Dr. V. SATHIESH KUMAR

HOME   TUTORIALS   PATENT AND PUBLICATIONS   FUNDING   LAB FACILITIES   RESEARCH ACTIVITIES   RESEARCH TEAM   MORE

PATENT

Title: Device and methods for determining the elemental identity and analysis on moving target from a variable stand-off distance.

Patent no: 314839

Date of Grant : 27.06.2019

Date of Filing: 09.10.2013

Application No: 4578/CHE/2013 dated 09.10.2013

Investigators: V. Sathiesh Kumar, Nilesh J. Vasa and R. Sarathi

BOOK PUBLICATIONS

2. R. Vaitheeshwari, V. Sathiesh Kumar and Anubha Pearline S, "**Design and Implementation of Human Safeguard Measure using Separable Convolutional Neural Network Approach**", Communications in Computer and Information Science Book Series, Vol. 1148, Springer, pp. 319 - 330, 2020.

1. Mohan Raj, I. Gogul, M. Deepan Raj, V. Sathiesh Kumar, V. Vaidehi and S. Sibi Chakkaravarthy, "**Analyzing ConvNet depth for Deep face recognition**", Advances in Intelligent System and Computing, ISBN: 978-981-10-7895-8 - Springer Book Chapter, pp. 317-330.

JOURNAL PUBLICATIONS

21. Anubha Pearline and Sathiesh Kumar V, "Non-Averaged Deep Dense Network for Plant Species Recognition", Submitted to IEEE Signal Processing Letters (Impact Factor : 4.180).

20. Rubin Bose S and Sathiesh Kumar V, "**Hybrid SSR: Hybrid single stage deep convolutional neural network for real-time multi-hand gesture recognition system**", Submitted to Journal of Digital Imaging (Impact Factor: 3.679).

19. J. Sumathi and V. Sathiesh Kumar, "**Remote identification and estimation of Calcium concentration in bulk liquid under high pressure condition**", Submitted to Journal of Applied Spectroscopy (Impact Factor: 0.710).

18. Anubha Pearline and Sathiesh Kumar V, "**Optimum Hyperparameter Estimation of PreLU based Shallow Neural Network for Plant Species Recognition**", Submitted to The Computer Journal (Impact Factor: 0.787).

17. Rubin Bose S and Sathiesh Kumar V, "**Investigation of RetinaNet CNN Architecture for Real-time Hand Action Recognition**", Submitted to IET Image Processing (Impact Factor: 2.004).

16. J. Sumathi and V. Sathiesh Kumar, "**Remote LIBS technique based Spectral and Temporal analysis of Sodium in bulk liquid under high pressure condition**", Submitted to Journal of Optics and Laser Technology (Impact Factor: 3.233).

15. Rubin Bose S and Sathiesh Kumar V, "**An efficient Inception V2 based Deep Convolutional Neural Network for Real-Time Hand Action Recognition**", IET Image Processing, Vol. 14, Issue no: 4, pp. 688 - 696, 2020 (Impact Factor: 2.004, Cite Score: 2.7, SNIP:1.196, SJR: 0.348).

14. Anubha Pearline and Sathiesh Kumar V, "**DDLA: Dual deep learning architecture for Classification of Plant Species**", IET Image Processing, Vol. 13, Issue no: 12, pp. 2176-2182, 2019(Impact Factor: 2.004, Cite Score: 2.7, SNIP: 1.196, SJR: 0.348).

13. Indu R, Radha S, Sathiesh Kumar V, Manikandan E, Sreeja B. S, Sumathi J, "**Study on Cholesterol contents using Laser induced breakdown spectroscopy**", Sensor Letters, Vol. 16, No. 12, pp. 951-954, 2018.

12. Anubha Pearline S, Sathiesh Kumar V and Harini S, "**A study on plant recognition using conventional image processing and deep learning approaches**", Journal of Intelligent and Fuzzy Systems, Vol. 36, No. 3, pp. 1997 - 2004, 2019 (Impact Factor : 1.637).

11. Jagannathan S, Sathiesh Kumar V and Meganathan D, "**Design and Implementation of in-situ Human-Elephant conflict management system**", Journal of Intelligent and Fuzzy Systems, Vol. 36, No. 3, pp. 2005 - 2013, 2019 (Impact Factor : 1.637).

