

## Curriculum Vitae

**Name:** Hussam Hesham AL-BILBISI (Ph.D.)  
*Professor of Remote Sensing & GIS*

**Nationality:** Jordanian

**Languages:** Arabic (Mother Language)  
English (Excellent)  
Japanese (speaking and hearing Good) (reading and writing Poor)



**Current Address:** Geology Department / School of Science  
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### Education-Academic Profile

|                         |   |
|-------------------------|---|
| April 2001 – March 2004 | (PhD) Remote Sensing & GIS<br>Center for Environmental Remote Sensing (CEReS)<br>Graduate School of Science and Technology<br>Chiba University-Japan. |
| Oct. 1999 – March 2001  | Research Student<br>Center for Environmental Remote Sensing (CEReS)<br>Chiba University-Japan.  |
| Feb. 1989 – Jan. 1992   | (M.Sc) Geology<br>Earth and Environmental Sciences Department.<br>Yarmouk University- Jordan.   |
| Feb. 1985 – Jan. 1989   | (B.Sc) Earth and Environmental Sciences<br>Earth and Environmental Sciences Department.<br>Yarmouk University- Jordan.                                |

## **Professional Work**

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|-------------------------|--|
| July 2019 – Date        | Professor of Remote Sensing & GIS<br>The University of Jordan, Amman- Jordan                               |
| March 2012 – June 2019  | Associate Professor of Remote Sensing & GIS<br>The University of Jordan, Amman- Jordan                     |
| Sept. 2006 – Feb. 2012  | Assistant Professor of Remote Sensing & GIS<br>The University of Jordan, Amman- Jordan                     |
| April 2004 – Aug. 2006  | Researcher & Academic Staff<br>Center for Environmental Remote Sensing (CEReS)<br>Chiba University-Japan.  |
| Sept. 1996 – Sept. 1999 | Teaching Assistant<br>Earth and Environmental Sciences Department<br>The Hashemite University-Jordan.      |
| Sept. 1996 – Aug. 1998  | Consultant Geologist and Geotechnical Engineer<br>SALINI-ITALSTRADE J.V.Co.<br>Karameh Dam Project-Jordan. |
| Aug. 1994 – Aug. 1996   | Senior Geologist and Geotechnical Engineer<br>SALINI-ITALSTRADE J.V.Co.<br>Karameh Dam Project-Jordan.     |
| June 1992 – July 1994   | Engineering Geologist<br>Geotechnical Engineering and Material Testing Co.<br>Amman-Jordan.                |

## **Research Interests:**

### **Using GIS & Microwave and Optical Remote Sensing Data For:**

- 1- Applications of GIS & Remote Sensing in Land Degradation.
- 2- Applications of GIS & Remote Sensing in Environmental Studies.
- 3- Image processing of Remotely Sensed Data.
- 4- Land Remote Sensing (Change detection & Land degradation).

