

ISPRS Foundation Travel Grant PIA15 & HRIGI15 – March, 2015 Participation Report



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Experiences at the workshop:

- I would like to start this report by thanking the ISPRS Foundation for the travel grant given to me, your financial support was invaluable for me to attend the symposium. I am really grateful for the opportunity.
- Just to remember, my contribution to the event was by a poster presentation. A brief outlook to the work could be described as:

“The tool that we presented tries to overcome the limitation that rises when we want to perform a classification process on big data files, like the ones that we use for remote sensing analysis, by taking advantages of the computational resources (clusters) available on the cloud. The classification algorithms that we use are the well-known: Decision Trees, Naïve Bayes, Random Forest and Support Vector Machines (SVM) algorithms, whose implementation are based from the WEKA’s machine learning library.”

- I must say that, even the delay in my arrival to Munich; the opportunities that I had with my participation in the congress were invaluable. Some of the benefits that I had were:
 - The ability to show our work to the specialized community assistant to the congress. The feedbacks, comments and suggestions that we received from the community were indeed invaluable in order to improve our work.
 - I believe that the contacts established with some of the attendees in the symposium will lead to some cooperation, given the importance of our work and the demand of the community for working with big data classification problems.
 - The opportunity to update and learn about the new advances related to *Pattern Analysis in Remote Sensing* was priceless. Just to mention some of the researches that were productive for me to increase my perspective in the field, I can list the following ones:
 - *SPATIAL-TEMPORAL CONDITIONAL RANDOM FIELDS CROP CLASSIFICATION FROM TERRASAR-X IMAGES*
B. K. Kenduywoa, D. Bargiel, and U. Soergel
 - *CONTEXTUAL CLASSIFICATION OF POINT CLOUD DATA BY EXPLOITING INDIVIDUAL 3D NEIGHBOURHOODS*
M. Weinmann, A. Schmidt, C. Mallet, S. Hinz, F. Rottensteiner, and B. Jutzi
 - *MULTI-SOURCE MULTI-SCALE HIERARCHICAL CONDITIONAL RANDOM FIELD MODEL FOR REMOTE SENSING IMAGE CLASSIFICATION*
Z. Zhang, M. Y. Yang, and M. Zhou
 - *CONTEXTUAL CLASSIFICATION OF POINT CLOUDS USING A TWO-STAGE CRF*
J. Niemeyer, F. Rottensteiner, U. Soergel, and C. Heipke

- *DEEP NEURAL NETWORKS FOR ABOVE-GROUND DETECTION IN VERY HIGH SPATIAL RESOLUTION DIGITAL ELEVATION MODELS*
D. Marmanis, F. Adam, M. Datcu, T. Esch, and U. Stilla
- *FEATURE DESCRIPTOR BY CONVOLUTION AND POOLING AUTOENCODERS*
L. Chen, F. Rottensteiner, and C. Heipke
- *QUALITY ASSESSMENT OF 3D RECONSTRUCTION USING FISHEYE AND PERSPECTIVE SENSORS*
C. Strecha, R. Zoller, S. Rutishauser, B. Brot, K. Schneider-Zapp, V. Chovancova, M. Krull, and L. Glassey
- *CONSISTENT MULTI-VIEW TEXTURING OF DETAILED 3D SURFACE MODELS*
K. Davydova, G. Kuschik, L. Hoegner, P. Reinartz, and U. Stilla
- *HYPERSPECTRAL HYPERION IMAGERY ANALYSIS AND ITS APPLICATION USING SPECTRAL ANALYSIS*
W. Pervez, S. A. Khan, and Valiuddin
- *IMPROVING LINEAR SPECTRAL UNMIXING THROUGH LOCAL ENDMEMBER DETECTION*
R. Ramak, M. J. Valadan Zouj, and B. Mojaradi
- *CONCEPT FOR A COMPOUND ANALYSIS IN ACTIVE LEARNING FOR REMOTE SENSING*
S. Wuttke, W. Middelmann, and U. Stilla
- *ROBUST SPARSE MATCHING AND MOTION ESTIMATION USING GENETIC ALGORITHMS*
M. Shahbazi, G. Sohn, J. Théau, and P. Ménard

These works are really useful for me to improve my knowledge about different techniques to work with data mining in remote sensing

- I truly believe that the symposium was a big contribution into the development of my current doctoral thesis, most of the researches listed above will produce a great impact in the horizon of my research and I hope I could present the future works in some other editions of the Photogrammetric Image Analysis Symposium.
- Once again, I would like to express my gratitude to the ISPRS Foundation for the Travel Grant, and most important, for the invaluable opportunity to present our work and to learn more about the recently advances in the remote sensing image analysis.

Best Regards,

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