

References for package “hsdar”

Lukas W. Lehnert

February 21, 2022

References

- Apan, A., Held, A., Phinn, S., Markley, J., 2004. Detecting sugarcane "orange rust" disease using EO-1 Hyperion hyperspectral imagery. International Journal of Remote Sensing 25, 489–498.
- Bach, H., 1995. Die Bestimmung hydrologischer und landwirtschaftlicher Oberflächenparameter aus hyperspektralen Fernerkundungsdaten. Münchener Geographische Abhandlungen Reihe B, Band B21.
- Ben-Dor, E., Levin, N., Singer, A., Karnieli, A., Braun, O., Kidron, G., 2006. Quantitative mapping of the soil rubification process on sand dunes using an airborne hyperspectral sensor. Geoderma 131, 1–21.
- Blackburn, G.A., 1998. Quantifying chlorophylls and carotenoids at leaf and canopy scales: An evaluation of some hyperspectral approaches. Remote Sensing of Environment 66, 273 – 285.
- Boochs, F., Kupfer, G., Dockter, K., Kühbauch, W., 1990. Shape of the red edge as vitality indicator for plants. International Journal of Remote Sensing 11, 1741–1753. [arXiv:
http://www.tandfonline.com/doi/pdf/10.1080/01431169008955127](http://www.tandfonline.com/doi/pdf/10.1080/01431169008955127).
- Broge, N., Leblanc, E., 2001. Comparing prediction power and stability of broadband and hyperspectral vegetation indices for estimation of green leaf area index and canopy chlorophyll density. Remote Sensing of Environment 76, 156 – 172.
- Carter, G.A., 1994. Ratios of leaf reflectances in narrow wavebands as indicators of plant stress. International Journal of Remote Sensing 15, 697–703. [arXiv:
http://www.tandfonline.com/doi/pdf/10.1080/01431169408954109](http://www.tandfonline.com/doi/pdf/10.1080/01431169408954109).
- Chappelle, E.W., Kim, M.S., McMurtrey, J.E., 1992. Ratio analysis of reflectance spectra (rars) - An algorithm for the remote estimation of the concentrations of chlorophyll-a, chlorophyll-b, and carotenoids in soybean leaves. Remote Sensing of Environment 39, 239–247.

- Chen, J.M., 1996. Evaluation of vegetation indices and a modified simple ratio for boreal applications. Canadian Journal of Remote Sensing 22, 229–242.
- Clark, R.N., King, T.V.V., Gorelick, N.S., 1987. Automatic continuum analysis of reflectance spectra, in: Proceedings of the Third Airborne Imaging Spectrometer Data Analysis Workshop, pp. 138–142.
- Dash, J., Curran, P.J., 2004. The MERIS terrestrial chlorophyll index. International Journal of Remote Sensing 25, 5403–5413.
- Datt, B., 1998. Remote sensing of chlorophyll a, chlorophyll b, chlorophyll a+b, and total carotenoid content in *Eucalyptus* leaves. Remote Sensing of Environment 66, 111 – 121.
- Datt, B., 1999a. Remote sensing of water content in *Eucalyptus* leaves. Australian Journal of Botany 47, 909–923.
- Datt, B., 1999b. Visible/near infrared reflectance and chlorophyll content in *Eucalyptus* leaves. International Journal of Remote Sensing 20, 2741–2759. [arXiv:<http://www.tandfonline.com/doi/pdf/10.1080/014311699211778>](http://www.tandfonline.com/doi/pdf/10.1080/014311699211778)
- Daughtry, C., Walthall, C., Kim, M., de Colstoun, E., III, J.M., 2000. Estimating corn leaf chlorophyll concentration from leaf and canopy reflectance. Remote Sensing of Environment 74, 229 – 239.
- Elvidge, C.D., Chen, Z.K., 1995. Comparison of broad-band and narrow-band red and near-infrared vegetation indexes. Remote Sensing of Environment 54, 38–48.
- Escadafal, R., Belghith, A., Ben Moussa, H., 1994. Indices spectraux pour la dégradation des milieux naturels en Tunisie aride, in: 6ème Symp. Int. Mesures Physiques et Signatures en Télédétection, Val d'Isère, France.
- Escadafal, R., Huete, A., 1991. Étude des propriétés spectrales des sols arides appliquée à l'amélioration des indices de végétation obtenus par télédétection, in: Comptes-rendus de l'Académie des Sciences de Paris, Série 312, pp. 1385–1391.
- Filella, I., Peñuelas, J., 1994. The red edge position and shape as indicators of plant chlorophyll content, biomass and hydric status. International Journal of Remote Sensing 15, 1459–1470.
- Galvão, L.S., Formaggio, A.R., Tisot, D.A., 2005. Discrimination of sugarcane varieties in southeastern Brazil with EO-1 Hyperion data. Remote Sensing of Environment 94, 523–534.
- Gamon, J., nuelas, J.P., Field, C., 1992. A narrow-waveband spectral index that tracks diurnal changes in photosynthetic efficiency. Remote Sensing of Environment 41, 35 – 44.