## Publications

- 1) Alshraifat, Hashem and **AL-BILBISI, Hussam. (2024)**. Forest Fire Prediction in northwest Jordan. **An-Najah Research Journal-B-**, Vol. 38, Issue 6. (*In Arabic Language*).
- 2) **AL-BILBISI, Hussam**; Ghanem, Ali; Abu Sammour, Hssan; and Karagoghly Mohummed. (2022). Analysis of *Al-Marba'anieh* precipitation in Jordan using statistical analysis and GIS (1981-2018). **Journal of Hebron University for Research**. (*In Arabic Language*). (*Accepted*)
- 3) Al-Mahadeen, Eman and **AL-BILBISI, Hussam. (2021)**. Urban expansion and its impact on rainfed agricultural lands in Karak governorate during the period 1979-2018 Using GIS. **Journal of Al-Hussein University for Research**, Vol.7, No. 3, pp 443-469. (*In Arabic Language*).
- 4) Arwa Aboislah; Rima Yaghan; Mustafa M. Al Kuisi; and **Hussam AL-BILBISI, (2020)**. Impact of climate change on flash floods using hydrological modelling and GIS: Case study Zarqa Ma'in area. **International Journal of Applied and Natural Sciences (IJANS)**, Vol. 9, Issue 5 pp 29-52.
- 5) **AL-BILBISI, Hussam. (2019)**. Spatial monitoring of urban expansion using satellite remote sensing images: A case study of Amman city, Jordan. **Sustainability** 11, no. 8: 2260.
- 6) Osama Khalil Abdeljawad and **Hussam Hesham AL-BILBISI, (2019)**. Analysis and detection of changes in land cover patterns and compare them with the map of land uses in the AL-Muwaqqar district using satellite imagery and geographic information systems. **DIRASAT: Human and Social Sciences**, Vol. 46, No. 2, pp 245-266 (Amman: The University of Jordan) (*In Arabic Language*).
- 7) Al- Mohammad, Haifa and **AL-BILBISI, Hussam. (2019)**. Estimating soil degradation in the Wadi Al Arab; basin using GIS and Remote Sensing techniques. **DIRASAT: Human and Social Sciences**, Vol. 46, No. 1 (2), pp 125-138 (Amman: The University of Jordan) (*In Arabic Language*).
- 8) A.Wasfi Lababneh; M. Al Kuisi and **H. AL-BILBISI, (2019)**. Hydrological modeling for Al Hasa catchment area using GIS Technique. **International Journal of Engineering Research and Applications**, Vol. 9, Issue 2 (series-1), IJERA pp 38-48.
- 9) Ibrahim M. Oroud; **Hussam AL-BILBISI** and Tareq M. Alghnmieen, (2018). Recent climate change and its influence on vegetation cover in Wadi Araba North, Jordan. **Jordan Journal of Social Sciences**, Vol. 11, No. 3, pp 347-362. (Amman: The University of Jordan) (*In Arabic Language*).

- 10) **Hussam Hesham AL-BILBISI, (2018)**. A method for land degradation monitoring in arid and semi-arid regions of northeastern Jordan using Landsat images. **Jordan Journal of Earth and Environmental Science**, Vol. 9, No. 2, pp 102-107. (Zarqa-Jordan: The Hashemite University).
- 11) Haifa Ahmad Mohammad, **Hussam Hesham AL-BILBISI** and Hassan Yousef Abu Sammour, **(2018)**. Change detection and analysis of the vegetation cover using spectral indices in remote sensing, Wadi Al Arab's case study. **DIRASAT: Human and Social Sciences**, Vol. 45, No. 1, pp 83-97 (Amman: The University of Jordan) *(In Arabic Language)*.
- 12) Haitham Al Kouri, Nazeeh Almanasyeh and **Hussam AL-BILBISI, (2018)**. Detecting land use changes in Bani Obaid District between 2004 2016 using Geographic Information System and Remote Sensing. **Jordan Journal of Social Sciences**, Vol. 11, No. 2, pp 219-236. (Amman: The University of Jordan) *(In Arabic Language)*.
- 13) **Hussam AL-BILBISI, (2017)**. Land use/cover change detection in arid and semi-arid areas of northeastern Jordan using Landsat images. **Jordan Journal of Social Sciences**, Vol. 10, No. 2, pp 265-278. (Amman: The University of Jordan).
- 14) Osama K. Abdeljwad and **Hussam H. AL-BILBISI, (2017)**. Development of demographic characteristics of AL Muwaggar District-Amman Governorate. **Al-Manara for Research and Studies Journal**, Vol. 23, No. 2, pp 291-320. (Mafraq-Jordan: Al al-Bayt University) *(In Arabic Language)*.
- 15) Mohammed Matouq; **Hussam AL-BILBISI**; Tayel El-Hasan and Saeid Eslamian, **(2014)**. GIS application in a changing climate. **In Handbook of Engineering Hydrology**, ed.1, Vol. 2, pp 297-312. London: Taylor and Francis).
- 16) Haifa Al-Mohammed, **Hussam Al-BILBISI**, and Hasan Abu Sammour, **(2014)**. Monitoring and measuring the changes in the Dead Sea area using remote sensing and GIS applications. **DIRASAT: Human and Social Sciences**, Vol. 41, No. 2, pp 376-391 (Amman: The University of Jordan) *(In Arabic Language)*.
- 17) Mohammed Matouq, Tayel El-Hasan, **Hussam AL-BILBISI**, Monther Abdelhadi, Muna Hindiyeh, Saeid Eslamian, and Salman Duheisat, **(2013)**. The climate change implication on Jordan: A case study using GIS and Artificial Networks for weather forecasting. **Journal of Taibah University for Science**, Vol. 7, Issue 2, pp 44-55. (Amsterdam: Elsevier).
- 18) **Hussam AL-BILBISI, (2012)**. A two decades land use/cover change detection and land degradation monitoring in central Jordan using satellite images. **Jordan Journal of Social Sciences**, Vol. 5, No. 1, pp 133-149. (Amman: The University of Jordan).
- 19) Ryutaro Tateishi, Bayaer Uriyangqai, **Hussam AL-BILBISI**, Mohamed Aboel Ghar, Javzandulam Tsend-Ayush, Toshiyuki Kobayashi, Alimujiang Kasimu, Nguyen Hoan, Adel Shalaby, Bayan Alsaaidh, Tesevengge Enkhzaya, Gegentana, Hiroshi P. Sato,

