

## Information and documentation about applications of the ECMWF's model in Hungary

### Articles in refereed journals

**Szintai, B. and Ihász, I.**, 2006: The dynamical downscaling of ECMWF EPS products with the ALADIN mesoscale limited area model: preliminary evaluation. *Időjárás* **110**, 229-252. [\[PDF\]](#)

**Ihász, I., Üveges, Z., Mile, M. and Németh, Cs.**, 2010: Ensemble calibration of ECMWF's medium-range forecasts *Időjárás* **114**, 275-286. [\[PDF\]](#)

**Gaál, N. and Ihász, I.**, 2015: Evaluation of the cold drops based on ERA-Interim reanalysis and ECMWF ensemble model forecasts over Europe, *Időjárás*, 119, 111-126. [\[PDF\]](#)

**Lázár, D. and Ihász, I.**, 2016: Potential benefit of the ensemble forecasts in case of heavy convective weather situations. *Időjárás*, 120, 383-394. [\[PDF\]](#)

**Ihász, I., Mátrai, A., Szintai, B., Szűcs, M., Bonta, I.**, 2018: Application of European numerical weather prediction models for hydrological purposes. *Időjárás*, 122, 59-79. [\[PDF\]](#)  
DOI:10.28974/idojaras.2018.1.5.

**Tóth B. and Ihász, I.**, 2021: Validation of subgrid scale ensemble precipitation forecasts based on ECMWF's ecPoint Rainfall project. *Időjárás*, 125, 397-418. [\[PDF\]](#)  
DOI:10.28974/idojaras.2021.3.2.

**Cséke, D. and Ihász, I.**, 2022: Validation of precipitation type forecasts based on ECMWF's ensemble model. *Meteorology*, 1(3), 274-287; DOI:10.3390/meteorology1030018 [\[HTM\]](#)

### Articles in ECMWF Newsletters

**Ihász, I. and Tajti, D.**: 2011: Use of ECMWF's ensemble vertical profiles at the Hungarian Meteorological Service *ECMWF Newsletter* **129**, 20-24. [\[PDF\]](#)

**Gaál, N. and Ihász I.**, 2014: Predictability of the cold drops based on ECMWF's forecasts over Europe. *ECMWF Newsletter*, 140, 26-30. [\[PDF\]](#)

**Mátrai, A. and Ihász, I.**, 2017: Calibrating forecasts of heavy precipitation in river catchments; *ECMWF Newsletter* 152, 34-40. [\[PDF\]](#)

**Balázs, Z. K. and Ihász, I.**, 2018: Rapidly developing cyclones in ECMWF reanalyses. *ECMWF Newsletter* 154, 11-12. [\[PDF\]](#)

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**Ihász, I.**, 2001, Validation of Extreme Forecast Index for Hungary. *Proceedings of Eighth ECMWF Workshop on Meteorological Operational Systems*, ECMWF Reading UK, 12-16 November, 122-123. [\[PDF\]](#)

**Ihász, I.**, 2003a: Experiments of clustering for central European area especially in extreme weather situations, *Proceedings of 9th Workshop on Meteorological Operational Systems*. ECMWF Reading UK, 10-14 November 2003, 112-116. [\[PDF\]](#)

**Ihász, I.**, 2003b: Operational medium-range weather forecastings in the ECMWF (in Hungarian). *29th Scientific Days of Meteorology*, Budapest MTA, 20-21 November 2003, 119-128. [\[PDF\]](#)

**Ihász, I., Hágel, E. and Szintai, B.**, 2005: Severe weather warnings at the Hungarian Meteorological Service: Developments and progress: *Proceedings of the Tenth ECMWF Workshop on Meteorological Operational Systems*, Reading UK, 14-18 November 2005. 127-133., [\[PDF\]](#)

**Ihász, I.**, 2007: Experiences using VarEPS products at the Hungarian Meteorological Service: *Proceedings of the Eleventh ECMWF Workshop on Meteorological Operational Systems*, Reading UK, 14-18 November 2007, 130-135. [\[PDF\]](#)

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**Ihász, I., Mile, M. and Üveges, Z.**, 2009: Comprehensive study of the calibrated ensemble forecasts. *Proceedings of the Twelfth ECMWF Workshop on Meteorological Operational Systems*, Reading, United Kingdom, 2-6 November 2009, 59-63. [\[PDF\]](#)

## Articles in Hungarian papers

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**Ihász, I.**, 2000: Hungary has been a co-operating state of the ECMWF for 5 years (in Hungarian). Légkör, 45. 1. 16-18.

