<div align="center">**Dr. Martin Takáč**</div>

Professional Preparation

- Comenius University in Bratislava, Slovakia, *Mathematics of Economics and Finance*, B.S., 2008.
- Comenius University in Bratislava, Slovakia, *Mathematics of Economics and Finance*, M.S., 2010.
- The University of Edinburgh, UK, *Operations Research*, Ph.D., 2010–2014.

Appointments

- 08/2014 – present Assistant Professor, Department of Industrial and Systems Engineering, Lehigh University.
- 2013–2016 *Founder & CEO*, **Big Data & Analytics Solutions, Ltd.,** Slovakia.
- 2010–2016 *Co-Founder*, **Laurus Group, Ltd.**, Slovakia.
- 2007–2010 **Business Analyst & Software Developer**, Plaut Slovensko, Ltd., Slovakia.

Products

Five Products Related to Proposed Research

- Albert S. Berahas, Majid Jahani and Martin Takáč, *Quasi-Newton Methods for Deep Learning: Forget the Past, Just Sample*, submitted, 2019.
  https://arxiv.org/abs/1901.09997
- Xi He, Dheevatsa Mudigere, Mikhail Smelyanskiy and Martin Takáč: *Large Scale Distributed Hessian-Free Optimization for Deep Neural Network*, AAAI Workshop on Distributed Machine Learning, 2017. http://arxiv.org/abs/1606.00511
- Chenxin Ma, Jakub Konen, Martin Jaggi, Virginia Smith, Michael I. Jordan, Peter Richtrik, Martin Takáč: *Distributed Optimization with Arbitrary Local Solvers* , Optimization Methods and Software, 2017.
  https://www.tandfonline.com/doi/full/10.1080/10556788.2016.1278445
- Albert S. Berahas, Jorge Nocedal and Martin Takáč: *A Multi-Batch L-BFGS Method for Machine Learning*, The Annual Conference on Neural Information Processing Systems, 2016.
  http://papers.nips.cc/paper/6145-a-multi-batch-l-bfgs-method-for-ml.pdf
- Chenxin Ma, Virginia Smith, Martin Jaggi, Michael I. Jordan, Peter Richtárik and Martin Takáč, *Adding vs. Averaging in Distributed Primal-Dual Optimization*, International Conference on Machine Learning, ICML 2015. http://www.jmlr.org/proceedings/papers/v37/mab15.pdf

Five Other Products

- Mohammadreza Nazari, Majid Jahani, Lawrence V. Snyder, Martin Takáč, *Don't Forget Your Teacher: A Corrective Reinforcement Learning Framework*, submitted, 2019.
  http://arxiv.org/pdf/1905.13562.pdf
- Mohammadreza Nazari, Afshin Oroojlooy, Lawrence V. Snyder and Martin Takáč: *Reinforcement Learning for Solving the Vehicle Routing Problem*, NeurIPS 2018.
  https://arxiv.org/abs/1802.04240
- Hossein K. Mousavi, Mohammadreza Nazari, Martin Takáč and Nader Motee, *Multi-Agent Image Classification via Reinforcement Learning*, 2019.
  https://arxiv.org/abs/1905.04835
- Zheng Qu, Peter Richtárik, Martin Takáč and Olivier Fercoq, *SDNA: Stochastic Dual Newton Ascent for Empirical Risk Minimization*, ICML 2016.
  http://jmlr.org/proceedings/papers/v48/qub16.pdf

- Lam Nguyen, Jie Liu, Katya Scheinberg, and Martin Takáč, *SARAH: A Novel Method for Machine Learning Problems Using Stochastic Recursive Gradient*, 34th International Conference on Machine Learning, ICML 2017. `http://proceedings.mlr.press/v70/nguyen17b.html`

Synergistic Activities

- **Editorial work**
  - **Associate Editors:** Mathematical Programming Computation, Optimization Methods and Software
  - **Area chair**: ICML (2017, 2018, 2019), AISTATS (2019, 2020), NeurIPS 2019
  - Member of **Review Editorial Board of Optimization**, Frontiers in Applied Math. and Statistics
  - **Referee for journals and conferences** including: Mathematical Programming, SIAM Journal on Optimization, Machine Learning, IEEE Conference on Decision and Control, IEEE Transactions on Cybernetics, Journal of Machine Learning Research, Computational Optimization and Applications, Optimiation Methods and Software, Operations Research Letters, Journal of Optimization Theory and Applications, Neural Information Processing Systems (NeurIPS), International Conference on Learning Representations (ICLR), International Conference on Machine Learning (ICML), Conference on Systems and Machine Learning SysML

- **Open-source**
  solvers for optimization problems and machine learning `https://github.com/optml` and `https://github.com/OptMLGroup`

- **Organization work**
  - conferences: SCOR 2012; MOPTA 2015, MOPTA 2016, /DIMACS/TRIPODS/MOPTA (2018)
  - sessions at international conferences including:
    * The International Conference on Continuous Optimization ICCOPT 2019, Germany
    * The International Symposium on Mathematical Programming 2018, France
    * DIMACS/TRIOPDS/MOPTA 2018 - Modeling and Optimization: Theory and Application, 2018, Bethlehem, PA
    * MOPTA 2017 - Modeling and Optimization: Theory and Application, 2017, Bethlehem, PA
    * SIAM Conference on Optimization, 2017, Vancouver, Canada
    * 5th International Conference on Continuous Optimization 2016, Tokyo, Japan
    * 28th European Conference on Operational Research (EURO 2016), 2016, Poznan, Poland
    * The International Symposium on Mathematical Programming 2015, Pittsburgh, PA
    * INFORMS Annual Meeting, 2014, San Francisco, CA
    * 4th International Conference on Continuous Optimization 2013, Lisbon, Portugal
    * 25th Biennial Numerical Analysis Conference, 2013, Glasgow, UK

- **Education activities**
  - Curriculum development:
    * Establish course "Mining of Large Datasets"
    * Redesign course "Computational Methods in Optimization"
    * Redesign course "Algorithms in Systems Engineering"
  - Workshop for PhD students: "High-performance computing for ISE"
  - **Co-organize and co-teach TRIPODS summer school on machine learning (2018)**
  - Establish and chair Undergraduate and Masters Research Symposium (2017,2018,2019)

- **Outreach activities**
  - **AI/ML Club**, Saucon Valley School District, High school
  - Mentor **Data Analytics And Design (D.A.A.D.) Club** @ Lehigh
  - **Robotics Club**, Saucon Valley School District, Elementary school