

Signal Processing Tools

Free downloadable Matlab scripts for scientists

available online at:

<http://terpconnect.umd.edu/~toh/spectrum/SignalProcessingTools.html>

Last updated October, 2017

Publications that cite the use of these programs and documentation

If you have published a paper using these programs that you would like me to include here, please email the paper or a citation thereto to Tom O'Haver at toh@umd.edu

1. Poppi, R. J., Vazquez, P. A., & Pasquini, C. (1992). Fast scanning Hadamard spectrophotometer. *Applied Spectroscopy*, 46(12), 1822-1827.
2. Ghatee, M. H., and A. Boushehri. "Modulation of the integrated rate equation of a composite system for the kinetic parameters." *Chemometrics and intelligent laboratory systems* 25.1 (1994): 43-49.
3. Chow, C. W. K. (1995). Optimisation, evaluation and chemometric studies of potentiometric stripping analysis. [PDF link](#).
4. Ringe, Steven A. "Hydrogen-extended defect interactions in heteroepitaxial InP materials and devices." *Solid-State Electronics* 41.3 (1997): 359-380.
5. chow, Christopher WK, David Edward Davey, and D. E. Mulcahy. "Signal filtering of potentiometric stripping analysis using Fourier techniques." *Analytica chimica acta* 338.3 (1997): 167-178.
6. Leung, Alexander Kai-man, Foo-tim Chau, and Jun-bin Gao. "Wavelet transform: a method for derivative calculation in analytical chemistry." *Analytical Chemistry* 70.24 (1998): 5222-5229.

7. Harris, D. C. (1998). Spektralphotometer. In *Lehrbuch der Quantitativen Analyse* (pp. 695-746). Vieweg+ Teubner Verlag. [Link](#).
8. Keyhani, Ali, Wenzhe Lu, and Gerald T. Heydt. "Neural network based composite load models for power system stability analysis." *IEEE International Conference on Computational Intelligence for Measurement Systems and Applications*. 2005.
9. Fernández, Mario, and J. Ricardo Pérez-Correa. "Instrumentation for Monitoring SSF Bioreactors." *Solid-State Fermentation Bioreactors*. Springer Berlin Heidelberg, 2006. 363-374
10. Richard Graham , Ring Laser Gain Media , Thesis, http://ir.canterbury.ac.nz/bitstream/10092/1377/1/thesis_fulltext.pdf (2006)
11. Sheaff, Chrystal N., Delyle Eastwood, and Chien M. Wai. "Increasing selectivity for TNT-based explosive detection by synchronous luminescence and derivative spectroscopy with quantum yields of selected aromatic amines." *Applied spectroscopy* 61.1 (2007): 68-73.
12. Hovick, James W., Michael Murphy, and J. C. Poler. "" Audibilization" in the chemistry laboratory: An introduction to correlation techniques for data extraction." *J. Chem. Educ* 84.8 (2007): 1331.
13. de Aragão, Bernardo José Guilherme, and Younes Messaddeq. "PEAK SEPARATION IN SPECTRAL ANALYSIS." (2007). [Link](#).
14. Ingersoll, Justin Edward. A Regularization Technique for the Analysis of Photographic Data Used in Chemical Release Wind Measurements. ProQuest, 2008.
15. Dinesh, S. "The Effect of Smoothing on the Extraction of Drainage Networks from Simulated Digital Elevation Models." *Journal of Applied Sciences Research* 4.11 (2008): 1356-1360.
16. Jed A. Meltzer, Hitten P. Zaveri, Irina I. Goncharova, Marcello M. Distasio, Xenophon Papademetris, Susan S. Spencer, Dennis D. Spencer and R. Todd

Constable, "Effects of Working Memory Load on Oscillatory Power in Human Intracranial EEG", *Cereb. Cortex* (2008) 18 (8): 1843-1855. doi: 10.1093/cercor/bhm213

17. Sheaff, Chrystal N., et al. "Fluorescence detection and identification of tagging agents and impurities found in explosives." *Applied spectroscopy* 62.7 (2008): 739-746.
18. "A regularization technique for the analysis of photographic data used in chemical release wind measurements", JE Ingersoll, 2008, books.google.com "An application of detection function for the eye blinking detection", Pander, T. Przybyla, T. ; Czabanski, *Human System Interactions 2008 Conference*: 25-27 May 2008, Page(s): 287- 291
19. "Isotopically labeled oxygen studies of the NO_x exchange behavior of La₂CuO₄ to determine potentiometric sensor response mechanism" F.M. Van Assche IV, E.D. Wachsman, *Solid State Ionics*, Volume 179, Issue 39, 15 December 2008, Pages 2225–2233
20. "High-speed laryngoscopic evaluation of the effect of laryngeal parameter variation on aryepiglottic trilling." Moisik, Scott R., John H. Esling, and Lise Crevier-Buchman. poster, http://www.ncl.ac.uk/linguistics/assets/documents/MoisikEslingBuchman_NewcastleP_haryngealsPoster_2009.Pdf (2009).
21. Tricas, Marazico, and Juan Ignacio. "Auto configuration dans LTE: procédés de mesure de l'occupation du canal radio pour une utilisation optimisée du spectre." , "Auto configuration in LTE: measuring the occupancy of the radio channel for optimized use of the spectrum" (2009). [PDF link](#).
22. "Early age concrete strength monitoring with piezoelectric transducers by the harmonic frequencies method", Thomas J. Kelleher, 2009 <http://www.engin.swarthmore.edu/e90/2008/reports/Thomas%20Kelleher.pdf>
23. "Information management for high content live cell imaging", Daniel Jameson, David A Turner, John Ankers, Stephnie Kennedy, Sheila Ryan, Neil Swainston, Tony Griffiths, David G Spiller, Stephen G Oliver, Michael RH White,

Douglas B Kell and Norman W Paton, *BMC Bioinformatics* **2009**, 10:226
doi:10.1186/1471-2105-10-226

24. "Human-Computer Systems Interaction: Backgrounds and Applications", edited by Zdzislaw S. Hippe, Juliusz Lech Kulikowski, Springer (Sep 30, **2009**), page 191.
25. "Multiplexed DNA detection using spectrally encoded porous SiO₂ photonic crystal particles", SO Meade, MY Chen, MJ Sailor, *Anal. Chem.*, **2009**, 81 (7), pp 2618–2625. DOI: 10.1021/ac802538x
26. "Prolonged stimulus exposure reveals prolonged neurobehavioral response patterns, Brett A. Johnson, Cynthia C. Woo, Yu Zeng, Zhe Xu, Edna E. Hingco, Joan Ong, Michael Leon. *The Journal of Comparative Neurology*, Volume 518, Issue 10, pages 1617–1629, 15 May **2010**
27. "Alternative Measures of Phonation: Collision Threshold Pressure and Electroglottographic Spectral Tilt: Extra: Perception of Swedish Accents." Enflo, Laura. (**2010**). [Full Text](#).
28. Botcharova, Maria. "Changes in structure of EEG-EMG coherence during brain development: analysis of experimental data and modeling of putative mechanisms." (**2010**) [\[PDF\] from ucl.ac.uk](#)
29. "Vowel Dependence for Electroglottography and Audio Spectral Tilt", L Enflo, *Proceedings of Fonetik*, **2010**. [Full text](#).
30. "Rapid and accurate detection of plant miRNAs by liquid northern hybridization." Wang, Xiaosu, Yongao Tong, and Shenghua Wang. *International journal of molecular sciences* 11.9 (**2010**): 3138-3148.
31. Nusz, G. J. (**2010**). *Label-free biodetection with individual plasmonic nanoparticles* (Doctoral dissertation, Duke University).
32. Khudaish, Emad A., and Aysha A. Al Farsi. "Electrochemical oxidation of dopamine and ascorbic acid at a palladium electrode modified with in situ fabricated iodine-adlayer in alkaline solution." *Talanta* 80.5 (**2010**): 1919-1925.

