

Advances in Environmental Monitoring with UAS

International Workshop

30th March 2022

University of Debrecen, Hungary (MTA DAB székház)

Co-organized by

HARMONIOUS COST Action (CA16219) Hungarian Academy of Sciences, Academic Commission Debrecen, Committee of Earth Sciences













Program (Draft)

30.03.2021 Workshop

08:30 - 09:30 Registration

09:30-09:50: László Bertalan, Brigitta Tóth: Welcome from local organizers

09:50-10:05: Salvatore Manfreda – The achievements HARMONIOUS COST Action

ideas through networks

10:05-10:25: Plenary talk: Francesco Nex – Towards real-time UAV mapping: example, challenges and opportunities

10:25-10:55: Plenary talk: James Dietrich – Drones for River Monitoring, a ten-year perspective

Growing

10:55-11:20 Coffee Break

11:20-11:35: Sorin Herban – Summary of WG1: UAS data processing

11:30-11:50: Jana Müllerová – Summary of WG2: Vegetation status (part 1)

11:50-12:05: Antonino Maltese – Summary of WG2: Vegetation status (part 2)

12:05-12:20: Yiyian Zeng – Summary of WG3: Soil moisture content

12:20-12:35: Dariia Strelnikova – Summary of WG4: River monitoring

12:35-12:50: Eyal Ben-Dor – Summary of WG5: Harmonization of methods and results

12:50-14:30: Lunch break

14:30-14:45: Gábor Papp – HungaroControl's Air-Ground-Air communication concept in order to enable UAVs' ecosystem
14:45-15:00: Géza Király et al. – UAS and their application in forest monitoring
15:00-15:15: Gábor Bakó et al. – HRAM: High Spatial Resolution Aerial Monitoring Network for Nature Conservation
15:15-15:30: Ferenc Kovács et al. – Application of UAV imagery in environmental research at the University of Szeged
15:30-15:45: Anette Eltner et al. – Hydro-morphological mapping of river reaches using videos captured with UAS
15:45-16:00: Ilyan Kotsev et al. – UAS-aided bedform and habitat mapping of Bolata Cove, Bulgarian Black Sea

16:00-16:30: Coffee Break

16:30-16:50: Lance R. Brady – UAS for Research and Applied Science in the United States Geological Survey 16:50-17:05: Kamal Jain et al. – Crop identification and classification from UAV images using conjugated dense convolutional neural network 17:05-17:20: Nicolas Francos et al. – Mapping Water Infiltration Rate Using Ground and UAV Hyperspectral Data: A Case Study of Alento, Italy 17:20-17:35: Martin Jolley et al. – Considerations When Applying UAS-based Large-Scale PIV and PTV for Determining River Flow Velocity 17:35-17:50: Adrian Gracia-Romero et al. – UAS plant phenotyping under abiotic stresses 17:50-18:05: Shawn C. Kefauver et al. – High-resolution UAV Imaging for Forest Productivity Monitoring



ZOOM connection Meeting ID: 849 7936 2853 Passcode: 407604



Program - WG meetings

31.03.2022 – Google Meet https://meet.google.com/nug-kboa-ozm

9:00-10:30 Meeting of WG1

10:30-11:00 Coffee Break

11:00-12:30 Meeting of WG2

12:30-14:00 Lunch break

14:00-15:30 Meeting of WG3

15:30-16:00 Coffee Break

16:00-17:30 Meeting of WG4

01.04.2022 - Google Meet:

https://meet.google.com/kfd-retv-ewq

9:00 -10:00 Meeting of WG5 – Updates on Book Activities 10:00-10:30 Coffee Break

10:30 - 12:00 MC Meeting





Travelling Instructions

Workshop venue - https://goo.gl/maps/T6okEkRiSJAKALTg9

The workshop will take place at 'DAB székház' which is the headquarters of the Hungarian Academy of Sciences, Academic Commission Debrecen.

Address: Thomas Mann u. 49. Debrecen

Travel to Debrecen by flight:

Debrecen has an international airport with a direct flight connection to the following airports: Brussels (Charleroi), Eindhoven, Kiev (Zhuany), Kiev (Boriszpili), Larnaca, London (Luton), Moscow, Palma de Mallorca, Paris (Orly), Paris (Beauvais), Santorini, Tel-Aviv

There are direct buses from the Terminal, but we recommend taking a taxi. Taxi prices to Debrecen city center from the Airport cost around 3000-4000 HUF (9-12 Euros).

Important contacts from the HARMONIOUS team: László Bertalan: e-mail: <u>bertalan@science.unideb.hu</u> Brigitta Tóth: e-mail: <u>toth.brigitta@atk.hu</u> Salvatore Manfreda: e-mail: <u>salvatore.manfreda@unina.it</u>

