

# Mladen Cucak, PhD

Maynooth University / TEAGASC - Agriculture and Food Development Authority

6 The Glade Oak Park Road; Carlow Town; Co. Carlow; Ireland

Mobile: +353 89 2571521

Skype: mladen\_cucak

e-mail: [mladen.cucak@gmail.com](mailto:mladen.cucak@gmail.com)

webpage: <https://mladencucak.netlify.com/>

GitHub: <https://github.com/mladencucak>

Twitter: <https://twitter.com/mladencucak>

## EXPERIENCE

### 1. February 2016 - May 2020

**Location:** Teagasc, Crops Research Centre, Oak Park, Carlow R93 XE12, Republic of Ireland

**Position:** Doctoral research fellow

**Work duties:**

- Implementation of the decision support system and application of chemical treatments for the field trials, including all relevant agricultural operations from planting to storage;
- Collection, maintenance and analysis of weather and disease data;
- Evaluation of the old and proposition of the new potato late blight risk prediction algorithm;
- Sampling, isolation and molecular characterization of *Phytophthora infestans*;
- Supervision of lab interns (three- and six-months placements);
- Initiated, led and tutored an R group at the institute;
- Collaboration with European and international groups.

### 2. December 2014 – December 2015

**Employer:** NIBIO Norwegian Institute of Bioeconomy Research, Plant Protection Division  
Høgskoleveien 7, 1430 Ås, Norway

**Position:** Intern (01.12.2014 – 10.06.2015), Senior Research Technician (10.06.2015 – 15.12.2015)

**Work duties:**

- Assisting project coordinator;
- Monitoring pest population and modelling risk of harmful organisms in agriculture (*Venturia inaequalis*, *Cydia pomonella*);
- Work on development and international promotion of decision support systems in agriculture;
- Facilitating international collaboration Norway – Balkans;
- Development of an automated insect trap: <http://bih.vips3test.bioforsk.no/information/4/>.

### 3. June 2010 – August 2010

**Employer:** Community Engagement. Division: Community Development; Department: Communities, Law and Governance; Southwark Council; PO BOX 64529; London SE1P 5LX;

**Position:** Intern

**Work duties:** Development of the Volunteer action plan for the council and expansion of possibilities volunteer work within the council

**4.** June 2010 – August 2010

**Employer:** National Development Center, Zagazig, El- Sharqueia, Egypt; <http://www.hrdtnc.com>

**Position:** Trainer and support staff

**Work duties:** Planning and facilitation of youth empowerment training and help with everyday activities.

Internships

01.06.2013 - 01.07.2013 Plant protection department; Agricultural Institute of Slovenia, Kmetijsko gozdarska zbornica Slovenije; Vinarska ulica 14, 2000 Maribor, Slovenia

01.04.2009 - 15.04.2009 Phytopharmacy store. Trznica A.D. Jedinica: Poljoprivredna apoteka, Banja Luka, Bosnia and Herzegovina

01.04.2008 - 15.04.2008 Apple fruit orchard (200 Ha); Agroimpex, Laktasi, Gradiska, Bosnia and Herzegovina

Lab interns

2019 Melanie Fortier; Masters student

2018 - 2019 Antoine Bodelot; Masters student

2018 Audrey Havot; Pre-Masters

2018 Fiona Folley; Masters student

2017 Marrie Anne Duranel; Masters student

Teaching

2018 - 2019 GY310B – Tutoring group of 16 students writing Bachelor thesis in the field of plant diseases epidemiology.

2019 Intro to R workshop for colleagues from the institute (weekly sessions for 2 months).

**EDUCATION**

2016 – 2020 PhD Maynooth University / Teagasc - Agriculture and Food Development Authority

2012 - 2015 Master of sciences in Agronomy - Biomolecular Techniques and Plant Protection; Faculty of Agriculture and Life Sciences, University of Maribor; Slovenia

2006 - 2011 Bachelor of Agronomy for Plant Production - Plant Protection; Faculty of Agriculture, University of Banja Luka; Bosnia and Herzegovina

## PROFFESIONAL

### Research interests:

Integrated Pest Management  
Plant Pathology  
Agrometeorology  
Epidemiology of Plant Diseases  
Decision Support Systems in Agriculture  
Crop Protection  
Data Analysis  
Statistics

### Professional Service

Open Plant Pathology  
Reviewer for *Plant Disease*, *Phytopathology* and *MDPI* journals

### Membership in Professional Associations

European Association for Potato Research  
The American Phytopathological Society  
EuroBlight group

### Awards and Scholarships:

|             |   |
|-------------|---|
| 2019        | Teagasc Walsh Fellowship Travel Award for three-month research stay at UC Davis (5000 EUR)                |
| 2016        | Student travel award for participation on EAPR Pathology and Pests section meeting in Dundee, August 2016 |
| 2016 - 2020 | Doctoral fellowship at Maynooth University and Teagasc - Agriculture and Food Development Authority       |
| 2014        | EEA grant for internship at Norwegian Institute for Bioeconomy Research NIBIO (3000 EUR)                  |
| 2012 - 2014 | Erasmus Mundus scholarship for Master Course  |