33. "Advances in Music Information Retrieval", edited by Zbigniew W. Ras, Alicja Wieczorkowska, Springer, **2010**, page 135.
34. Bilal, M., Sharif, M., Jaffar, M. A., Hussain, A., & Mirza, A. M. (**2010**, May). Image restoration using modified hopfield fuzzy regularization method. In *Future Information Technology (FutureTech), 2010 5th International Conference on* (pp. 1-6). IEEE.
35. Rim, Jung Ho. "Preparation and Characterization of Sources for Ultra-high Resolution Microcalorimeter Alpha Spectrometry." The Pennsylvania State University (**2010**). [PDF link](#).
36. Xiaosu Wang , Yongao Tong and Shenghua Wang, Rapid and Accurate Detection of Plant miRNAs by Liquid Northern Hybridization, *Int. J. Mol. Sci.* **2010**, 11(9), 3138-3148; doi:[10.3390/ijms11093138](https://doi.org/10.3390/ijms11093138)
37. "Radio Frequency Fuel Gauging With Neuro-Fuzzy Inference Engine For Future Spacecrafts". Kumagai, A., Liu, T. I., & Sul, D. In *Proceedings of the 10th IASTED International Conference*, **2010** (Vol. 674, No. 020, p. 243).
38. "Automatic Seizure Detection in ECoG by Differential Operator and Windowed Variance," Majumdar, K.K.; Vardhan, P., *Neural Systems and Rehabilitation Engineering, IEEE Transactions on* , vol.19, no.4, pp.356,365, Aug. **2011**
39. "Genetic algorithm with peaks adaptive objective function used to fit the EPR powder spectrum", Sebastian Grzegorz Żurek, *Applied Soft Computing*, Volume 11, Issue 1, January **2011**, Pages 1000–1007
40. "Determination of sea conditions for wave energy conversion by spectral analysis", B Yagci, P Wegener, *IEEE Transactions on Power Delivery*, 18(2): 372–376.
41. "Push-broom hyperspectral imaging for elemental mapping with glow discharge optical emission spectrometry", G Gamez, D Frey, J Michler - *J. Anal. At. Spectrom.*, 2012 -, Spectrosc., **2011**, 65, 85–98

42. "Dual-order snapshot spectral imaging of plasmonic nanoparticles", Gregory J. Nusz, Stella M. Marinakos, Srinath Rangarajan, and Ashutosh Chilkoti, *Applied Optics*, Vol. 50, Issue 21, pp. 4198-4206 (**2011**)
<http://dx.doi.org/10.1364/AO.50.004198>
43. Sugandharaju, Ravi Kumar Chatnahalli. "Gaussian Deconvolution and MapReduce Approach for Chipseq Analysis". Diss. University of Cincinnati, **2011**.
44. "Parallel Deconvolution Algorithm in Perfusion Imaging" F Zhu, DR Gonzalez, T Carpenter, *Healthcare Informatics, Imaging and Systems Biology (HISB)*, 2011 First IEEE International Conference, 26-29 July **2011**
45. "Field observations of infragravity waves and their behaviour on rock shore platforms" Edward P. Beetham, Paul S. Kench, *Earth Surface Processes and Landforms*, Volume 36, Issue 14, pages 1872–1888, November **2011**
46. "Majority Voting: Material Classification by Tactile Sensing Using Surface Texture", Jamali, N., Sammut, C., *IEEE Transactions on Robotics*, Volume: 27, Issue: 3, Page(s): 508 - 521, June **2011**
47. Yuan, Yuan, Yishan Luo, and Albert Chung. "VE-LLI-VO: Vessel enhancement using local line integrals and variational optimization." *IEEE Transactions on Image Processing* 20.7 (**2011**): 1912-1924.
48. "Demand Estimation with Automated Meter Reading in a Distribution Network", Aksela, K. and Aksela, M. , *J. Water Resour. Plann. Manage.*, 137(5), 456–467 (**2011**). doi: 10.1061/(ASCE) WR.1943-5452.0000131
49. Ochoa, Jeimy Catherine Millán. *Design and Development of a Localization System for a Sensor Network in Collective Symbiotic Organisms*. Diss. Universitätsbibliothek der Universität Stuttgart, **2011**.
50. "Genetic algorithm with peaks adaptive objective function used to fit the EPR powder spectrum", Sebastian Grzegorz Żurek, *Journal Applied Soft Computing archive*. Volume 11, Issue 1, January, **2011** , pages 1000-1007

51. Hornung, J. P. (2011). *Exploring the potential for using deep-sea bamboo corals (Isidella sp.) for paleoceanographic reconstructions* (Doctoral dissertation).
52. Boll, Marie-Theres. *Ein neues Konzept zur automatisierten Bewertung von Fertigkeiten in der minimal invasiven Chirurgie für Virtual-Reality-Simulatoren in Grid-Umgebungen*. Vol. 38. KIT Scientific Publishing, 2011. [Link](#).
53. "Development of ECG signal interpretation software on Android 2.2, Hermawan, K.; Iskandar, A.A.; Hartono, R.N., "Instrumentation, Communications, Information Technology, and Biomedical Engineering (ICICI-BME), 2011 2nd International Conference on , vol., no., pp.259,264, 8-9 Nov. 2011
doi: 10.1109/ICICI-BME.2011.6108621
54. Hoffman, Galen Brandt. *Direct Write of Chalcogenide Glass Integrated Optics Using Electron Beams*. Diss. The Ohio State University, 2011.
55. "Automated peak alignment for nucleic acid capillary electrophoresis data by dynamic programming". Fethullah Karabiber, Kevin Weeks, and Oleg V. Favorov. In *Proceedings of the 2nd ACM Conference on Bioinformatics, Computational Biology and Biomedicine (BCB '11)*. ACM, New York, NY, USA, 2011. pages 544-546. DOI=10.1145/2147805.2147895
<http://doi.acm.org/10.1145/2147805.2147895>
56. Shin, Sung-Hwan, et al. "Mass estimation of impacting objects against a structure using an artificial neural network without consideration of background noise." *Nuclear Engineering and Technology* 43.4 (2011): 343-354.
57. Taibo, María Luisa Gómez, et al. "Matching needs and capabilities with assistive technology in an amyotrophic lateral sclerosis patient." *Accessibility, Inclusion and Rehabilitation using Information Technologies* (2011): 21.
58. Paul, Ruma R., Victor C. Valgenti, and Min Sik Kim. "Real-time Netshuffle: Graph distortion for on-line anonymization." *Network Protocols (ICNP)*, 2011 19th IEEE International Conference on. IEEE, 2011.

