IEEE GLOBECOM™

IEEE Global Communications Conference
9-13 December 2018
Abu Dhabi, UAE
Gateway to a Connected World

# Call for Papers

## 4th Workshop on Non-Orthogonal Multiple Access Techniques for 5G

**Thursday, 13 December 2018, Abu Dhabi, UAE**

**Scope:** Future radio access networks are expected to have the capability to support: 1) massive connectivity and dramatically higher capacity; 2) diverse sets of users and applications with radically different requirements in terms of delay, bandwidth, etc.; and 3) flexible and efficient use of all available resources, such as spectrum and time. The above requirements, especially the need for massive connectivity and diverging latency, challenge the current cellular networks in many ways, particularly the available multiple access (MA) methods. As a result, significant efforts have been recently made to design more spectrally and energy efficient MA schemes for future wireless networks. A common feature of these newly designed MA schemes is the avoidance of the use of conventional orthogonal schemes. Instead, users are encouraged to share their bandwidth resources opportunistically according to their diverse channel conditions and their quality of service requirements. The superior spectral efficiency of these non-orthogonal multiple access (NOMA) schemes has been demonstrated by recent theoretical and experimental studies.

The **4th Workshop on Non-Orthogonal Multiple Access Techniques for 5G** will take place during IEEE Globecom'18 in Abu Dhabi, UAE, on December 13, 2018. The workshop will provide a forum for brainstorming on the emerging NOMA techniques for 5G cellular networks. We aim to bring together the leading researchers in the field, both from academia and industry, to share their recent findings and their views on what access methods best suit the diverse requirements of next generation networks. Topics of interest include, but are not limited to:

- *Non-orthogonal multiple access via the power domain*
  - ✓ Advanced coding and modulation for NOMA
  - ✓ MIMO techniques for NOMA
  - ✓ Multi-cell/massive MIMO NOMA
  - ✓ Security concerns for NOMA
  - ✓ Cross-layer design and optimization of NOMA
  - ✓ Hardware implementation issues in NOMA
- *Non-orthogonal multiple access via the code domain*
  - ✓ Sparse code multiple access (SCMA)
  - ✓ Multi-user shared access (MUSA)
  - ✓ Lattice partition multiple access (LPMA)
  - ✓ Interleave division multiple access (IDMA)

- *Other multiple access protocols for*
  - ✓ Massive MTC applications
  - ✓ Massive internet-of-things (IoT)
  - ✓ Vehicle-to-X (V2X) and satellite networks
- *Coexistence of NOMA and OFDMA*

**Submission Guideline**: see http://globecom2018.ieee-globecom.org/authors

**Submission Link**: Papers should be submitted via EDAS (submission link)

**Important Dates:**

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| Full Paper Submission: | July 1, 2018 |
| Acceptance Notification: | August 15, 2018 |
| Camera-Ready Submission: | September 15, 2018 |
| Workshop Date: | December 13, 2018 |

**Workshop Organizers & TCP Chairs:**

Mojtaba Vaezi (Villanova University, USA)
Zhiguo Ding (Manchester University, UK)
H. Vincent Poor (Princeton University, USA)
Robert Schober (University of British Columbia, Canada)
Octavia A. Dobre (Memorial Univ., Canada)
George K. Karagiannidis (AUTH, Greece)