(2011). Production of global land cover data – GLCNMO, **International Journal of Digital Earth**, Vol. 4, No.1, pp 22-49. (London: Taylor and Francis).

20) Faris Jaber AL-SALLAL and **Hussam Hesham AL-BILBISI**, (2011). A GIS and remote sensing based integrated approach to detect land use/cover dynamics in Sahab district (Central Jordan). **Abahth Al-Yarmouk "Hum.&Soc.Sci"**, Vol. 27, No. 3, pp 2345-2362. (Jordan: Yarmouk University).

21) **Hussam AL-BILBISI** and Zeyad MAKHAMREH, (2010). A comparison of pixel-based and object-based classification approaches in arid and semi-arid areas of Dead Sea region using Landsat imagery, **DIRASAT: Human and Social Sciences**, Vol. 37, No. 3, pp 649-659. (Amman: The University of Jordan).

22) Rokhmatuloh, R. Tateishi, **H. AL-BILBISI**, K. Arihara, T. Kobayashi, D. Nitto, S.A Lee, K. Hirabayashi, Y.Q. Lu, C. Lu, T. Enkhzaya, B. Erdene, Ts. Javzandulam, E. Migita, N. Soliman, Y. Ouma, N.T. Hoan and K. Alimujiang, (2010). Global percent tree cover mapping using regression tree method: An advantage of QuickBird images as training data. **Asian Journal of Geoinformatics**, Vol. 10, No. 2, pp 21-28. (Thailand: Asian Remote Sensing Research Information Network).

23) T. Ngigi, R. Tateishi, **H. AL-BILBISI**, M. Gachari and E. Waithaka, (2009). Applicability of the mix-unmix classifier in percentage of tree and soil cover mapping, **International Journal of Remote Sensing**, Vol. 30, No. 14, pp 3637-3648. (London: Taylor and Francis)

24) **Hussam AL-BILBISI**, (2009). Monitoring of land degradation in central Jordan using remote sensing imagery, **Proceedings (in CD-ROM) of The International Conference On Remote Sensing Technologies and Geographic Information Systems**, October 5<sup>th</sup>-7<sup>th</sup>, Tripoli-Libya.

25) **Hussam AL-BILBISI**, (2009). Preprocessing of Global MODIS Satellite Imagery, **Proceedings of The Remote Sensing and GIS Applications Symposium**, April 20<sup>th</sup>, pp E36-E51, The University of Jordan, Jordan.

26) R. Tateishi, Bayaer, M. A. Ghar, **H. AL-BILBISI** and others (2008). A New Global Land Cover Map, GLCNMO, **Proceedings of the 21 congress of the International Society for Photogrammetry and Remote Sensing (ISPRS)**, No. 21, pp 1369-1372 Beijing, China.

27) Ryutaro Tateishi, Javzandulam Tsend-Ayush, Mohamed Aboel Ghar, **Hussam AL-BILBISI** and Takaki Okatani, (2007). Sampling method for validation of large area land cover mapping, **Journal of the Remote Sensing Society of Japan (RSSJ)**, Vol. 27, No. 3, pp 195-204. (Tokyo, Japan, RSSJ).