59. Lopez-Castellanos, V. (2011). *Ultrawideband time domain radar for time reversal applications* (Doctoral dissertation, The Ohio State University).
60. "Electricity gain via integrated operation of turbine generator and cooling tower using local model network." Pan, Tian-Hong, et al. *Energy Conversion, IEEE Transactions on* 26.1 (2011): 245-255.
61. "Dynamic analysis of electronic devices' power signatures, Marcu, M.; Cernazanu, C., " *Instrumentation and Measurement Technology Conference (I2MTC), 2012 IEEE International* , vol., no., pp.117,122, 13-16 May 2012 doi: 10.1109/I2MTC.2012.6229562
62. "Experimental comparison among pileup recovery algorithms for digital gamma-ray spectroscopy" El-Tokhy, M.S. Mahmoud, I.I. ; Konber, H.A. *Informatcs and Systems (INFOS)*, 2012 8th International Conference on 14-16, May 2012
63. Kwon, Soonil. "Voice-driven sound effect manipulation." *International Journal of Human-Computer Interaction* 28.6 (2012): 373-382.
64. "Distributed representation of chemical features and tunotopic organization of glomeruli in the mouse olfactory bulb" Limei Maa, Qiang Qiua, Stephen Gradwohla, Aaron Scotta, Elden Q. Yua, Richard Alexandera, Winfried Wiegreaebea, and C. Ron Yu, *Proceeding of the National Academy of Sciences*, April 3, 2012 vol. 109, no. 14, pages 5481-5486.
65. Hofler, Alicia S. *Optimization Framework for a Radio Frequency Gun Based Injector*. Old Dominion University, PhD dissertation, 2012.
66. "A Robust Heart Sound Segmentation and Classification Algorithm using Wavelet Decomposition and Spectrogram." Deng, Yiqi, and Peter J. Bentley. Full text: <http://www.peterjbentley.com/heartworkshop/challengepaper3.pdf>
67. "Detecting STR peaks in degraded DNA samples". Marasco, E., Ross, A., Dawson, J., Moroose, T., & Ambrose, T. Proc. of 4th International Conference on Bioinformatics and Computational Biology (BICoB), (Las Vegas, USA), March 2012. Full text:

68. "Saccades detection in optokinetic nystagmus-a fuzzy approach." PANDER, Tomasz, et al. , *Journal of Medical Informatics & Technologies* 19 (2012): 33-39.
69. "Grain-size properties and organic-carbon stock of Yedoma Ice Complex permafrost from the Kolyma lowland, northeastern Siberia", J Strauss, L Schirrmeyer, S Wetterich, Andreas Borchers, Sergei P. Davydov, *Global Biogeochemical Cycles*, Volume 12, 2012.
70. "An Early Prediction of Cardiac Risk using Augmentation Index Developed based on a Comparative Study." Manimegalai, P., Delpha Jacob, and K. Thanushkodi. , *International Journal of Computer Applications* 50 (2012). [Abstract](#).
71. "Determinação Da Estabilidade Oxidativa De Biocombustíveis," Bruno A. F. Vitorino, Franz H. Neff, Elmar U. K. Melcher, Antonio M. N. Lima, Anais do XIX Congresso Brasileiro de Automática, CBA 2012. <http://www.eletrica.ufpr.br/anais/cba/2012/Artigos/100018.pdf>
72. "Efficacy of Differential Operators in Brain Electrophysiological Signal Processing: A Case Study in Epilepsy."Majumdar, Kaushik, and Pratap Vardhan. [Full text](#).
73. Snider, W. (2012). *Electro-optically Tunable Microring Resonators for Non-Linear Frequency Modulated Waveform Generation*(Doctoral dissertation, Texas A & M University).
74. "9.0 Experimental–Two-Dimensional GCxGC." *Technologies towards the Development of a Lab-on-a-Chip GCxGC for Environmental Research* (2012). [Full text](#). A Thesis by Jaydene Halliday, BSc MRSC
75. "BaNa: A hybrid approach for noise resilient pitch detection," He Ba; Na Yang; Demirkol, I.; Heinzelman, W., *Statistical Signal Processing Workshop (SSP), 2012 IEEE* , vol., no., pp.369,372, 5-8 Aug. 2012. doi: 10.1109/SSP.2012.6319706

76. Tripathi, Ashish. THE NEW IMAGE PROCESSING ALGORITHM FOR QUALITATIVE AND QUANTITATIVE STM DATA ANALYSIS. Diss. **2012**.
77. Skelton, Martin. "Diffusion of Innovation System Elements-A Novel Method to Study Technology Development and Its Application to Wind Power." (**2012**). [\[PDF\] from chalmers.se](#)
78. Pander, T., et al. "A new method of saccadic eye movement detection for optokinetic nystagmus analysis." Engineering in Medicine and Biology Society (EMBC), *2012 Annual International Conference of the IEEE*. IEEE, **2012**.
79. Mahmoud, I. I., M. S. El_Tokhy, and H. A. Konber. "Pileup recovery algorithms for digital gamma ray spectroscopy." *Journal of Instrumentation* 7.09 (**2012**): P09013.
80. Zhu, Fan, et al. "Parallel perfusion imaging processing using GPGPU." *Computer methods and programs in biomedicine* 108.3 (**2012**): 1012-1021.
81. Cuss, C. W., and Celine Guéguen. "Determination of relative molecular weights of fluorescent components in dissolved organic matter using asymmetrical flow field-flow fractionation and parallel factor analysis." *Analytica chimica acta* 733 (**2012**): 98-102.
82. Olugboji, Oluwafemi A., and Jack M. Hale. "Development of Damage Reconstruction Techniques From Impulsive Events Based on Measurements Made Remotely." ASME 2012 International Mechanical Engineering Congress and Exposition. *American Society of Mechanical Engineers*, **2012**.
83. Dickson, B., and M. Craig. "Deconvolving gamma-ray logs by adaptive zone refinement." *Geophysics* 77.4 (**2012**): D159-D169.
84. "SmartBells: RFID-Enhanced System to Monitor Free Weight Exercises." Chaudhri, Rohit, and Gaetano Borriello. [Full text](#).
85. "Diffusion of Innovation System Elements-A Novel Method to Study Technology Development and Its Application to Wind Power." Skelton, Martin. (**2012**). [Full](#)

[text](#).

86. Grotenhuis, Michael Gary. "An Overview of the Maximum Entropy Method of Image Deconvolution." *A University of Minnesota–Twin Cities "Plan B" Master's paper*.
87. "On comet attitude determination of Rosetta lander Philae through nonlinear optimal system identification." Caputo, Gianluca. (2012). [Full text](#).
88. Valadares¹, D. C., Vitorino, B. A., Neta, M. L. N., Batista, E. S., Santos, M. V., Neff, F. H., & Melcher, E. N. (2012). System for Analysis of the Biodiesel Quality.
89. Phillips, James William, and Yi Jin. "Systems and methods for modulating the electrical activity of a brain using neuro-EEG synchronization therapy." U.S. Patent No. 8,465,408. 18 Jun. 2013.
90. Moon, Jim, et al. "Body-worn vital sign monitor." U.S. Patent No. 8,364,250. 29 Jan. 2013.
91. Hao, Manzhao, et al. "Corticomuscular Transmission of Tremor Signals by Propriospinal Neurons in Parkinson's Disease." *PloS one* 8.11 (2013): e79829.
92. McCOMBIE, Devin, Marshal Dhillon, and Matt Banet. "Method for measuring patient motion, activity level, and posture along with PTT-based blood pressure." U.S. Patent No. 8,475,370. 2 Jul. 2013.
93. Banet, Matt, Devin McCombie, and Marshal Dhillon. "Body-worn monitor for measuring respiration rate." U.S. Patent No. 8,545,417. 1 Oct. 2013.
94. Banet, Matt, and Jim Moon. "Body-worn vital sign monitor." U.S. Patent No. 8,591,411. 26 Nov. 2013.
95. McCombie, Devin, et al. "Alarm system that processes both motion and vital signs using specific heuristic rules and thresholds." U.S. Patent No. 8,594,776. 26 Nov. 2013.