## SCIENTIFIC OUTPUTS

### Peer-reviewed publications

Cucak, M., Sparks, A. H., Moral, R., Kildea, S., Lambkin, K., Fealy, R. (2018) Evaluation of Irish Rules, the Potato Late Blight Forecasting Model and its Operational use in Republic of Ireland. *Agronomy* 2019. 9: 515

Website and supplementary material: <https://mladencucak.github.io/PLBFieldTrial/index.html>

### Publications accepted-under revisions:

Cucak, M., Moral, R., Fealy, R., Downes, P., Kildea, S. Optimising potato late blight management in the Republic of Ireland using risk prediction, varietal resistance and molecular tools. *Phytopathology*

Website and supplementary material: <https://mladencucak.github.io/AnalysisPLBIreland/>

### Publications under revision:

Cucak, M., Esker, P., Kildea, S., Downes, P., Fealy, R. BlightR: a new potato late blight risk prediction model and approach. Submitted to *Plant Disease*.

Code repository: <https://github.com/mladencucak/BlighR>

### Conference paper

Hansen, J.G., Lassen, P., Hjelkrem, A.-G.R., Eikemo, H., Cucak, M., Lees, A., Gaucher, D., Chatot, C., Kessel, G., 2017. Integration of pathogen and host resistance information in existing DSSs - introducing the IPMBlight2.0 approach. In: Proc. Sixt. Euroblight Workshop December 2017. PAGV Special Report No. 18: 147–158.

Available at: [http://euroblight.net/fileadmin/euroblight/Workshops/Aarhus/Proceedings/20\\_Jens\\_Hansen-p147-158.pdf](http://euroblight.net/fileadmin/euroblight/Workshops/Aarhus/Proceedings/20_Jens_Hansen-p147-158.pdf) (accessed 29 January 2019)

### Conference Presentations

Cucak, M., Sparks, A. H., Fealy, R., Griffin, D., Lambkin, K., Kildea, S. (2018) Potato Late Blight Risk Forecasting in Republic Of Ireland: Field validation. Society of Irish plant pathologists (SIP) Meeting. Dublin, 26-27 November 2018

Cucak, M., Sparks, A. H., Fealy, R., Griffin, D., Lambkin, K., Kildea, S. (2018) Revision of Potato Late Blight Risk Forecasting in Republic Of Ireland. IEW12- 12th International Epidemiology Workshop. Lillehammer, 10-14th June 2018

Cucak, M., Sparks, A. H., Fealy, R., Griffin, D., Lambkin, K., Kildea, S. (2017) Potato Late Blight Risk Forecasting in Republic Of Ireland. Society of Irish plant pathologists (SIP) Meeting. Dublin, 5-6th December 2017

Cucak, M., Fealy, R., Griffin, D., Lambkin, K., Kildea, S. (2017) The use of agrometeorological data for crop disease risk forecasting in Ireland: a case of potato late blight. 17th EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2017. Dublin, 4-8th September 2017

T-E. Skog, M. Cucak, B. Nordskog, H. Eikemo, H. Hole, A. F. Schjøll, J. Netland, N. Trandem, T. Rafoss, R. Meadow. (2015) VIPS – an Open Source technology platform for prognosis and decision support and its implementation in Bosnia and Herzegovina. IV International Symposium and XX Scientific Conference of agronomists of Republic of Srpska. Bijeljina, Bosnia and Herzegovina.

### Poster presentations

Cucak, M., Sparks, A. H., Fealy, R., Griffin, D., Lambkin, K., Kildea, S. (2017) Lowering thresholds of qualitative plant risk prediction algorithms: sensitivity versus specificity of Irish Rules for potato blight development. Aarhus, Denmark. E In: Proc. Sixth Euroblight Workshop December 2017. PAGV Special Report No. 18: 231-232.

Available at:

[http://euroblight.net/fileadmin/euroblight/Workshops/Aarhus/Proceedings/Special\\_Report\\_18\\_Totaal.pdf](http://euroblight.net/fileadmin/euroblight/Workshops/Aarhus/Proceedings/Special_Report_18_Totaal.pdf) (accessed 29 January 2019)

7th – 11th August 2016, Dundee, Scotland, Meeting of Pest and Pathology Group of European Potato Research Society, Poster Presentation: Can We Still Use Irish Rules to Forecast Potato Late Blight In Ireland?

T-E. Skog, M. Cucak, B. Nordskog, H. Eikemo, H. Hole, A. F. Schjøll, J. Netland, N. Trandem, T. Rafoss, R. Meadow. (2015) VIPS – an Open Source technology platform for prognosis and decision support. Plant health for sustainable agriculture. Ljubljana, Slovenia.

### Other

Master thesis:

Cucak, M. 2015: Analysis of possibilities for peach (*Prunus persica* L.) disease control without use of copper-based pesticides. University of Maribor, Maribor, Slovenia.

Available at: <https://dk.um.si/Dokument.php?id=70634&lang=eng>)

## **PERSONAL**

### Driving license:

Category B (license from Ireland)

### Hobbies:

Cooking, photography and several sports.