- 28) Rokhmatuloh, Daisuke Nitto, **Hussam AL-BILBISI**, Kota Arihara and Ryutaro Tateishi, (2007). Estimating percent tree cover using regression tree method with very-high-resolution QuickBird images as training data, **Journal of the Remote Sensing Society of Japan (RSSJ)**, Vol. 27, No. 1, pp 1-12. (Tokyo, Japan, RSSJ).
- 29) Ahmad AL-HANBALI, **Hussam AL-BILBISI**, Akihiko, KONDOH, (2006). Monitoring the Dead Sea Area Changes Using Remote Sensing and GIS. **Journal of Japan Society of Hydrology & Water Resources**, 19(6), pp 483-490. (Tokyo, Japan, JSHW).
- 30) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2006). Land degradation monitoring in arid and semi-arid area of northeastern Jordan using Landsat (TM) data, **Proceedings of the Annual Conference of the Remote Sensing Society of Japan (RSSJ)**, 40, pp 93-94, (Tokyo, Japan, RSSJ).
- 31) Ryutaro Tateishi, Javzandulam Tsend-Ayush, Mohamed Aboel Ghar and **Hussam AL-BILBISI**, (2006). Better sampling method for validation of land cover classification, **Proceedings of the Annual Conference of the Remote Sensing Society of Japan (RSSJ)**, 40, pp 55-56, (Tokyo, Japan, RSSJ).
- 32) Rokhmatuloh, **H. AL-BILBISI**, K. Arihara, T. Kobayashi. D. Nitto, B. Erdenee, K. Hirabyashi, T. A. Javzandulam, S.A. Lee, E. Migita, N. Soliman, Y. Ouma and Ryutaro Tateishi, (2006). Application of regression tree method for continental percent tree cover mapping, **Proceedings of the Annual Conference of the Remote Sensing Society of Japan (RSSJ)**, 40, pp 9-10, (Tokyo, Japan, RSSJ)
- 33) Rokhmatuloh, Nitto, D., **AL-BILBISI, H.** and Tateishi. R., (2005). Percent tree cover estimation using regression tree method: a case study of Africa with very-high resolution QuickBird images as training data, **Geoscience and Remote Sensing Symposium IEEE 2005 International, IGARSS 05**. Vol. 3, pp 2157-2160, (U.S.A).
- 34) **Hussam AL-BILBISI**, Ryutaro Tateishi, Rokhmatuloh and Kota Arihara, (2005). Pre-processing of global MODIS data from USGS, **Proceedings of the Annual Conference of the Remote Sensing Society of Japan (RSSJ)**, 39, pp 83-84, Tokushima, Japan.
- 35) Rokhmatuloh, **Hussam AL-BILBISI**, Arihara Kota, Toshiyuki Kobayashi, Ryutaro Tateishi, (2005). Application of regression tree method for estimating percent tree cover of Asia with Quickbird images as training data, **Proceedings of The 11<sup>th</sup> International Symposium on Remote Sensing**, pp 213-222, Chiba University, Chiba, Japan.
- 36) A. Al-Hanbali, **H. AL-BILBISI**, A. Kondoh, (2005). The environmental problem of the Dead Sea using remote sensing and GIS techniques, **Proceedings of The 11<sup>th</sup> International Symposium on Remote Sensing**, pp 163-168, Chiba University, Chiba, Japan.