96. Banet, Matt, Marshal Dhillon, and Devin McCombie. "Body-worn system for measuring continuous non-invasive blood pressure (cNIBP)." U.S. Patent No. 8,602,997. 10 Dec. **2013**.
97. Moon, Jim, et al. "Body-worn pulse oximeter." U.S. Patent No. 8,437,824. 7 May **2013**.
98. Cheng, Chunmei, et al. "Remote sensing estimation of Chlorophyll a and suspended sediment concentration in turbid water based on spectral separation." *Optik-International Journal for Light and Electron Optics* 124.24 (**2013**): 6815-6819.
99. Phillips, James William, and Yi Jin. "Systems and methods for neuro-EEG synchronization therapy." U.S. Patent No. 8,585,568. 19 Nov. **2013**.
100. Khvostichenko, Daria S., et al. "An X-ray transparent microfluidic platform for screening of the phase behavior of lipidic mesophases." *Analyst* 138.18 (**2013**): 5384-5395.
101. "A signal alignment method based on DTW with new modification", Karabiber, F. ; Bilgisayar Muhendisligi Bolumu ; Balcilar, M. *Signal Processing and Communications Applications Conference (SIU)*, 2013 21st , 24-26 April **2013** . ISBN: 978-1-4673-5562-9; DOI: 10.1109/SIU.2013.6531176
102. "An automated signal alignment algorithm based on dynamic time warping for capillary electrophoresis data", *Turkish Journal of Electrical Engineering & Computer Sciences* , Fethullah KARABİBER , 21, (**2013**), 851-863. Full text: [pdf](#)
103. "Traditional Asymmetric Rhythms: A Refined Model Of Meter Induction Based On Asymmetric Meter Templates, Fouloulis, Thanos, Aggelos Pikrakis, and Emiliios Cambouropoulos, " *Proceedings of the Third International Workshop on Folk Music Analysis (FMA2013)*. **2013**. ISBN 978-90-70389-78-9
104. "Comparison of two methods for measuring γ -H2AX nuclear fluorescence as a marker of DNA damage in cultured human cells: applications for microbeam radiation therapy." Anderson, D., et al. , *Journal of Instrumentation*

8.06 (2013): C06008. [Full text PDF](#).

105. Ayodeji, Olugboji Oluwafemi, Jonathan Yisa Jiya, and Jack M. Hale. "Event Reconstruction by Digital Filtering." *Advances in Signal Processing* 1.3 (2013): 48-56.
106. "A conserved aromatic residue regulating photosensitivity in short-wavelength sensitive cone visual pigments". Kuemmel, C. M., Sandberg, M. N., Birge, R. R., & Knox, B. E. *Biochemistry*, 52(30), 5084-5091 (2013).
107. "Measurement Of The Lightweight Rotor Eigenfrequencies And Tuning Of Its Model Parameters," Luboš SMOLÍK, Michal HAJŽMAN, Transactions of the VŠB – Technical University of Ostrava, Mechanical Series, No. 1, 2013, vol. LIX. [Full English text](#).
108. "Investigation of the phase separation of PNIPAM using infrared spectroscopy together with multivariate data analysis." Munk, Tommy, et al. , *Polymer* 54.26 (2013): 6947-6953. [Abstract](#).
109. "Phase separation in $\text{In}_x\text{Ga}_{1-x}\text{N}$ ($0.10 < x < 0.40$)." Belyaev, K. G., Rakhlin, M. V., Jmerik, V. N., Mizerov, A. M., Kuznetsova, Y. V., Zamoryanskaya, M. V., ... & Toropov, A. A. (2013). *physica status solidi (c)*, 10 (3), 527-531.
110. "Corticomuscular Transmission of Tremor Signals by Propriospinal Neurons in Parkinson's Disease." Hao, Manzhao, et al. , *PloS one* 8.11 (2013): e79829.
111. "Sickle-shaped voxel approach to enhance automatic reclaiming operation using bucket wheel reclaimer," Maung Thi Rein Myo; Tien-Fu Lu, *Industrial Electronics and Applications (ICIEA), 2013 8th IEEE Conference on* , vol., no., pp.1700,1705, 19-21 June 2013. doi: 10.1109/ICIEA.2013.6566642
112. "Review of software tools for design and analysis of large scale MRM proteomic datasets." Colangelo, Christopher M., et al., *Methods* 61.3 (2013): 287-298.
113. Carabetta, Valerie J., et al. "A complex of YlbF, YmcA and YaaT regulates

- sporulation, competence and biofilm formation by accelerating the phosphorylation of Spo0A." *Molecular microbiology* 88.2 (2013): 283-300.
114. Web, N. L. P. M. L., and Andrew Rosenberg. "Ensemble Methods." (2013).
115. Cannon, Robert William, "Automated Spectral Identification of Materials using Spectral Identity Mapping", 2013, Master of Science in Chemistry, Cleveland State University, College of Sciences and Health Professions.
116. MS Freeman, ZI Cleveland, Y Qi , [Enabling hyperpolarized 129Xe MR spectroscopy and imaging of pulmonary gas transfer to the red blood cells in transgenic mice expressing human hemoglobin](#) , *Magnetic Resonance in Medicine*, Volume 70, Issue 5, pages 1192–1199, November 2013
117. SMOLÍK, Luboš, and Michal HAJ ŤZMAN. "MEASUREMENT OF THE LIGHTWEIGHT ROTOR EIGENFREQUENCIES AND TUNING OF ITS MODEL PARAMETERS . Transactions of the VSB – Technical University of Ostrava, Mechanical Series Ť No. 1, 2013, vol. LIX article No. 1942
118. Kumssa, Aida Meredassa. "Tablet User Interface Evaluation for a Portable Ultrasound System and Real time Doppler Spectrum Processing." (2013).
119. A Baradarani, J Sadler, JRB Taylor , [High-resolution blood flow imaging through the skull](#), *Electronics Letters*, vol. 40, no. 13, 2014, pp. 798–799.
120. Singh, R. (2014). Tune Measurement at GSI SIS-18: Methods and Applications (Doctoral dissertation, Technische Universität).
121. Pander, Tomasz, et al. "An automatic saccadic eye movement detection in an optokinetic nystagmus signal." *Biomedical Engineering/Biomedizinische Technik* 59.6 (2014): 529-543.
122. "Demonstration of Large Coupling-Induced Phase Delay in Silicon Directional Cross-Couplers," Westerveld, W.J.; Pozo, J.; Leinders, S.M.; Yousefi, M.; Urbach, H.P., *Selected Topics in Quantum Electronics, IEEE Journal of* ,

123. "Probabilistic peak detection for first-order chromatographic data", M. Lopatka, G. Vivo-Truyols, M.J. Sjerps, *Analytical Chemica Acta*, **2014** DOI: <http://dx.doi.org/10.1016/j.aca.2014.02.015>
124. "A recursive algorithm for optimizing differentiation." Mashreghi, Ali, and Hadi Sadoghi Yazdi. *Journal of Computational and Applied Mathematics* 263 (2014): 1-13.
125. Cade, D. E. (2014). *Detection, classification and ecology of acoustic scattering layers* (Doctoral dissertation).
126. Grubišić, Vladimir, et al. "Heterogeneity of myotubes generated by the MyoD and E12 basic helix-loop-helix transcription factors in otherwise non-differentiation growth conditions." *Biomaterials* 35.7 (2014): 2188-2198.
127. "Comparison of Signal Smoothing Techniques for Use in Embedded System for Monitoring and Determining the Quality of Biofuels", Dalton Cézarne Gomes Valadares , Rute Cardoso Drebes, Elmar Uwe Kurt Melcher, Sérgio de Brito Espínola, Joseana Macêdo Fechine Régis de Araújo, *Applied Mechanics and Materials*, Vols. 448-453, pages 1679-1688, Trans Tech Publications, Switzerland, **2014**. DOI: [10.4028/www.scientific.net/AMM.448-453.1679](http://dx.doi.org/10.4028/www.scientific.net/AMM.448-453.1679)
128. "Characterization of Integrated Optical Strain Sensors Based on Silicon Waveguides," Westerveld, W.J.; Leinders, S.M.; Muilwijk, P.M.; Pozo, J.; van den Dool, T.C.; Verweij, M.D.; Yousefi, M.; Urbach, H.P., , *Selected Topics in Quantum Electronics, IEEE Journal of* , vol.20, no.4, pp.1,10, July-Aug. **2014**. doi: 10.1109/JSTQE.2013.2289992
129. "Gaussian-function-based deconvolution method to determine the penetration ability of petrolatum oil into in vivo human skin using confocal Raman microscopy", Chun-Sik Choe, Jürgen Lademann, and Maxim E Darvin, *Laser Phys.* 24 10560, **2014**. (<http://iopscience.iop.org/1555-6611/24/10/105601>)
130. "Borosilicate Glass Containing Bismuth and Zinc Oxides as a Hot Cell Material for Gamma-Ray Shielding". H. A. Saudi, H. A. Sallam, K. Abdullah.