10. Anirudh Raghav R, Harishwar A, Vishwanath Prathap V, Veerappan K, Sathiesh Kumar V, **"Liveliness detection in facial recognition systems"**, International Journal of Emerging Technology and Advanced Engineering, Vol. 8, Special Issue 1, pp. 59-65, 2018.

9. Syed Salman A, Swarna Dharani S, Ramya S and Sathiesh Kumar V, **"LBP based automatic authorized entry and surveillance systems for residence"**, International Journal of Emerging Technology and Advanced Engineering, Vol. 8, Special Issue 1, pp. 51-58, 2018.

8. Deepti Susan John, V. Sathiesh Kumar, Prasath Ramalingam and Manikandan Murugesan, **"Diagnostic feature automation and diagnostic fool for In-Vehicle infotainment (IVI) System"**, International Journal of Pure and Applied Mathematics, Vol. 119, No. 7, 2018, pp. 1093-1099. (Scopus Indexed, Cite Score : 0.23, SJR: 0.253, SNIP: 0.388)

7. Mohanraj. V, S. Sibi Chakkaravarthy, Gogul. I, Vaidehi. V, Sathiesh Kumar. V and Ranajit Kumar, **"Hybrid Feature descriptors to detect face spoof attacks"**, Journal of Intelligent and Fuzzy Systems, Vol. 34, 2018, pp. 1411-1419. (Scopus Indexed, Cite Score : 1.41, SJR : 0.475, SNIP : 0.747, Impact Factor : 1.637)

6. V. Sathiesh Kumar, Nilesh J. Vasa and R. Sarathi, **"Electrostatic model to understand the influence of salt deposit in GFRP material during lightning discharges"**, The Journal of CPRI, Vol. 13, Issue. 1, March 2017, pp. 37-46.

5. V. Sathiesh Kumar, **I. Gogul**, M. Deepan Raj, S. K. Pragadesh and J. Sarath Kumar Sebastin, **"Smart autonomous gardening rover with plant recognition using neural networks"**, Procedia Computer Science, Vol. No. 93, pp. 975-981, 2016. (Scopus Indexed, Cite Score : 1.03, SJR : 0.258, SNIP : 0.732)

4. V. Sathiesh Kumar, Nilesh J. Vasa and R. Sarathi, **"Remote Surface Pollutant Measurement by Adopting Variable Stand-off Distance Based Laser Induced Breakdown Spectroscopy Technique"**, Journal of Physics D: Applied Physics-Vol. 48, 2015, 435504 (10 pp). (Scopus Indexed, Cite Score : 2.07, SJR : 0.645, SNIP : 0.917, Impact Factor : 2.588)

3. V. Sathiesh Kumar, Nilesh J. Vasa, R. Sarathi, Daisuke Nakamura and Tatsuo Okada, "**Understanding the discharge activity across GFRP Material due to salt deposit under transient voltages by adopting OES and LIBS technique**", IEEE Transactions on Dielectrics and Electrical Insulation, Vol. 21, 2014, pp. 2283-2292. (Scopus Indexed, Cite Score : 2.46, SJR : 0.585, SNIP : 1.563, Impact Factor : 2.115)

2. V. Sathiesh Kumar, Nilesh J. Vasa and R. Sarathi, "**Study on pollution performance on a wind turbine blade using OES technique for lightning and switching impulse voltage profiles**", Jurnal Teknologi (Sciences and Engineering), Vol. 64, 2013, pp. 63–68. (Scopus Indexed, Cite Score : 0.31, SJR : 0.156, SNIP : 0.322, Impact Factor : 0.063)

1. V. Sathiesh Kumar. V, Nilesh J. Vasa, R.Sarathi, **"Detecting salt deposition on a wind turbine blade using laser induced breakdown spectroscopy "**, Applied Physics A : Materials Science and Processing, Vol:112, 2013, pp. 149-153. (Scopus Indexed, Cite Score : 1.52, SJR : 0.509, SNIP : 0.756, Impact Factor : 1.455)

CONFERENCES

40. Anubha Pearline and Sathiesh Kumar V, "High Performance Ensembled Convolutional Neural Network for Plant Species Recognition", Conference on Computer Vision and Image Processing (CVIP-2020), IIIT Allahabad, 4-6th December 2020. - Submitted.