- Gandia, S., Fernández, G., García, J., Moreno, J., 2004. Retrieval of vegetation biophysical variables from CHRIS/PROBA data in the SPARC campaign, in: ESA SP, pp. 40–48.
- Gao, B.C., 1996. NDWI - A normalized difference water index for remote sensing of vegetation liquid water from space. *Remote Sensing of Environment* 58, 257 – 266.
- Garrison, S.R., Eitel, J.U., Vierling, L.A., 2011. Disentangling the relationships between plant pigments and the photochemical reflectance index reveals a new approach for remote estimation of carotenoid content. *Remote Sensing of Environment* 115, 628 – 635.
- Gitelson, A., Buschmann, C., Lichtenthaler, H., 1999. The chlorophyll fluorescence ratio F735/F700 as an accurate measure of the chlorophyll content in plants - Experiments with autumn chestnut and maple leaves. *Remote Sensing of Environment* 69, 296–302.
- Gitelson, A., Merzlyak, M.N., 1994. Quantitative estimation of chlorophyll-a using reflectance spectra: Experiments with autumn chestnut and maple leaves. *Journal of Photochemistry and Photobiology B: Biology* 22, 247 – 252.
- Gitelson, A., Y, G., MN., M., 2003. Relationships between leaf chlorophyll content and spectral reflectance and algorithms for non-destructive chlorophyll assessment in higher plant leaves. *Journal of Plant Physiology* 160, 271–282.
- Gitelson, A.A., Kaufman, Y.J., Merzlyak, M.N., 1996. Use of a green channel in remote sensing of global vegetation from EOS-MODIS. *Remote Sensing of Environment* 58, 289 – 298.
- Gitelson, A.A., Merzlyak, M.N., 1997. Remote estimation of chlorophyll content in higher plant leaves. *International Journal of Remote Sensing* 18, 2691–2697.
- Guyot, G., Baret, F., 1988. Utilisation de la haute resolution spectrale pour suivre l'état des couverts végétaux, in: Guyenne, T.D., Hunt, J.J. (Eds.), *Spectral Signatures of Objects in Remote Sensing*, pp. 279–286.
- Haboudane, D., Miller, J.R., Tremblay, N., Zarco-Tejada, P.J., Dextraze, L., 2002. Integrated narrow-band vegetation indices for prediction of crop chlorophyll content for application to precision agriculture. *Remote Sensing of Environment* 81, PII S0034-4257(02)00018-4.
- Haubrock, S.N., Chabrillat, S., Lemmnitz, C., Kaufmann, H., 2008. Surface soil moisture quantification models from reflectance data under field conditions. *International Journal of Remote Sensing* 29, 3–29.
- Hernández-Clemente, R., Navarro-Cerrillo, R.M., Suárez, L., Morales, F., Zarco-Tejada, P.J., 2011. Assessing structural effects on PRI for stress detection in conifer forests. *Remote Sensing of Environment* 115, 2360 – 2375.