Physics and Materials Chemistry. **2014**; 2(1):20-24. doi: 10.12691/pmc-2-1-4.

131. "Theta-Burst Stimulation of Hippocampal Slices Induces Network-Level Calcium Oscillations and Activates Analogous Gene Transcription to Spatial Learning", Graham K. Sheridan , Emad Moeendarbary, Mark Pickering, John J. O'Connor, and Keith J. Murphy, *PLOS One*, June 20, **2014**. DOI: 10.1371/journal.pone.0100546
132. Mahmoud, Imbaby I., and Mohamed S. El_Tokhy. "Development of coincidence summing and resolution enhancement algorithms for digital gamma ray spectroscopy." *Journal of Analytical Atomic Spectrometry* 29.8 (**2014**): 1459-1466.
133. M. Rahmat, W. Maulina, Isnaeni, Miftah, N. Sukmawati, E. Rustami, M. Azis, K.B. Seminar, A.S. Yuwono, Y.H. Cho, H. Alatas, Development of a novel ozone gas sensor based on sol-gel fabricated photonic crystal, *Sensors and Actuators A: Physical*, Volume 220, 1 December **2014**, Pages 53–61
134. "Bacteria-instructed synthesis of polymers for self-selective microbial binding and labelling", E. Peter Magennis, Francisco Fernandez-Trillo, Cheng Sui, Sebastian G. Spain, David J. Bradshaw, David Churchley, Giuseppe Mantovani, Klaus Winzer & Cameron Alexander, *Nature Materials* 13, 748–755 (**2014**) doi:10.1038/nmat3949 (<http://www.nature.com/nmat/journal/v13/n7/extref/nmat3949-s1.pdf>)
135. A COMPUTERIZED DATABASE FOR BULLET COMPARISON BY CONSECUTIVE MATCHING, Ashley Chu, David Read and David Howitt, Federally funded grant report, U.S. Department of Justice, Document No. 247771, July **2014**. (<http://www.crime-scene-investigator.net/computerized-database-for-bullet-comparison-by-consecutive-matching.pdf>)
136. Circuit level defects in the developing neocortex of Fragile X mice, [J Tiago Gonçalves](#), [James E Anstey](#), [Peyman Golshani](#) , [Carlos Portera-Cailliau](#), *Nature Neuroscience* 16, 903–909 (**2013**) doi:10.1038/nn.3415
137. Cade David E., Benoit-Bird Kelly J., (2014), An automatic and quantitative approach to the detection and tracking of acoustic scattering layers, *Limnology and Oceanography: Methods*, 12, doi:

10.4319/lom.2014.12.742.

138. Blake, Phillip, et al. "Diffraction in nanoparticle lattices increases sensitivity of localized surface plasmon resonance to refractive index changes." *Journal of Nanophotonics* 8.1 (2014): 083084-083084.
139. Sprinkhuizen, Sara M., Jerome L. Ackerman, and Yi-Qiao Song. "Influence of bone marrow composition on measurements of trabecular microstructure using decay due to diffusion in the internal field MRI: Simulations and clinical studies." *Magnetic Resonance in Medicine* 72.6 (2014): 1499-1508.
140. Canlas, Reich Rechner D., Carlo Noel E. Ochotorena, and Elmer P. Dadios. "Fuzzy-genetic photoplethysmograph peak detection." *Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management (HNICEM), 2014 International Conference on. IEEE, 2014.*
141. Duenas, J. A., et al. "Dependency on the silicon detector working bias for proton–deuteron particle identification at low energies." *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 714 (2013): 48-52.
142. Sterling, Ryan, and Nathaniel Todd. "USING NEURAL SIGNALS TO PROVIDE INPUT FOR COMPUTING APPLICATIONS IN AUTONOMOUS PROSTHETICS." [\[PDF\] from 136.142.82.187](#)
143. Wang, Xiao, Yi-Qing Ni, and Ke-Chang Lin. "Comparison of statistical counting methods in SHM-based reliability assessment of bridges." *Journal of Civil Structural Health Monitoring*: 1-12.
144. González-Sáiz, J. M., et al. "Modulation of the phenolic composition and colour of red wines subjected to accelerated ageing by controlling process variables." *Food chemistry* 165 (2014): 271-281.
145. Kurniawan, Itmy Hidayat, and Sahat Simbolon. "Deteksi dan Pengukuran Spektra dalam Analisis Spektrografi Emisi dengan Pengolahan Citra." *Jurnal Nasional Teknik Elektro dan Teknologi Informasi (JNTETI)* 3.1 (2014).

146. Souri, Zoha. EEG-BASED ASSESSMENT OF DRIVER'S PERCEPTION OF TRAFFIC ENVIRONMENT. Diss. Lamar University, **2014**.
147. Lin, Junfang, et al. "Novel method for quantifying the cell *size of marine phytoplankton based on optical measurements*." *Optics express* 22.9 (**2014**): 10467-10476.
148. Hammonds Jr, James S., Kimani A. Stancil, and Charlezetta E. Stokes. "Quality factor temperature dependence of a surface phonon polariton resonance cavity." *Applied Physics Letters* 105.11 (**2014**): 114107.
149. Mall, U., et al. "Characterization of lunar soils through spectral features extraction in the NIR." *Advances in Space Research* 54.10 (**2014**): 2029-2040.
150. Bai, Er-Wei, et al. "Detection of radionuclides from weak and poorly resolved spectra using Lasso and subsampling techniques." *Radiation Measurements* 46.10 (**2011**): 1138-1146.
151. Sugandharaju, Ravi Kumar Chatnahalli. Gaussian Deconvolution and MapReduce Approach for Chipseq Analysis. Diss. University of Cincinnati, **2011**.
152. Mukhopadhyay, C. K., et al. "Acoustic emission during fracture toughness tests of SA333 Gr. 6 steel." *Engineering Fracture Mechanics* 96 (**2012**): 294-306.
153. Huang, Zifang. "Knowledge-Assisted Sequential Pattern Analysis: An Application in Labor Contraction Prediction." (**2012**). [PDF link](#).
154. van de Voort, Frederik R., and David Pinchuk. "System and Method for Determining Base Content of a Hydrophobic Fluid." U.S. Patent Application 13/171,566.
155. Hoerndli, Frédéric J., et al. "Kinesin-1 regulates synaptic strength by mediating the delivery, removal, and redistribution of AMPA receptors." *Neuron* 80.6 (**2013**): 1421-1437.