**Ihász, I.**, 2002: Medium-range plan of the ECMWF for the period of 2001 and 2004, developments made in OMSZ for encouraging to use ECMWF-s model products (in Hungarian). Activity report of Hungarian Meteorological Service, Budapest.170-178

**Ihász, I.**, 2010: Possible applications of the medium-range weather forecasts (in Hungarian). *ELTE Meteorological Summer School, Szigliget, 28 August 2010, Egyetemi Meteorológiai Füzetek*. 23, 121-125. [[PDF](#)]

**Ihász I.**, 2014: Researchs and developments on ensemble medium-range weather forecasts (in Hungarian). *ELTE Meteorological Summer School, Szigliget, 26-28 August 2014, Egyetemi Meteorológiai Füzetek*, 25, 32-37. [[PDF](#)]

**Ihász I.**, 2016: Predictability of the weather beyond one week (in Hungarian). *Természet Világa*, 1. 21-24. [[PDF](#)]

**Szépszó, G.**, 2019: Hungary has been a co-operating state of the ECMWF for 25 years (in Hungarian). *Légkör*, 64. 152-154.

### Internet publication

**Ihász, I., 2019:** Hungary has been cooperating state for 25 years. (In Hungarian), [www.met.hu/ismeret-tar/erdekessegek\\_tanulmanyok/index.php?id=2593&hir=Magyarorszag\\_25\\_eve\\_az\\_ECMWF\\_tarsult\\_tagja](http://www.met.hu/ismeret-tar/erdekessegek_tanulmanyok/index.php?id=2593&hir=Magyarorszag_25_eve_az_ECMWF_tarsult_tagja) 24 June 2019

### Project of the National Research and Development Fund

Estimation of the risk and economic planning by using ensemble weather forecasting „Applications of probability forecasts” NKFP 3A/051/2004 project leaders: **Károly Vissy** and **Sándor Kertész**

### BSc and MSc theses

**Hágel, Edit**, 2003: Early detection of the extreme weather situations by using Extreme Forecast Index. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász)

**Osváth, Szabolcs**, 2004: Investigation of the ensemble clustering focusing on Carpathian basin. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász)

**Szintai, Balázs**, 2006: Short-range ensemble forecasting made by ALADIN model. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász) [[PDF](#)]

**Mile, Máté**, 2008: Calibration of the ECMWF’s ensemble forecasts. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász) [[PDF](#)]

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**Tajti, Dávid**, 2009: Comprehensive verification of the ECMWF’s deterministic and probability forecasts. Budapest, Eötvös Loránd University. BSc thesis (supervisor: István Ihász) [[PDF](#)]

**Németh, Csilla**, 2010: Verification of the ECMWF's calibrated probability forecasts. Budapest, Eötvös Loránd University. BSc thesis (supervisor: István Ihász) [[PDF](#)]

**Lázár, Dóra**, 2011: Verification of the decadal and monthly EPS plumes based on ECMWF's ensemble forecasts. Budapest, Eötvös Loránd University. BSc thesis (supervisor: István Ihász) [[PDF](#)]

**Tajti, Dávid**, 2011: Investigation of the ECMWF's ensemble vertical profiles. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász) [[PDF](#)]

**Gaál, Nikolett**, 2012: Study of the cold drops based on ERA Interim reanalysis. Budapest, BSc thesis (supervisor: István Ihász) [[PDF](#)]

**Sábitz, Judit**, 2012: Comparison of the ensemble clustering and dispersion models. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Lázár, Dóra**, 2013: Applicability of the probabilistic forecasts in summer convective events. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Gaál, Nikolett**, 2014: Dynamical and synoptical study of the cold drops based on ERA-Interim reanalysis and ECMWF ensemble model forecastse előrejelzések alapján. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Mátrai, Amarilla**, 2015: Predictability of the precipitation based on ensemble forecasts over catchments of river Danube and Tisza. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Balázs, Zita Krisztina**, 2017: Comparison of ECMWF ERA-Interim and ERA-20C reanalyses. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Dóra Cséke**, 2018: Comparison of ECMWF ERA-Interim and ERA-20C reanalyses. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

**Boglárka Tóth**, 2020: Comparison of ECMWF ERA-Interim and ERA-20C reanalyses. Budapest, Master thesis (supervisor: István Ihász) [[PDF](#)]

### Students' papers made for Scientific Conferences for Students

**Szintai, Balázs**, 2005: Clustering of the ECMWF's medium-range ensemble forecasts. *Award 2 on Scientific Conferences for Students.* (supervisor: István Ihász).

**Mile, Máté**, 2008: Calibration of ECMWF's medium-range ensemble forecasts. *Award 1 on Scientific Conferences for Students.* (supervisor: István Ihász).

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**Németh, Csilla**, 2011: Verification of the calibrated ECMWF's probability forecasts. (supervisor: István Ihász).

**Tajti, Dávid**, 2011: Generation and verification of the ECMWF's ensemble vertical profiles. *Laudation on Scientific Conferences for Students*. (supervisor: István Ihász).

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**Tóth, Boglárka**, 2020: Estimation of the probability of the precipitation type based on ECMWF ensemble forecasts. *Award 2 on Scientific Conference for Students*. (supervisor: István Ihász)

Budapest, 31 August 2022