on back gate modulation achieving 1T submicron pixel............................................ 140401(3)
Liaqiao LIU, Guihai YU, Gang DU & Xiaoyan LIU

A SiGe W-band frequency tripler with 10.5 dBm output power using harmonic suppression technique.......................................................... 140402(2)
Huanbo LI, Jixin CHEN, Peigen ZHOU, Debin HOU & Wei HONG

Self-compensation tensor multiplication unit for adaptive approximate computing in low-power CNN processing.......................... 140303(2)
Bo LIU, Zilong ZHANG, Hao CAI, Reyuan ZHANG, Zhen WANG & Jun YANG

An energy-efficient dynamically reconfigurable cryptographic engine with improved power/EM-side-channel-attack resistance...................................................................................................................... 140404(2)
Chenchen DENG, Min ZHU, Jinjiang YANG, Yosyu WU, Jiaji HE, Bohan YANG, Jianfeng ZHU, Shouyi YIN, Shaojun WEI & Leibo LIU

Cover image: The brain-machine interface affords a direct communication pathway between the brain and external devices. The cover depicts the future applications of the brain-machine interface, ranging from closed-loop prosthetic control to merging human intelligence with artificial intelligence. See more on the recent development of brain-machine interfaces and applications in the special focus articles 140401—140406.

Information for authors

SCIENCE CHINA Information Sciences (Sci China Inf Sci), cosponsored by the Chinese Academy of Sciences and the National Natural Science Foundation of China, and published by Science China Press, is committed to publishing high-quality, original results of both basic and applied research in all areas of information sciences, including computer science and technology, control science and engineering, information and communication engineering, microelectronics and solid state electronics, etc. Sci China Inf Sci is indexed in Science Citation Index Expanded (SCIE), Engineering Index (EI), Journal Citation Reports/Science Edition (JCR), Academic OneFile, Astrophysics Data System (ADS), CSA, Cabi, Current Contents/Engineering, Computing, and Technology Database, Digital Mathematics Registry, Earthquake Engineering Abstracts, Engineered Materials Abstracts, Gale, Google, INSPEC, Mathematical Reviews, OCLC, ProQuest, SCOPUS, Summon by Serial Solutions, VINITI. Sci China Inf Sci is published monthly in both print and electronic forms.

Authors are recommended to use Science China’s online submission services. To submit a manuscript, please go to www.scichina.com, create an account to log in http://mc03.manuscriptcentral.com/scis, and follow the instructions there to upload text and image/table files.

All submissions will be reviewed by referees selected by the editorial board. The decision of acceptance or rejection of a manuscript is made by the editorial board based on the referees’ reports. The entire review process may take 90 to 120 days, and the editorial office will inform the author of the decision as soon as the process is completed. If the editorial board fails to make a decision within 90 days, please contact the editorial office.

Authors should guarantee that their submitted manuscript has not been published before and has not been submitted elsewhere for print or electronic publication consideration. Submission of a manuscript is taken to imply that all the named authors are aware that they are listed as coauthors, and they have agreed on the submitted version of the paper. No change in the order of listed authors can be made without agreement signed by all the authors.

Ethical responsibilities of authors: Authors should refrain from misrepresenting research results which could damage the trust in the journal and ultimately the entire scientific endeavour, and follow the COPE guidelines on how to deal with potential acts of misconduct. Disclosure of potential conflict of interests: Authors must disclose all relationships or interests that could influence or bias the work. The corresponding author will include a summary statement in the text of the manuscript in a separate section before the reference list.

Once a manuscript is accepted, the authors should send a copyright transfer form signed by all authors to Science China Press. Authors of one published paper will be presented one sample copy. If more sample copies or offprints are required, please contact the managing editor and pay the extra fee. The full text opens free to domestic readers at www.scichina.com, and is available to overseas readers at link.springer.com.