156. Brockie, Penelope J., et al. "Cornichons control ER export of AMPA receptors to regulate synaptic excitability." *Neuron* 80.1 (2013): 129-142.
157. Žáčik, Michal. Šumová spektroskopie pro biologii. Diss. Vysoké učení technické v Brně. Fakulta elektrotechniky a komunikačních technologií, 2013.
158. Bucur, R. V. "Structure of the Voltammograms of the Platinum-Black Electrodes: Derivative Voltammetry and Data Fitting Analysis." *Electrochimica Acta* 129 (2014): 76-84.
159. Teixeira, Carlos Esteves. "Sobre a teoria da difração de raios-X em estruturas tridimensionais." (2014). [\[PDF\] from ufmg.br](#)
160. Moon, Jim, et al. "Cable system for generating signals for detecting motion and measuring vital signs." U.S. Patent No. 8,738,118. 27 May 2014.
161. Thompson, D. Brian, et al. "A Comparison of R-line Photoluminescence of Emeralds from Different Origins." *The Journal of Gemmology* 34.4 (2014): 334.
162. Oliveira, Raphael Rocha de. "Modelos de calibração multivariada por NIRS para a predição de características de qualidade da carne bovina." (2014). [PDF\] from ufg.br](#)
163. Kirley, M. P. (2014). Electrical conductivity of metal surfaces at terahertz frequencies (Doctoral dissertation, The University of Wisconsin-Madison).
164. Anderson, Danielle L., et al. "Spatial and temporal distribution of γ H2AX fluorescence in human cell cultures following synchrotron-generated X-ray microbeams: lack of correlation between persistent γ H2AX foci and apoptosis." *Synchrotron Radiation* 21.4 (2014).
165. Maxfield, Dane Arthur. [KINESIN-1 REGULATES SYNAPTIC STRENGTH BY MEDIATING DELIVERY, REMOVAL AND REDISTRIBUTION OF AMPARS.](#) Diss. The University of Utah, 2014.
166. Zou, Xiaoyu, Magneto-optical properties of ferromagnetic nanostructures

on modified nanosphere templates. Thesis, CALIFORNIA STATE UNIVERSITY, LONG BEACH, **2014**, 87 pages; 1591619

167. A Carrasco, TA Brown, SG Lomber, [Spectral and Temporal Acoustic Features Modulate Response Irregularities within Primary Auditory Cortex Columns](#), PloS one, **2014**, DOI: 10.1371/journal.pone.0114550
168. Sirotin, Yevgeniy B., Martín Elias Costa, and Diego A. Laplagne. "Rodent ultrasonic vocalizations are bound to active sniffing behavior." *Frontiers in behavioral neuroscience* 8 (**2014**).
169. Luo, Changtong, et al. "Wave system fitting: A new method for force measurements in shock tunnels with long test duration." *Mechanical Systems and Signal Processing* (**2015**).
170. Bleecker, J. V. (**2015**). *Relating phase separation and thickness mismatch in model lipid membranes* (Doctoral dissertation).
171. Möbius, Klaus, et al. "Möbius–Hückel topology switching in an expanded porphyrin cation radical as studied by EPR and ENDOR spectroscopy." *Physical Chemistry Chemical Physics* 17.9 (**2015**): 6644-6652.
172. Tariq, Humera, and SM Aqil Burney. "Low Level Segmentation of Brain MR Slices and Quantification Challenges.", NCMCS'15 (**2015**). [Link](#).
173. Nystad, Helle Emilia. Comparison of Principal Component Analysis and Spectral Angle Mapping for Identification of Materials in Terahertz Transmission Measurements. Diss. Master's thesis, Norwegian University of Technology and Science, **2015**.
174. Hahn, Christian, et al. "Adjusting rheological properties of concentrated microgel suspensions by particle size distribution." *Food Hydrocolloids* 49 (**2015**): 183-191.
175. Chiuchiú, D. "Time-dependent study of bit reset." *EPL (Europhysics Letters)* 109.3 (**2015**): 30002.

176. Taghizadeh, Mohammad Taghi, Nazanin Yeganeh, and Mostafa Rezaei. "The investigation of thermal decomposition pathway and products of poly (vinyl alcohol) by TG-FTIR." *Journal of Applied Polymer Science* 132.25 (2015).
177. P Sevusu , [Real-time air quality measurements using mobile platforms](#), 2015, Thesis, [\[PDF\] from rutgers.edu](#)
178. D. S. Khvostichenko, J. D. D. Ng, S. L. Perry, M. Menon, P. J. A. Kenis, Effects of detergent β -octylglucoside and phosphate salt solutions on phase behavior of monoolein mesophases , [PDF\] from researchgate.net](#)
179. Mahmoud, Imbaby I., and Mohamed S. El_Tokhy. "Advanced signal separation and recovery algorithms for digital x-ray spectroscopy." *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 773 (2015): 104-113.
180. Morrow, Justin D. Surface Microstructure and Properties of Pulsed Laser Micro Melted S7 Tool Steel. The University of Wisconsin-Madison, 2015.
181. Ubnoske, Stephen M., et al. "Role of nanocrystalline domain size on the electrochemical double-layer capacitance of high edge density carbon nanostructures." *MRS Communications* (2015): 1-6.
182. MUHAMMAD MUFTI AZIS, "Experimental and kinetic studies of H₂ effect on lean exhaust aftertreatment processes: HC-SCR and DOC" CHALMERS UNIVERSITY OF TECHNOLOGY Göteborg, Sweden 2015
183. Umesh Rudrapatna, S., et al. "Measurement of distinctive features of cortical spreading depolarizations with different MRI contrasts." *NMR in Biomedicine* 28.5 (2015): 591-600.
184. Kühbach, Markus, Brüggemann, Thiemo, Molodov, Konstantin, Gottstein, Günter. "On a Fast and Accurate In Situ Measuring Strategy for Recrystallization Kinetics and Its Application to an Al-Fe-Si Alloy", *Metallurgical and Materials Transactions A*, March 2015, Volume 46, Issue 3, pp 1337-1348

185. D. Y. Lipatov, Y. R. Shaltaeva, V. V. Belyakov, A. V. Golovin, V. S. Pershenkov, V. V. Shurenkov, D. Y. Yakovlev, "Modeling of IMS Spectra in Medical Diagnostic Purposes", [3rd International Conference on Nanotechnologies and Biomedical Engineering](#), Volume 55 of the series [IFMBE Proceedings](#), pp 404-408
186. Y. Meerten, , Y. Swolfs , J. Baets , L. Gorbatikh , I. Verpoebucurst , "Penetration impact testing of self-reinforced composites", *Composites Part A: Applied Science and Manufacturing*, Volume 68, January **2015**, Pages 289–295
187. Ivanov, I , Optimal filtering of synchronized current phasor measurements in a steady state, 2015 IEEE International Conference on [Industrial Technology \(ICIT\)](#), Pages 1362 - 1367 , 17-19 March **2015**
188. L Farge, J Boisse, J Dillet, S André , [Wide-angle X-ray scattering study of the lamellar/fibrillar transition for a semi-crystalline polymer deformed in tension in relation with the evolution of volume strain](#), *Journal of Polymer Science B*, Volume 53, Issue 20, 15 October **2015**, Pages 1470–1480
189. [Patrick Schloth](#) , Precipitation in the high strength AA7449 aluminium alloy: implications on internal stresses on different length scales, Thesis, [École Polytechnique Fédérale de Lausanne](#), Lausanne, Switzerland, June **2015**.
190. Guzman, P. (**2015**). *Studying the Physical Stability of BSA at the Bulk Solution and Oil/Water Interface* (Doctoral dissertation, University of Otago).
191. FlavonQ: An Automated Data Processing Tool for Profiling Flavone and Flavonol Glycosides with Ultra-High-Performance Liquid Chromatography–Diode Array Detection–High Resolution Accurate Mass–Mass Spectrometry, [Mengliang Zhang](#), [Jianghao Sun](#), and [Pei Chen*](#), *Anal. Chem.*, **2015**, 87 (19), pp 9974–9981, DOI: 10.1021/acs.analchem.5b02624
192. Schulze, H. Georg, and Robin FB Turner. "Development and Integration of Block Operations for Data Invariant Automation of Digital Preprocessing and Analysis of Biological and Biomedical Raman Spectra." *Applied spectroscopy* 69.6 (**2015**): 643-664.