39. Rubin Bose S and Sathiesh Kumar V, "Precise Recognition of Vision based Multi-hand signs using Deep Single Stage Convolutional Neural Network", Conference on Computer Vision and Image Processing (CVIP-2020), IIIT Allahabad, 4-6th December 2020. - Submitted.

38. Vaitheeswari R, **Sathiesh Kumar V** and Anubha Pearline S, "**Design and Implementation of Human Safeguard measure using Separable Convolutional Neural Network**", Fourth International Conference on Computer Vision and Image Processing (CVIP-2019), Malaviya National Institute of Technology Jaipur during 27th to 29th September 2019.

37. Shatish Balaji R, Guruprasad S and Sathiesh Kumar V, "**Face-Spoof detection system using convolutional neural network**", International conference on Recent Trends in Electronics, Computing and Communication Engineering 2019 (ICRTECC2019), Saveetha School of Engineering, 25th & 26th April 2019 - **Best Paper Award**.

36. Madheswaran K M S, Ezhil Venthan, Sathiesh Kumar V, Sabitha Ramakrishnan, Sivaramakrishnan R and Thyagarajan T, "**Design and Development of FPGA based automation circuit for Antibiogram Device**", International Conference on Recent Trends in Electronics, Computing and Communication Engineering 2019 (ICRTECC2019), Saveetha School of Engineering, 25th & 26th April 2019 - **Best Paper Award**.

35. Rubin Bose and Sathiesh Kumar V, "**Hand gesture recognition using faster R-CNN Inception V2 Model**", 4th International Conference on Advances in Robotics (AIR 2019), Proceedings of the Advances in Robotics 2019, Article No: 19, pp. 1 - 6, DOI: https://doi.org/10.1145/3352593.3352613, Indian Institute of Technology Madras, 2nd to 6th July 2019.

34. Sumathi J and Sathiesh Kumar V, "**Optical based instrumentation setup to detect potassium under high pressure condition**", National conference on Recent Trends in Instrumentation and Control (RTIC-2019), Proceedings ISBN No: 978-93-89934-19-9, pp. 58-64, Dept. of Instrumentation Engineering, MIT Campus, Anna University, 4th and 5th March 2019.

33. Anubha Pearline S and Sathiesh Kumar V, "**Plant species recognition using Modified LeNet-5 CNN Architecture**", National conference on Recent Trends in Instrumentation and Control (RTIC-2019), Proceedings ISBN No: 978-93-89934-19-9, pp. 103-113, Dept. of Instrumentation Engineering, MIT Campus, Anna University, 4th and 5th March 2019.

32. K. M.S. Madheswaran and V. Sathiesh Kumar, "**Region based Convolutional Neural Network for Human-Elephant Conflict Management System**", International Conference on Computational Intelligence in Data Science (ICCIDS-2019), Dept. of Computer Science Engineering, SSN College of Engineering, 21-23rd Feb 2019, IEEE Explore, DOI: 10.1109/ICCIDS.2019.8862006 .

31. R. Vaitheeshwari and V. Sathiesh Kumar, "**Performance analysis of Epileptic Seizure Detection System using Neural Network Approach**", International Conference on Computational Intelligence in Data Science (ICCIDS-2019), Dept. of Computer Science Engineering, SSN College of Engineering, 21-23rd Feb 2019, IEEE Explore, DOI: 10.1109/ICCIDS.2019.8862158.

30. G. S. Jayalakshmi and V. Sathiesh Kumar, "**Performance analysis of Convolutional Neural Network (CNN) based Cancerous Skin Lesion Detection System**", International Conference on Computational Intelligence in Data Science (ICCIDS-2019), Dept. of Computer Science and Engineering, SSN College of Engineering, 21-23rd Feb 2019, IEEE Explore, DOI: 10.1109/ICCIDS.2019.8862143 .

29. Jagannathan S, V. Sathiesh Kumar and D. Meganathan, "**Design and Implementation of in-situ Human-Elephant conflict management system**", Fourth International Symposium on Intelligent Systems Technologies and Applications (ISTA 18), 19-22 September 2018.

