



europass

# Juraj Balkovič

**Nationality:** Slovak **Date of birth:** 19/11/1975 **Email address:** [balkovic@iiasa.ac.at](mailto:balkovic@iiasa.ac.at)

**Work:** Schlossplatz 1, A-2361 Laxenburg (Austria)

## WORK EXPERIENCE

### **Research Scholar**

**International Institute for Applied Systems Analysis (IIASA)** [ 2012 – Current ]

**Address:** Schlossplatz 1, A-2361 Laxenburg (Austria)

**City:** Laxenburg

**Country:** Austria

**Website:** <https://iiasa.ac.at/>

- Leader of the Agro-Environmental Systems (AES) team in the Agriculture, Forestry, and Ecosystem Services (AFE) Research Group / Biodiversity and Natural Resources (BNR) Research Program .
- Biophysical modelling of agro-ecosystems at large scale (crop production, soil organic carbon, environmental externalities, crop management interventions, climate change impacts)

### **Assistant Professor**

**Faculty of Natural Sciences, Comenius University in Bratislava** [ 2003 – 2022 ]

**Address:** Mlynská dolina, Ilkovičova 6, 842 15 Bratislava (Slovakia)

**City:** Bratislava

**Country:** Slovakia

**Website:** [www.fns.uniba.sk](http://www.fns.uniba.sk)

**Business or sector:** Education

- Teacher
- Research in soil and plant science

### **Research Scholar**

**Soil Science and Conservation Research Institute** [ 2004 – 2011 ]

**Address:** Gagarinova 10, 827 13 Bratislava (Slovakia)

**City:** Bratislava

**Country:** Slovakia

**Website:** [www.vupop.sk](http://www.vupop.sk)

- Soil and landscape information system
- Policy support/consultancy

## EDUCATION AND TRAINING

### **PhD**

**Faculty of Natural Sciences, Comenius University in Bratislava** [ 1999 – 2002 ]

**Address:** Bratislava (Slovakia)

- Soil science
- Thesis: "Soils with andic properties in Slovakia"

**RNDr.**

**Faculty of Natural Sciences, Comenius University in Bratislava** [ 2001 ]

Address: Bratislava (Slovakia)

- Plant sociology
- Thesis: "Primary assessment of forest vegetation in the Štiavnické vrchy Mts"

**M.Sc.**

**Faculty of Natural Sciences, Comenius University in Bratislava** [ 1994 – 1999 ]

Address: Bratislava (Slovakia)

- Environmental science
- Soil science
- Plant sociology and ecology

## **LANGUAGE SKILLS**

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Mother tongue(s): **Slovak**

**Other language(s):**

**English**

**LISTENING C2 READING C2 WRITING C2**

**SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2**

## **DIGITAL SKILLS**

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Microsoft Office / R Programming / R Statistics Analysis / ArcGIS / EPIC / FORTRAN / Visual Basic / MS SQL Server

## **NETWORKS AND MEMBERSHIPS**

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### **Memberships**

- Societas pedologica slovaca
- The International Union of Soil Sciences (IUSS)

## **DRIVING LICENCE**

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**Driving Licence:** AM

**Driving Licence:** B

## **ORGANISATIONAL SKILLS**

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### **Organisational skills**

- I am experienced in leading and managing small and dynamic research teams.

## **COMMUNICATION AND INTERPERSONAL SKILLS**

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### **Communication and interpersonal skills**

- Teamwork: I have worked in various types of research and education teams.
- Intercultural skills: I am experienced at working in an international dimension, collaborating with people of various nations.

## **JOB-RELATED SKILLS**

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### **Job-related skills**

- mathematical modelling of the soil-plant-atmosphere systems
- Environmental Policy Integrated Climate (EPIC) model

- basic and applied soil science
- statistics

## **MOST RELEVANT PUBLICATIONS (ORCID: 0000-0003-2955-4931)**

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**Janssens, C., Havlik, P., Boere, E., Palazzo, A., Mosnier, A., Leclère, D., Balkovič, J. et al. (2022) A sustainable future for Africa through continental free trade and agricultural development.** *Nat Food* 3, 608–618.

**Jägermeyr, J., Müller, C., Ruane, A.C., Elliott, J., Balkovic, J. et al. (2021) Climate impacts on global agriculture emerge earlier in new generation of climate and crop models.** *Nat Food* 2, 873–885.

**Folberth, C., Khabarov, N., Balkovič, J. et al. (2020) The global cropland-sparing potential of highyield farming.** *Nat Sustain* 3, 281–289.

**Balkovič, J., Madaras, M., Skalský, R. et al. (2020) Verifiable soil organic carbon modelling to facilitate regional reporting of cropland carbon change: A test case in the Czech Republic.** *Journal of Environmental Management* 274, 111206.

**Liu, B., Martre, P., Ewert, F. et al. (2019). Global wheat production with 1.5 and 2.0°C above pre-industrial warming.** *Global Change Biology* 25 (4), 1428–1444.

**Asseng, S., Martre, P., Maiorano, A. et al. (2019). Climate change impact and adaptation for wheat protein.** *Global Change Biology* 25 (1), 155–173.

**Balkovič, J., Skalský, R., Folberth, C. et al. (2018) Impacts and Uncertainties of +2°C of Climate Change and Soil Degradation on European Crop Calorie Supply.** *Earth's Future* 6, 373–395.

**Schauberger, B., Archontoulis, S., Arneth, A., Balkovič, J. et al. (2017). Consistent negative response of US crops to high temperatures in observations and crop models.** *Nat Communications* 8, 13931.

**Folberth, C., Skalský, R., Moltchanova, E., Balkovič, J. et al. (2016). Uncertainty in soil data can outweigh climate impact signals in global crop yield simulations.** *Nat Communications* 7, 11872.

**Elshout, P.M.F., Van Zelm, R., Balkovič, J. et al. (2015). Greenhouse-gas payback times for cropbased biofuels.** *Nat Climate Change* 5 (6), 604–610.

**Balkovič, J., van der Velde, M., Skalský, R. et al. (2014). Global wheat production potentials and management flexibility under the representative concentration pathways.** *Global and Planetary Change* 122, 107–121.

**Balkovič, J., van der Velde, M., Schmid, E. et al. (2013). Pan-European crop modelling with EPIC: Implementation, up-scaling and regional crop yield validation.** *Agricultural Systems* 120, 61–75.