193. Hutchison, Richard Stephen. Novel high refractive index, thermally conductive additives for high brightness white LEDs. Diss. Rensselaer Polytechnic Institute, **2015**.
194. Magnotti, G., et al. "Raman spectra of methane, ethylene, ethane, dimethyl ether, formaldehyde and propane for combustion applications." *Journal of Quantitative Spectroscopy and Radiative Transfer* 163 (**2015**): 80-101.
195. Chen, Rex Chin-Hao. "Spectral and Temporal Interrogation of Cerebral Hemodynamics Via High Speed Laser Speckle Contrast Imaging." (**2015**).
196. Maistry, N. (**2015**). Investigating the concept of Fraunhofer lines as a potential method to detect corona in the wavelength region 338nm-405nm during the day (Doctoral dissertation).
197. Parker, Michael J. Coupling Nuclear Induced Phonon Propagation with Conversion Electron Moessbauer Spectroscopy. No. AFIT-ENP-MS-15-J-054. AIR FORCE INSTITUTE OF TECHNOLOGY WRIGHT-PATTERSON AFB OH GRADUATE SCHOOL OF ENGINEERING AND MANAGEMENT, **2015**.
198. Maistry, Nattele. Investigating the concept of Fraunhofer lines as a potential method to detect corona in the wavelength region 338nm-405nm during the day. Diss. **2015**.
199. Liu, Yanping, et al. "Applications of Savitzky-Golay Filter for Seismic Random Noise Reduction." *Acta Geophysica* (**2015**).
200. Kojimoto, N. C. (**2015**). Ultrasonic inspection methods for defect detection and process control in roll-to-roll flexible electronics manufacturing (Doctoral dissertation, Massachusetts Institute of Technology).
201. Sheehan, Terry L., and Richard A. Yost. "What's the most meaningful standard for mass spectrometry: instrument detection limit or signal-to-noise ratio." *Curr Trends Mass Spectrometry* 13 (**2015**): 16-22.
202. Bleecker, J. V. (**2015**). Relating phase separation and thickness mismatch in model lipid membranes (Doctoral dissertation).

203. Ilewicz, Witold, et al. "Comparison of baseline estimation algorithms for chromatographic signals." *Methods and Models in Automation and Robotics (MMAR), 2015 20th International Conference on*. IEEE, **2015**.
204. Massimi, Federico. Sviluppo di metodi integrati basati sulle tecniche di nanoindentazione e del fascio ionico focalizzato (FIB) per la caratterizzazione, risolta nello spazio, delle proprietà meccaniche dei materiali", *ArcAdiA*." (**2015**). <http://hdl.handle.net/2307/5329>
205. Swoboda, Daniel Maximilian, et al. "A Comprehensive Study of Simple Digital Filters for Botball IR Detection Techniques." [PDF link](#).
206. CE Funes, EF Cromwell [System and method for determining a baseline measurement for a biological response curve](#), US Patent App. 13/308,021, 2
207. AD Beyene, R Bluffstone, Z Gebreegziabher , [The Improved Biomass Stove Saves Wood, But How Often Do People Use It?](#), [TXT] from worldbank.com
208. Alt, Daniel M. Design and Commissioning of a 16.1 MHz Multiharmonic Buncher for the ReAccelerator at NSCL. *ProQuest*, **2016**.
209. Coy, A., Rankine, D., Taylor, M., Nielsen, D. C., & Cohen, J. (**2016**). Increasing the accuracy and automation of fractional vegetation cover estimation from digital photographs. *Remote Sensing*, 8(7), 474.
210. Nguyen, Tuan Ngoc. "An algorithm for extracting the PPG Baseline Drift in real-time." (2016). [PDF link](#).
211. Maitre, Léa. "Metabonomic and epidemiological analyses of maternal parameters and exposures during pregnancy and their influence on fetal growth amongst the INMA birth cohort." (**2016**). [PDF link](#).
212. Lipatov, D. Y., et al. "Modeling of IMS Spectra in Medical Diagnostic Purposes." 3rd International Conference on Nanotechnologies and Biomedical Engineering. Springer Singapore, **2016**.

213. Wang, Xing. [Effects of Interfaces on Properties of Cladding Materials for Advanced Nuclear Reactors](#). The University of Wisconsin-Madison, **2016**. [PDF link](#).
214. Dang, Hue, Marian Dekker, Jason Farquhar, and Tom Heskes. "Processing and analyzing functional near-infrared spectroscopy data." (**2016**).
215. Damavandi, H. G. (**2016**). Data analytics, interpretation and machine learning for environmental forensics using peak mapping methods (Doctoral dissertation, The University of Iowa).
216. Performance evaluation and optimization of X-ray stress measurement for nickel aluminium bronze based on the Bayesian method. *Journal of Applied Crystallography*, **2016** – [scripts.iucr.org](#)
217. [Top-down modulation of stimulus drive via beta-gamma cross-frequency interaction](#). CG Richter, WH Thompson, [CA Bosman](#), [P Fries](#) - bioRxiv, **2016** – [biorxiv.org](#)
218. Azpúrua, Marco A., Marc Pous, and Ferran Silva. "Decomposition of Electromagnetic Interferences in the Time-Domain." (**2016**).
219. Barros, Rodrigo Emanuel de Britto Andrade. SISTEMA DE INTERROGAÇÃO DE REDES DE BRAGG: PRIMEIROS PASSOS NA CRIAÇÃO DE UM PROTÓTIPO. Diss. Universidade Federal do Rio de Janeiro, **2016**.
220. Li, Yuanlu, et al. "A novel signal enhancement method for overlapped peaks with noise immunity." *Spectroscopy Letters* 49.4 (**2016**): 285-293.
221. Hatterschide, Joshua. "Retroviral-RNA Structure and Function: Investigating the role of aminoacyl-tRNA synthetases and retroviral-RNA structural elements in the initiation of reverse transcription." (**2016**).
222. Guizani, Chamseddine, et al. "Biomass char gasification by H₂O, CO₂ and their mixture: Evolution of chemical, textural and structural properties of the chars." *Energy* 112 (**2016**): 133-145.