28. Anubha Pearline S, V. Sathiesh Kumar and S. Harini, "**A study on plant recognition using conventional image processing and deep learning approaches**", Fourth International Symposium on Intelligent Systems Technologies and Applications (ISTA 18), 19-22 September 2018.

27. Harini S and Sathiesh Kumar V, "**Leaf based plant recognition system using conventional image descriptors and neural networks**", 3rd International conference on Recent trends in Engineering and Technology, St. Joseph Institute of Technology, 4-5 May 2018.

26. Syed Salman A, Swarna Dharani S, Ramya S and Sathiesh Kumar V, "**LBP based automatic authorized entry and surveillance systems for residence**", 3rd International conference on Recent trends in Engineering and Technology, St. Joseph Institute of Technology, 4-5 May 2018.

25. Sai Mukkundan R, Melvin A, Shoban Chander S and V. Sathiesh Kumar, "**Feature matching based book detection system**", 3rd International conference on Recent trends in Engineering and Technology, St. Joseph Institute of Technology, 4-5 May 2018.

24. Anirudh Raghav R, Harishwar A, Vishwanath Prathap V, Veerappan K and Sathiesh Kumar V, "**Liveliness detection in Facial Recognition Systems**", 3rd International conference on Recent trends in Engineering and Technology, St. Joseph Institute of Technology, 4-5 May 2018.

23. **Mythili M**, Veerappan. K and Sathiesh Kumar V, "**Nutrient profile analysis in turmeric (Curcuma Longa) using Laser induced breakdown spectroscopy**", 8th International conference on Science and Innovative Engineering, Jawahar Engineering College, 1st April 2018.

22. **Veerappan. K** and Sathiesh Kumar V, "**Laser Induced Breakdown Spectroscopy for Plant Nutrient Analysis**", 2nd Maghnad Saha Memorial International Symposium cum Workshop on Laser Induced Breakdown Spectroscopy (MMISLIBS-II), University of Allahabad, 19-21th February 2018.

21. **Sumathi. J** and Sathiesh Kumar V, "**Analysis of salt samples using laser induced breakdown spectroscopy**", 2nd Meghnad Saha Memorial International Symposium cum Workshop on Laser Induced Breakdown Spectroscopy (MMISLIBS-II), University of Allahabad, 19-21th February 2018.

20. Mohanraj. V, **S. Sibi Chakkaraverthy**, Gogul. I, V. Vaidehi, V. Sathiesh Kumar and Ranajith Kumar, "**Hybrid feature descriptors to detect face spoof attacks**", ISTA-17, Manipal University, 13-16th September 2017.

19. K. Veerappan, **V. Sathiesh Kumar** and Nilesh J. Vasa, "**Identification of nutrient in plant material using laser induced breakdown spectroscopy technique**", COLA-2017, 3-8th September 2017, Marseille, France.

18. M. Thangaraja, **V. Sathiesh Kumar** and Nilesh J. Vasa, "**Investigation of optimal parameters for remote soil testing using LIBS**", COLA-2017, 3-8th September 2017, Marseille, France.

17. J. Sumathi, **V. Sathiesh Kumar** and Nilesh J. Vasa, "**Investigation of minerals using laser induced breakdown spectroscopy technique under high pressure conditions**", COLA-2017, 3-8th September 2017, Marseille, France.

16. **Mohan Raj**, I. Gogul, M. Deepan Raj, V. Sathiesh Kumar, V. Vaidehi and S. Sibi Chakkaravarthy, "A**nalyzing ConvNet depth for Deep face recognition**", CVIP-2017, 9-12th September 2017, IIT Roorkee.

15. **Deepthi Susan John**, V. Sathiesh Kumar, Prasath Ramalingam and Manikandan Murugesan, "**Diagnostic tool for IN-Vehicle infotainment system**", 5-6th May 2017, St. Joseph Institute of Technology.

14. **Deepthi Susan John**, V. Sathiesh Kumar, Prasath Ramalingam and Manikandan Murugesan, "**IN- Vehicle infotainment system diagnostic tool**", NCSCV'17, 24-25th March 2017, Anna University Regional Campus, Coimbatore.

