

IGARSS 2015 – Andrew Brumfield

The IEEE IGARSS 2015 (Geoscience and remote Sensing Society) Remote Sensing conference was hosted in Milan Italy July 26th through the 31st. The theme of this conference was remote sensing: understanding the earth for a safer world. Sub-Themes listed were Data analysis methods for optical, multi spectral, and hyperspectral. Cryosphere data management and education,, LAN atmosphere oceans mission sensors in calibration, and feeding the planet energy for life.

Sponsors at the conference ESA the (European Space Agency), ESA is an intergovernmental organization created in 1975, with the mission to shape the development of Europe's space capability. Agenzi Spaciale Italiana (ASI) is a government agency founded in 1988 with the purpose to coordinate all of Italy's efforts and investments in the space sector in 1960's. Thales Alenia is a Joint venture between Thales and Finmeccania which is a key player in space telecommunications, Navigation, and Earth observation. Google Earth Engine which brings together the world's satellite imagery that contains trillions of scientific measurements sating back over 40 years and makes it available online with tools for scientist, independent researchers, and nations to mine the massive warehouse of data to detect changes.

MetaSensing is an innovative company providing proprietary sensors for data acquisition and post-processing services. Rapid Analysis and Spatialisation of Risk (RASOR) is a Multi-hazard risk analysis software platform to support the full cycle of disaster management. TRE is the world leader in surface deformation monitoring services with InSAR technology. TRE measures surface deformation to millimeter accuracy by analyzing satellite SAR images to offer a quantitative understanding of ground response to both natural and anthropogenic activities founded in 2000. Vito (Flemish Institute for Technological Research) Remote Sensing Unit with more than 80 specialist developing new remote sensing systems, sensors, platforms, processing and distribution of multiple space/airborne/UAV data.

Monday was a full session from the beginning was the Introduction and welcome from General Co-Chairs Vito Pascazio and Sebastiano B. Serpico, IEEE Geoscience and remote Sensing Society President Kamal Sarabandi, and Technical Co-Chairs Lorenzo Bruzzone and Paolo Gamba to the conference in Milan Italy followed by a flurry of Tutorials, Oral and Poster sessions, and Social events. The session attended on Monday was in yellow room number 2 located in Milano Congressi (MiCo), which was a data management session part 2 with session chairs Andrea Lawrence from Spelman College and Alisia Joseph from NASA Goddard Space Flight Center. The topic of the sessions was Providing Provenance to Instruments through the US Global Change Information systems presented by Robert Eolfe, NASA Goddard Space Flight Center. Next was Image Data and Metadata Workflows Automation In Geospatial Data Infrastructure Deployed For Agricultural Sector presented by Tomas Kilemnt, the Open Geoscience and Remote Sensing Framework BY Leland Pierce from University of Michigan who Dr. Hayden introduced me to at Sunday's welcome reception (administrator for the IEEE IGARSS website), then the SMAP Data and Services at the NASA DAACS by Amanda Leon. Afterward the oral presentation by Raven Mackenzie on her research conducted at ECSU during the Undergraduate Research Experience (URE) her topic was a Comparative Study To The 2011-2013 Water Quality Assessment In The Pasquotank Watershed In The North Eastern North Carolina with a Sea Level Rise Component.

Later that Monday afternoon there was a young professional's cocktail coordinated by Ferdinando Nunziata, University of Naples at Blend Tower where I met with fellow colleagues in the profession of remote sensing as well as to Addcom members in an informal forum to interact with other senior members. It was an opportunity to discuss potential career paths and skill sets to secure employment in the geosciences and remote sensing industries, as well as professional development opportunities.

Tuesday the sessions that I attended was why data matters the value of stewardship and knowledge of augmented services park to which I began the session with my presentation. The

session co-chairs were Siri Judah Tesla, University of Colorado and Kurt times of NASA. The session began with my oral presentation topic which was Update of the CERSER TeraScan Image Cataloging System. Next was Scalable Development for Big Data Analytics, then Advances In Automated Advent Services. After the session concluded Dr. Hayden held a Minority Technology Professionals whose speakers Dr. Lawrence and Mr. Eric Baptiste (EEC Weather Tech) to speak about our futures in this profession. Mr. Baptiste said “know your end game, balance work and life, and make an impact at each position in your career and never stay for more than two years with a company.”

On Wednesday the conference hosted the Industry Student Lunch which is the flagship event of the student program, which was not like the buffet they promised but there were students from all over the world there to represent themselves. This was an opportunity to make valuable connections and put networking skills to use. some of the industry participants were Altamira Information, Enterprise Electronics Corporation (EEC), and SI Imaging Services (SIIS, ENVI software). There I met Hossein Torabzadeh Khorasani, PhD student Remote Sensing Laboratories (RSL) at the University of Zurich.

That evening after visiting some posters in the poster sessions, the Technical Committee and Chapter Chairs Dinner was held at Melia Hotel where members of Technical Committees, Chairs, and delegates learned more about Technical committees for example Radio Frequency advocate whose main objective is to make sure communication wavelength regulations are upheld so that no interference from other communications such as cell devices would not pollute the data received from remote sensing devices. A wonderful meal took place as well as the award ceremony of the 2015 IEEE GRSS Data Fusion Contest.

Thursday was the last day for sessions and exhibits where I attended two separate sessions. First was Sentinel-2 Mission Status and Preparation for Mission Exploitation. Session Co-Chairs: Bianca Hoersch, ESP; Oliver Arino, ESP. Sentinel-2 is a new satellite mission which launched in 2013 and has been sending data since the beginning of 2014. The last session

attended before the awards ceremony that night was Earth Remote Sensing with Small Satellites. Session Co-Chairs Boon Lim, NASA Jet Propulsion Laboratory; Blackwell, MIT Lincoln Laboratory. The most amazing talk in this session was to use fleets of smaller satellites that are more cost effective and lightweight to conduct remote sensing.