- 37) Rokhmatuloh, Daisuke Nitto, **Hussam AL-BILBISI** and Ryutaro Tateishi, (2005). Percent tree cover estimation using regression tree method, **Proceedings (in CD-ROM) of the IGARSS 2005**, July 25-29. Seoul, Korea
- 38) **H. AL-BILBISI**, R. TATEISHI, and J. TETUKO S.S, (2004). A technique to estimate topsoil thickness in arid and semi-arid areas of north-eastern Jordan using synthetic aperture radar data, **International Journal of Remote Sensing**, Vol. 25, No. 19, pp 3873-3882. (London: Taylor and Francis)
- 39) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2004). Combined use of spectral and textural features of Landsat-TM and JERS-1 SAR imagery for land use/land cover classification in northeastern Jordan, **Proceedings of Indonesian-Japan Joint Scientific Symposium**, pp 95-100, Chiba University, Chiba, Japan.
- 40) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2003). Using satellite remote sensing data to detect land use/cover changes and to monitor land degradation in central Jordan, **Journal of the Japan Society of Photogrammetry and Remote Sensing (JSPRS)**, Vol. 42, No. 6, pp 4-18. (Tokyo, JSPR).
- 41) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2003). Land cover classification with textural analysis using multi-temporal JERS-1 (SAR) L-band in Northeastern Jordan, **Proceedings (in CD-ROM) of Symposium on Environmental Monitoring (SIEM 2003)**, Chiba University, Chiba, Japan.
- 42) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2002). Monitoring of land degradation in northeastern Jordan by remote sensing, **Proceedings (in CD-ROM) of 5<sup>th</sup> International Symposium on Land Cover /Asia**, Center for Environmental remote Sensing (CEReS), Chiba University, Chiba, Japan.
- 43) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2002). A study on land use/cover classification using multi-temporal JERS-1 (SAR) L-band in arid and semi arid area. (A case study in northeastern Jordan), **Proceedings (in CD-ROM) of the 23<sup>rd</sup> Asian Conference on Remote Sensing**, Kathmandu, Nepal.
- 44) **Hussam AL-BILBISI** and Ryutaro Tateishi, (2002). A study on change detection and monitoring of land degradation in Northeastern Jordan using satellite remote sensing data, **Proceedings of the Annual Conference of the Japan Society of Photogrammetry and Remote Sensing**, pp.63-68, Tokyo, Japan.
- 45) Al-Akhal, H., **AL-BILBISI, H.**, and Al-Dwairi, I., (2001). Contribution to the Geochemistry, Petrography, and Tectonic Evolution of a Neoproterozoic rock suite from southwest Jordan. **Freiberger Forschungshefte**. C494: pp1-9. Germany.

## **Book**

Nikolai KHARIN, Ryutaro TATEISHI, Peter GUNIN and **Hussam AL-BILBISI, (2004)**, DEGRADATION OF THE DRYLANDS OF NORTHERN AFRICA. Center for Environmental Remote Sensing (CEReS), Chiba University-Japan.

## **Academic Awards**

- 1- Awarded a scholarship of the Japanese Government-MONBUSHO (Ministry of Education, Science, Sports and Culture) for research student at Center for Environmental Remote Sensing/Chiba University, (from 10-1999 to 3-2001).
- 2- Awarded a scholarship of the Japanese Government-MONBUSHO (Ministry of Education, Science, Sports and Culture) for PhD Degree in Remote Sensing at Graduate School of Science and Technology/Center for Environmental Remote Sensing Chiba University (from 4-2001 to 3-2004).

## **Courses Taught:**

### **B.Sc. Courses:**

- 1- Principles of Remote Sensing.
- 2- Remote Sensing Techniques.
- 3- Geographic Information Systems (**GIS**).
- 4- Principles of Cartography.
- 5- Digital Thematic Mapping.
- 6- Geography of Arid Regions.
- 7-

### **M.Sc. Course:**

Advanced Geographic Information Systems (**GIS**)

### **Ph.D. Course:**

Advanced Remote Sensing  
Spatial analysis / GIS



## **External Activities:**

**Editorial Board of:**  
**Journal of Ecology & Natural Resources (ISSN: 2578-4994)**  
(<https://www.medwinpublishers.com/JENR/editorial-board.php>)

### **Referee for the following Journals:**

- 1- International Journal of Remote Sensing.
- 2- International Journal of Digital Earth.
- 3- Asian Journal of GEOINFORMATICS.
- 4- Dirasat Journal, Jordan University.

## **Community Services Activities**

- Several training courses in Remote Sensing and GIS were conducted for both public and private sectors employees
- Introducing the applications of Remote Sensing and GIS Sciences for colleges and schools students (several times).