



Hungarian Meteorological Service

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](#)]
- **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](#)]
- **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](#)]
- **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](#)]
- **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.

Articles in proceedings of the conferences

- **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](#)]



Hungarian Meteorological Service

- **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]
- **Ihász, I. and Máté, M.**, 2008: Calibration of ECMWF ensemble precipitation forecasts for hydrological purposes at the Hungarian Meteorological Service. *Proceedings of the XIV Conference of the Danubian Countries. 2-4 June 2008*, Bled, Slovenia (CD) [PDF]
- **Ihász, I.**, 2008: Model products and possible applications of medium and long range weather forecastings (in Hungarian). *34th Scientific Days Of Meteorology*. Hungarian Scientific Academy. 20-21 November 2008 [PDF]
- **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

- **Ihász, I.**, 1998: Influence of the sea surface temperature anomalies for seasonal forecasts of the ECMWF (in Hungarian). *ELTE Meteorological Summer School: Influence of the ocean for weather and climate*. Balatonalmádi, Hungary, 7-12 September 1998. *Egyetemi Meteorológiai Füzetek*. 70-74.
- **Ihász, I.**, 2000: Hungary has been a co-operating state of the ECMWF for 5 years (in Hungarian). *Léggör*, 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 bwyonf one week (in Hungarian). *Természet Világa*, 1. 21-24. [PDF]

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**



Hungarian Meteorological Service

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](#)]
- **Üveges, Zoltán**, 2009: Calibration of ECMWF's monthly ensemble forecasts. Budapest, Eötvös Loránd University. Master thesis (supervisor: István Ihász) [[PDF](#)]
- **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](#)]

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).



Hungarian Meteorological Service

- **Üveges, Zoltán**, 2009: Calibration of ECMWF's monthly forecasts. *Award 2 on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Tajti, Dávid**, 2010: Seasonal verification of the ECMWF's forecasts. *Laudation on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Lázár, Dóra**, 2011: Verification of decadal and monthly EPS plumes based on ECMWF's ensemble forecasts. (supervisor: István Ihász).
- **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).
- **Gaál, Nikolett**, 2012: Study of the cold drops based on ERA Interim reanalysis. *Special Award on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Lázár, Dóra**, 2012: Using ensemble forecasts in convective, severe weather situation. *Award 1 on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Tajti Dávid**, 2012: Investigation of the ECMWF's ensemble vertical profiles. *Award 1 on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Gaál, Nikolett**, 2013: Study of the cold drops based on ERA Interim reanalysis. *Award 3 on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Lázár, Dóra**, 2013: Using ensemble forecasts in convective, severe weather situation. *Laudation on Scientific Conferences for Students*. (supervisor: István Ihász)
- **Gaál, Nikolett**, 2014: Study of the cold drops based on ECMWF deterministic and ensemble forecasts. *Award 2 on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Amarilla Mátrai**, 2015: Predictability of the ensemble precipitation forecasts over catchments of the river Danube and Tisza. *Laudation on Scientific Conferences for Students*. (supervisor: István Ihász).
- **Cséke Dóra**, 2017: Estimation of the probability of the precipitation type based on ECMWF ensemble forecasts. *Award 1 on Scientific Conference for Students, at Section in Meteorology at Eötvös Loránd University* (supervisor: István Ihász)

Budapest, 24 January 2018