Algoritmi folosiți în optimizare

An înființare: 2018

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Scurtă descriere

Grupul de cercetare intitulat „Algoritmi folosiți în optimizare" a fost înființat în anul 2018 în cadrul Facultății de Matematică și informatică, Universitatea Transilvania din Brașov, cu scopul de a consolida o echipă cu preocupari comune de cercetare științifică ale cărei idei să fie concretizate prin publicații în reviste bine cotate internațional (indexate ISI sau in baze de date recunoscute), cărți și, nu în ultimul rând, de a aplica pentru proiecte de cercetare la nivel național și internațional.

De-a lungul ultimelor decenii, cantitatea de informație care există și trebuie procesată a crescut într-un ritm din ce în ce mai alert. Această realitate conduce la necesitatea elaborării unor metode și algoritmi de optimizare indispensabili pentru abordarea diferitelor probleme practice din domenii precum inginerie, fizică, economie, finanțe, biologie, construcții, medicină etc. Echipa de cercetare din cadrul grupului dorește să găsească soluții de rezolvare pentru o gamă cât mai largă de probleme practice din domeniile amintite.

De asemenea, se dorește găsirea unor parteneri din domeniul economic în vederea identificării unor probleme practice ce pot fi modelate și, ulterior, rezolvate în cadrul echipei, atrăgând astfel idei de cercetare și fonduri.

Articole publicate de către membrii echipei (ultimii 10 de ani):

1. O. Deaconu, **A.M. Deaconu**, G.C. Chitonu, D. Taus, *The Online Teaching System as a Sustainable Way of Learning*, Sustainability 14 (18), 11556, 2022. https://doi.org/10.3390/su141811556
2. **C.-Ş. Nănău**, Message priority MaxDelivery algorithm applied in earthquake communication situation, Bulletin of the Transilvania University of Brasov. Mathematics and Computer Science, vol. 2(64), no. 1, 247-256, 2022. https://webbut.unitbv.ro/index.php/Series_III/article/view/3191
3. **E. Ciurea**, O. Georgescu, C. Schiopu, *Minimum Flows in Directed 1−n Planar Static and Dynamic Networks with Arcs and Nodes Capacities*, Journal of Circuits, Systems and Computers, Vol. 31, No. 07, 2230004, 2022. https://www.worldscientific.com/doi/abs/10.1142/S0218126622300045
4. L. Ciupala, **A. Deaconu**, L. Majercsik, *Shortest paths in a diagraph with an underestimated arc weight*, Bulletin of the Transilvania University of Brasov. Mathematics and Computer Science, vol. 2(64), no. 1, 247-256, 2022. https://webbut.unitbv.ro/index.php/Series_III/article/view/1872
5. D.T. Cotfas, **A.M. Deaconu,** P.A. Cotfas, *Hybrid successive discretisation algorithm used to calculate parameters of the photovoltaic cells and panels for existing datasets*, IET Renewable Power Generation, vol. 15, issue 15, pp. 3661-3687, 2021. https://doi.org/10.1049/rpg2.12262

6. G. Bhagwat; S. Kumari; V. Patekar; **A.M. Deaconu,** *Novel Static Multi-Layer Forest Approach and Its Applications*. Mathematics, *9*, 2650, 2021. https://doi.org/10.3390/math9212650
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11. R. Udroiu, R., **A.M. Deaconu**, **C.-Ş. Nănău**, *Data Delivery in a Disaster or Quarantined Area Divided into Triangles Using DTN-Based Algorithms for Unmanned Aerial Vehicles*, Sensors, vol. 21, no. 11, 3572, 2021. https://doi.org/10.3390/s21113572
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13. J. Tayyebi, **A.M. Deaconu**, *Expanding maximum capacity path under weighted sum-type distances*, AIMS Mathematics, Vol. 6, Issue 4, 3996-4000, 2021. https://doi.org/10.3934/math.2021237
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28. M. Parpalea, N. Avesalon, **E. Ciurea**, *Minimum parametric flow in time-dependent dynamic networks*, RAIRO - Theoretical Informatics and Applications, Volume 52, No. 1, pp. 43–53, 2018
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39. **E. Ciurea,** M. Parpalea, *A sequential algorithm for finding the solution of the parametric minimum flow problem*, Carpathian Journal of Mathematics, vol. 28, no. 1, pp.47-58, 2012
40. **A. Deaconu**, **E. Ciurea**, *The inverse maximum flow problem under L_k norms*, Carpathian Journal of Mathematics, 59-66, 2012

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2. **C.-Ş. Nănău**, *Reţele cu toleranţă la întârzieri: buffer management şi aplicaţii*, Editura Universității Transilvania din Brașov, 2021
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4. **E**. **Ciurea**, *Algoritmica grafurilor*, Editura Universității Transilvania din Brașov, 2008
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Proiecte de cercetare

1. Sfera III, Horizon 2020, “MPPT for PVs based on metaheuristic algorithm under concentrated light”, granted in April 2022