C. The mentor

C1. Curriculum Vitae of the mentor (maximum 2 pages);

Full name: Dumitrescu Bogdan-Alexandru

Date/place of birth: May 7, 1962, Bucharest, Romania

ResearcherID: B-5839-2011, Scopus: 6603839944, Google Scholar: QEf1T4gAAAAJ

Education:

• 1993: Ph.D. at University Politehnica of Bucharest (UPB), Thesis: *Parallel computation systems and algorithms*.

• 1987: M.Sc. at UPB, Department of Automatic Control and Computers (ACC).

Positions:

• 2003 – present: professor at ACC, UPB.

• 1998 – 2015 (part time). Visiting researcher at Tampere University of Technology (TUT), Department of Signal Processing.

• 2010 – 2013: FiDiPro (Finnish Distinguished Professor) fellow at TUT.

• 1990 – 2003: various teaching positions at the ACC, UPB. Visiting stages at Universite Polytechnique de Grenoble.

• 1987 – 1990: software engineer at FEPER Bucharest (Peripheral Equipments Factory).

Activity:

• **Teaching**. At UPB I teach Numerical Methods (2nd year) and Parallel Algorithms (master) and taught several other courses like Signal Processing, Scientific Computation, Advanced Signal Processing, Convex Optimization, Control Systems, Scientific Writing. PhD adviser since 2007 (7 students, 4 graduated).

• **Research**. Main current interests: numerical methods and optimization in signal processing, sparse representations. Other interests: parallel algorithms, optimization with positive polynomials. Research grants: several grants from the Romanian National Science Council, including two IDEI grants (Positivity in the analysis and synthesis of multidimensional systems 2007-2010, Sparse representations and signal processing applications 2011-2016). Industry contracts: Nokia Research Center and Microsoft Finland.

• **Publications**. About 50 journal articles and 80 conference papers. Articles in prestigious journals (top 25% based on current AIS): *IEEE Trans. on Signal Processing* (9 articles), *IEEE Signal Processing Letters* (8), *IEEE Trans. on Circuits and Systems I* (1), *Computers Graphics Forum* (1), *Optimization and Engineering* (1), *IEEE J. Selected Topics in Signal Processing* (1). Other articles in *Signal Processing* (7), *IEEE Trans. on Circuits and Systems II* (2), *Linear Algebra and Its Applications* (1), *BIT Numerical Mathematics* (1), *Numerische Mathematik* (1).

Author of the book "Positive trigonometric polynomials and signal processing applications, Springer, 2007. Complete list at http://www.schur.pub.ro/BD_PublicationList.html.

Hirsch index: 10 WoS, 12 Scopus, 15 Google scholar
Citations: 384 WoS, 545 Scopus, 865 Google scholar (Sept. 2016)

Other activities:
• Associate editor (2008-2012) and area editor (2010-2014) at *IEEE Transactions on Signal Processing*.
• Associate editor at *Mathematical Problems in Engineering* (2015-present)
• Reviewer for more than 20 journals and Mathematical Reviews
• Technical Program Committee member at *EUSIPCO* since 2007 and at other signal processing conferences, like *IEEE Statistical Signal Proc. Workshop* 2016, *ICUWB* 2015, *Globecom* 2014.

C2. The list with the most important scientific publications

B. Dumitrescu, Trigonometric Polynomials Positive on Frequency Domains and Applications to 2-D FIR Filter Design, *IEEE Trans. Signal Proc.*, vol. 54, no. 11, pp. 4282-4292, 2006.

B. Dumitrescu, I. Bayram, I. Selesnick, Optimization of Symmetric Self-Hilbertian Filters for the Dual-Tree Complex Wavelet Transform*, IEEE Signal Processing Letters*, vol. 15, pp. 146-149, 2008.

B. Dumitrescu, SDP Approximation of a Fractional Delay and the Design of Dual-Tree Complex Wavelet Transform, *IEEE Trans. Signal Proc*., vol. 56, no. 9, pp. 4255-4262, 2008.

B. Dumitrescu, A. Onose, P. Helin, I. Tabus, Greedy Sparse RLS, *IEEE Trans. Signal Proc*., vol. 60, no. 5, pp. 2194-2207, May 2012.

C. Rusu, **B. Dumitrescu**, Stagewise K-SVD to Design Efficient Dictionaries for Sparse Representations, *IEEE Signal Processing Letters*, vol. 19, no. 10, pp. 631-634, 2012

A. Onose, **B. Dumitrescu**, Adaptive Randomized Coordinate Descent for Sparse Systems: Lasso and Greedy Algorithms, *IEEE Trans. Signal Proc*., vol. 63, no. 15, pp. 4091-4101, 2015.

Note: the journals belong to top 25% based on Article Influence Score, Journal Citation Reports 2014, Web of Science category „Engineering, Electrical & Electronic"