

PERSONAL INFORMATION

Norbert-Botond MIHÁLY



Sex | Date of birth | Nationality

POSITION APPLIED FOR

PhD

EDUCATION AND TRAINING

- 2020-present **PhD student**
 Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering Cluj-Napoca, RO 400018
- 2018-2020 **MSc**
 Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering Cluj-Napoca, RO 400018
 ▪ ICAP
- 2014-2018 **BSc**
 Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering Cluj-Napoca, RO 400018
 ▪ CISOPC
- 2010-2014 **Bachelor's degree**
 Bolyai Farkas High School, Târgu Mureş, RO 540064
 ▪ Natural Sciences-intensive English

PERSONAL SKILLS

Mother tongue(s) Hungarian

| Other language(s) | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C2 | C2 | C2 |
| Cambridge Certificate of Proficiency in English | | | | | |
| Romanian | C2 | C2 | C2 | C2 | C2 |
| Native speaker | | | | | |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills ▪ good communication skills gained through working in groups for different assignments during the university years

Digital skills

| SELF-ASSESSMENT | | | | |
|------------------------|---------------|------------------|-------------|-----------------|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Independent | Independent | Independent | Independent | Independent |

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

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- good command of MATLAB/SIMULINK and toolboxes gained through research work
- independent user of ChemCAD and Aspen PLUS software, experience gained through work at the university

Driving licence B

Presentations ▪ Monthly presentation at the “Erdélyi Múzeum Egyesület” 30.05.2019.

- Conferences Awards**
- Oral presentation at the “XIVth International Conference Students for Students”, 26-30.04.2017.
 - Best undergraduate presentation award at the “XIVth International Conference Students for Students”, 26-30.04.2017.
 - Poster presentation at the “XXIII. Nemzetközi Vegyészkonferencia”, 25-28.10.2017.
 - 2nd place award at the “XXIII. Nemzetközi Vegyészkonferencia”, 25-28.10.2017.
 - Special award at the “XXIII. Nemzetközi Vegyészkonferencia”, 25-28.10.2017.
 - Oral presentation at the “Erdélyi Természettudományi Konferencia 2017”, 25.11.2017
 - Oral presentation at the “XVth International Conference Students for Students”, 18-22.04.2018.
 - Oral presentation at the “XX. Műszaki Tudományos Diákköri Konferencia”, 26-28.04.2018.
 - 1st place award at “XX. Műszaki Tudományos Diákköri Konferencia”, 26-28.04.2018.
 - Poster presentation at the “XXIV. Nemzetközi Vegyészkonferencia”, 24-27.10.2018.
 - 1st place award at the “XXIV. Nemzetközi Vegyészkonferencia”, 24-27.10.2018.
 - Oral presentation “Erdélyi Természettudományi Konferencia 2018”, 24.11.2018.
 - Oral presentation “XXXIV. Országos Tudományos Diákköri Konferencia”, 21-23.03.2019.
 - Oral presentation “XVIth International Conference Students for Students”, 3-7.04.2019.
 - Best masters presentation award at the “XVIth International Conference Students for Students”, 3-7.04.2019
 - Attendance at the “Next Generation” conference of STAR institute, 12-14.07.2019.
 - Attendance at the 16th SDEWES Conference in Dubrovnik, Croatia, 10-15.10.2021.
 - Attendance at IEEE International Conference on Automation, Quality and Testing, Robotics, Cluj-Napoca, Romania, 19-21.05.2022.
 - Attendance at the 32nd European Symposium on Computer-Aided Process Engineering (ESCAPE-32), Toulouse, France, 12-15.06.2022.
 - Attendance at the 17th SDEWES Conference in Paphos, Cyprus, 6-10.11.2022.
 - Attendance at the the 33rd European Symposium on Computer-Aided Process Engineering (ESCAPE-33), Athens, Greece, 18-21.06.2023.
 - Planned attendance at the 34th European Symposium on Computer-Aided Process Engineering (ESCAPE-34), Florence, Italy, 02-06.06.2024.

ADDITIONAL INFORMATION

- Volunteering**
- Volunteered at the faculties open days “Zilele Porților Deschise la Facultatea de Chimie și Inginerie Chimică”, 20.10.2018.
 - Volunteered at the faculties open days “Zilele Porților Deschise la Facultatea de Chimie și Inginerie Chimică”, 19.10.2019
 - Volunteered at the faculties open days “Zilele Porților Deschise la Facultatea de Chimie și Inginerie Chimică”, 22.10.2022
 - Volunteered at the faculties open days “Zilele Porților Deschise la Facultatea de Chimie și Inginerie Chimică”, 21.10.2023
- Scholarships**
- Erasmus+ Mobility scholarship at University of Pannonia, Hungary, 10.02.2020-10.04.2020.
- Projects**
- Advanced (multi)-enzymatic synthesis and purification processes for biobased furan derivatives – ASPIRE, National Authority for Scientific Research and Innovation (ANCSI), Project code: CF 25/14.11.2022;
- Publications**
- Mihály, N. B., Luca, A. V., Simon-Várhelyi, M., & Cristea, V. M. (2023). Improvement of air flowrate distribution in the nitrification reactor of the waste water treatment plant by effluent quality, energy and greenhouse gas emissions optimization via artificial neural networks models. *Journal of Water Process Engineering*, 54. <https://doi.org/10.1016/j.jwpe.2023.103935>
 - Mihály, N. B., Simon-Várhelyi, M., & Cristea, V. M. (2022). Data-driven modelling based on artificial neural networks for predicting energy and effluent quality indices and wastewater treatment plant optimization. *Optimization and Engineering*, 23, 2235–2259. <https://doi.org/10.1007/s11081-022-09724-5>
 - Luca, A. V., Simon-Várhelyi, M., Mihály, N. B., & Cristea, V. M. (2021). Data driven detection of different dissolved oxygen sensor faults for improving operation of the WWTP control system. *Processes*, 9(9). <https://doi.org/10.3390/pr9091633>
 - Luca, A. V., Simon-Várhelyi, M., Mihály, N. B., & Cristea, V. M. (2023). Fault Type Diagnosis of the WWTP Dissolved Oxygen Sensor Based on Fisher Discriminant Analysis and Assessment of Associated Environmental and Economic Impact. *Applied Sciences (Switzerland)*, 13(4). <https://doi.org/10.3390/app13042554>
 - Mihály, N.-B., Luca, A.-V., & Cristea, V. M. (2023). Artificial neural networks-based identification of the WWTP DO sensor types of faults (pp. 1879–1884). <https://doi.org/10.1016/B978-0-443-15274-0.50298-5>
 - Mihály, N.-B., & Cristea, V. M. (2022). Optimization of the Wastewater Treatment Plant Aeration Using Artificial Neural Networks Models (pp. 1375–1380). <https://doi.org/10.1016/B978-0-323-95879-0.50230-7>
 - Mihály, N.-B., Simon-Várhelyi, M., Luca, A.-V., & Cristea, V.-M. (2022). Optimization of the Wastewater Treatment Plant Recycle Flowrates Using Artificial Neural Networks. 2022 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), 1–6. <https://doi.org/10.1109/AQTR55203.2022.9801979>