13. **I. Gogul** and V. Sathiesh Kumar, "**Flower species recognition system using convolutional neural networks and transfer learning**", ICSCN-2017, 16-18th March 2017, Department of Electronics Engineering, MIT, Chennai- **Awarded outstanding presentation prize.**

12. **M. Deepan Raj** and V. Sathiesh Kumar, "**Vision based feature diagnosis for automobile instrument cluster using machine learning**", ICSCN-2017, 16-18th March 2017, Department of Electronics Engineering, MIT, Chennai.

11. **M. Deepan Raj**, I. Gogul, M. Thangaraja and V. Sathiesh Kumar, "**Static gesture recognition based precise positioning of 5-DOF robotic arm using FPGA**", DOI: 10.1109/TIMA.2017.8064804, 6-8th January 2017, Department of Instrumentation, MIT, Chennai.

10. **J. Sumathi** and V. Sathiesh Kumar, "**Investigation of a ns-pulsed laser ablation rate on a Cu target at 1 atm**", NLS-25, 20-23rd December 2016, KIIT University, Bhuvaneshwar.

9. **V. Sathiesh Kumar**, Nilesh J. Vasa and R. Sarathi, "**Electrostatic model to understand the influence of salt deposit in GFRP material during Lightning Discharges**", ACED2016, 8-10 December 2016, IIT Madras.

8. V. Sathiesh Kumar, **I. Gogul**, M. Deepan Raj, S. K. Pragadesh and J. Sarath Kumar Sebastin, "**Smart autonomous gardening rover with plant recognition using neural networks**", ICACC 2016, 6th to 8th September 2016.

7. **V. Sathiesh Kumar**, "**Measurement of salt deposit on wind turbine blade material by adopting optical emission and laser induced breakdown spectroscopy techniques**", Thesis presentation in NLS-23,

Sri Venkateswara University, Tirupati, Dec 3-6, 2014.

6. **V. Sathiesh Kumar**, Nilesh J. Vasa, R. Sarathi, Daisuke Nakamura and Tatsuo Okada, "**Evaluation of a LIBS Method for Remote Detection of a Salt Deposit on a Wind Turbine Blade**", 12th International Conference on Laser Ablation (COLA 2013), Italy, Oct 6-11, 2013.- **Awarded outstanding poster presentation prize.**

5. Sathiesh Kumar. V, **Nilesh J. Vasa**, R. Sarathi, Daisuke Nakamura and Tatsuo Okada, "**LIBS combined with temporal and spatial measurements for detecting a salt deposit on a GFRP Material**", 10th Conference on Laser and Electro-Optics Pacific Rim (CLEO-PR) held in Kyoto, Japan from 30th June-4th July 2013.

4. **Sathiesh Kumar. V**, Nilesh J. Vasa, R. Sarathi, Daisuke Nakamura and Tatsuo Okada, "**Analysis of contaminant accumulated on a wind turbine blade using laser induced breakdown spectroscopy technique** ", 21st DAE-BRNS National Laser Symposium (NLS-21) held in Mumbai from Feb 6-9, 2013.

3. Sathiesh Kumar. V, **Nilesh J. Vasa**, R.Sarathi, " **Study of pollution performance on a wind turbine blade using OES technique for lightning and switching impulse voltage profiles**", ACED 2012, Malaysia from Dec 9-12, 2012.

2. **Sathiesh Kumar. V,** Nilesh J. Vasa, R.Sarathi, "**Optical emission spectroscopy technique for studying lightning discharge on a glass fiber reinforced plastics** ", ICONTOP 2011, Kolkata, India from Dec 9-12, 2011.

1. **Sathiesh Kumar. V**, Nilesh J. Vasa, R.Sarathi, "**Detecting salt deposition on a wind turbine blade using laser induced breakdown spectroscopy** ", COLA 2011, Playa del Carmen, Mexico from Nov 13-19, 2011.

"**Live as if you were to die tomorrow. Learn as if you were to live forever.**"

"**An ounce of practice is worth more than tons of preaching.**"

"**You must be the change you wish to see in the world.**"

Mahatma Gandhi