223. Wagner, C. F. (2016). Transition from transparency to hole-boring in relativistic laser-solid interactions at the Texas Petawatt (Doctoral dissertation).
224. Bocaege, E., and S. Hillson. "Disturbances and noise: Defining furrow-form enamel hypoplasia." *American journal of physical anthropology* 161.4 (2016): 744-751
225. Merla, Yu, et al. "Extending battery life: A low-cost practical diagnostic technique for lithium-ion batteries." *Journal of Power Sources* 331 (2016): 224-231.
226. Besemer, Matthieu, et al. "Identification of Multiple Water–Iodide Species in Concentrated NaI Solutions Based on the Raman Bending Vibration of Water." *The Journal of Physical Chemistry A* 120.5 (2016): 709-714.
227. Brachi, Paola, et al. "Pseudo-component thermal decomposition kinetics of tomato peels via isoconversional methods." *Fuel Processing Technology* 154 (2016): 243-250.
228. Lee, Hansol, et al. "Flow-suppressed hyperpolarized ¹³C chemical shift imaging using velocity-optimized bipolar gradient in mouse liver tumors at 9.4 T." *Magnetic resonance in medicine* (2016).
229. Wu, B., et al. "Novel application of differential thermal voltammetry as an in-depth state-of-health diagnosis method for lithium-ion batteries." [PDF file](#).
230. Creese, Andrew J., and Helen J. Cooper. "Separation of cis and trans Isomers of Polyproline by FAIMS Mass Spectrometry." *Journal of The American Society for Mass Spectrometry* 27.12 (2016): 2071-2074.
231. Kvyetnyy, Roman, et al. "Improving the quality perception of digital images using modified method of the eye aberration correction." *Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2016*. Vol. 10031. International Society for Optics and Photonics, 2016.
232. Myers, G. A., Turner, L. G., Morgan, Q., & Pearce, J., "[Raman Spectroscopy--detecting SOx and NOx in the Precipice Sandstone](#)". (2016)

233. Pancholi, Manthan, et al. "Relative Translation and Rotation Calibration Between Optical Target and Inertial Measurement Unit." International Conference on Sensor Systems and Software. Springer, Cham, **2016**.
234. Ferriss, Elizabeth, Terry Plank, and David Walker. "Site-specific hydrogen diffusion rates during clinopyroxene dehydration." *Contributions to Mineralogy and Petrology* 171.6 (**2016**): 55.
235. Roy, Sujan Kumar, Wei-Ping Zhu, and Benoit Champagne. "Single channel speech enhancement using subband iterative Kalman filter." Circuits and Systems (ISCAS), 2016 IEEE International Symposium on. IEEE, **2016**.
236. Langaas, Gjertrud Louise. "Measurements of radioactivity in plant and soil samples taken near a nuclear power plant." (**2016**). [PDF link](#).
237. Benigni, Paolo, and Francisco Fernandez-Lima. "Oversampling selective accumulation trapped ion mobility spectrometry coupled to FT-ICR MS: fundamentals and applications." *Analytical chemistry* 88.14 (**2016**): 7404-7412.
238. Aldokhail, A. M. (**2016**). Automated Signal to Noise Ratio Analysis for Magnetic Resonance Imaging Using a Noise Distribution Model (Doctoral dissertation, University of Toledo).
239. Fasching, Joshua, et al. "Automated coding of activity videos from an OCD study." Robotics and Automation (ICRA), 2016 IEEE International Conference on. IEEE, **2016**.
240. Bleecker, J. V., Cox, P. A., Foster, R. N., Litz, J. P., Blosser, M. C., Castner, D. G., & Keller, S. L. (**2016**). Thickness Mismatch of Coexisting Liquid Phases in Non-Canonical Lipid Bilayers. *The journal of physical chemistry. B*, 120(10), 2761.
241. Joshi, Bijal, and Nitu Anil Kumar. "Computationally efficient data rate mismatch compensation for telephony clocks." U.S. Patent No. 9,514,766. 6 Dec. **2016**.
242. Vallet, Aurélien, et al. "A multi-dimensional statistical rainfall threshold for

- deep landslides based on groundwater recharge and support vector machines." *Natural Hazards* 84.2 (2016): 821-849.
243. Skaret, H. B. (2016). The Arctic Sea Ice-Melting During Summer or not Freezing in Winter? (Master's thesis, The University of Bergen). [PDF link](#).
244. Van der Rest, Guillaume, Human Rezaei, and Frédéric Halgand. "Monitoring Conformational Landscape of Ovine Prion Protein Monomer Using Ion Mobility Coupled to Mass Spectrometry." *Journal of The American Society for Mass Spectrometry* 28.2 (2017): 303-314.
245. Mirsafavi, Rustin Y., et al. "Detection of papaverine for the possible identification of illicit opium cultivation." *Analytical Chemistry* 89.3 (2017): 1684-1688.
246. Myers, Grant A., Kelsey Kehoe, and Paul Hackley. "Analysis of Artificially Matured Shales With Confocal Laser Scanning Raman Microscopy: Applications to Organic Matter Characterization." *Unconventional Resources Technology Conference (URTEC)*, 2017.
247. Torres, Andrei BB, José Adriano Filho, Atslands R. da Rocha, Rubens Sonsol Gondim, and José Neuman de Souza. "Outlier detection methods and sensor data fusion for precision agriculture.", 2017, [PDF link](#).
248. Desmet, F., Lesaffre, M., Six, J., Ehrlé, N., & Samson, S. (2017). Multimodal analysis of synchronization data from patients with dementia. In *ESCOM 2017*.
249. Seeber, Renato, and Alessandro Ulrici. "Analog and digital worlds: Part 2. Fourier analysis in signals and data treatment." *ChemTexts* 3.2 (2017): 8.
250. Mustafa, M. A., et al. "Nonintrusive Freestream Velocity Measurement in a Large-Scale Hypersonic Wind Tunnel." *AIAA Journal* (2017).
251. Suárez-Cortés, Pablo, et al. "Ned-19 inhibition of parasite growth and multiplication suggests a role for NAADP mediated signalling in the asexual development of *Plasmodium falciparum*." *Malaria Journal* 16.1 (2017): 366.

252. Catalbas, M. C., & Dobrisek, S. (2017). 3D Moving Sound Source Localization via Conventional Microphones. *Elektronika ir Elektrotechnika*, 23(4), 63-69.
253. Xu, Jun-Li, Aoife A. Gowen, and Da-Wen Sun. "Time series hyperspectral chemical imaging (HCI) for investigation of spectral variations associated with water and plasticizers in casein based biopolymers." *Journal of Food Engineering* 218 (2018): 88-105.
254. Du, Zhenhui, et al. "High-sensitive carbon disulfide sensor using wavelength modulation spectroscopy in the mid-infrared fingerprint region." *Sensors and Actuators B: Chemical* 247 (2017): 384-391.
255. Hamilton, N. E., Mahjoub, R., Laws, K. J., & Ferry, M. (2017). A blended NPT/NVT scheme for simulating metallic glasses. *Computational Materials Science*, 130, 130-137.
256. Sun, Y. C., Huang, C., Xia, G., Jin, S. Q., & Lu, H. B. (2017). [Accurate wavelength calibration method for compact CCD spectrometer](#). *JOSA A*, 34(4), 498-505.
257. Mikhailov, I. F., et al. "Rapid diagnostics of urinary iodine using a portable EDXRF spectrometer." *Journal of X-Ray Science and Technology Preprint* (2017): 1-7. [PDF link](#).
258. ianchi, Davide, et al. "A wavelet filtering method for cumulative gamma spectroscopy used in wear measurements." *Applied Radiation and Isotopes* 120 (2017): 51-59.
259. Xiong, Zheng, et al. "Automated Phase Segmentation for Large-Scale X-ray Diffraction Data Using a Graph-Based Phase Segmentation (GPhase) Algorithm." *ACS Combinatorial Science* 19.3 (2017): 137-144
260. Jiménez-Carvajal, C., et al. "Weighing lysimetric system for the determination of the water balance during irrigation in potted plants." *Agricultural Water Management* 183 (2017): 78-85.

261. Acciarri, R., et al. "Noise Characterization and Filtering in the MicroBooNE Liquid Argon TPC." arXiv preprint arXiv:1705.07341 (**2017**). [PDF link.](#)
262. Mathault, Jessy, Hamza Landari, Frederic Tessier, Paul Fortier, and Amine Miled. "Biological Modeling Challenges in a Multiphysics Approach." *Circuits and Systems (MWSCAS)*, **2017** IEEE 60th International Midwest Symposium
263. Weiss, Charles J. "Scientific Computing for Chemists: An Undergraduate Course in Simulations, Data Processing, and Visualization." *Journal of Chemical Education* 94.5 (**2017**): 592-597.