- Hernández-Clemente, R., Navarro-Cerrillo, R.M., Zarco-Tejada, P.J., 2012. Carotenoid content estimation in a heterogeneous conifer forest using narrow-band indices and PROSPECT + DART simulations. *Remote Sensing of Environment* 127, 298 – 315.
- Huete, A., 1988. A soil-adjusted vegetation index (SAVI). *Remote Sensing of Environment* 25, 295–309.
- Huete, A., Liu, H., Batchily, K., van Leeuwen, W., 1997. A comparison of vegetation indices over a global set of TM images for EOS-MODIS. *Remote Sensing of Environment* 59, 440 – 451.
- Hunt, E.R., Doraiswamy, P.C., McMurtrey, J.E., Daughtry, C.S.T., Perry, E.M., Akhmedov, B., 2013. A visible band index for remote sensing leaf chlorophyll content at the canopy scale. *International Journal of Applied Earth Observation and Geoinformation* 21, 103–112.
- Hunt, E.R., Rock, B.N., 1989. Detection of changes in leaf water-content using near-infrared and middle-infrared reflectances. *Remote Sensing of Environment* 30, 43–54.
- Jacquemoud, S., Baret, F., 1990. Prospect - a model of leaf optical-properties spectra. *Remote Sensing of Environment* 34, 75–91.
- Jacquemoud, S.A., Verhoef, W., Baret, F., Bacour, C., Zarco-Tejada, P.J., Asner, G.P., Francois, C., Ustin, S.L., 2009. PROSPECT + SAIL models: A review of use for vegetation characterization. *Remote Sensing of Environment* 113, Supplement 1, 56 – 66.
- Jordan, C.F., 1969. Derivation of leaf-area index from quality of light on forest floor. *Ecology* 50, 663–&.
- Kim, M., Daughtry, C., Chappelle, E., McMurtrey, J., Walthall, C., 1994. The use of high spectral resolution bands for estimating absorbed photosynthetically active radiation (Apar), in: Proceedings of the Sixth Symposium on Physical Measurements and Signatures in Remote Sensing, Val D'Isere, France. pp. 299–306.
- Kruse, F.A., Lefkoff, A.B., Boardman, J.W., Heidebrecht, K.B., Shapiro, A.T., Barloon, P.J., Goetz, A.F.H., 1993. The spectral image processing system (SIPS) – interactive visualization and analysis of imaging spectrometer data. *Remote Sensing of Environment* 44, 145–163.
- Levin, N., Kidron, G.J., Ben-dor, E., 2007. Surface properties of stabilizing coastal dunes: Combining spectral and field analyses. *Sedimentology* 54, 771–788.
- Lichtenthaler, H.K., Lang, M., Sowinska, M., Heisel, F., Miehe, J.A., 1996. Detection of vegetation stress via a new high resolution fluorescence imaging system. *Journal of Plant Physiology* 148, 599–612.

- Lobell, D.B., Asner, G.P., Law, B.E., Treuhaft, R.N., 2001. Subpixel canopy cover estimation of coniferous forests in Oregon using SWIR imaging spectrometry. *Journal of Geophysical Research* 106, 5151–5160.
- Maccioni, A., Agati, G., Mazzinghi, P., 2001. New vegetation indices for remote measurement of chlorophylls based on leaf directional reflectance spectra. *Journal of Photochemistry and Photobiology B: Biology* 61, 52 – 61.
- Madeira, J., Bedidi, A., Cervelle, B., Pouget, M., Flay, N., 1997. Visible spectrometric indices of hematite (Hm) and goethite (Gt) content in lateritic soils: The application of a Thematic Mapper (TM) image for soil-mapping in Brasilia, Brazil. *International Journal of Remote Sensing* 18, 2835–2852.
- le Maire, G., Francois, C., Dufrene, E., 2004. Towards universal broad leaf chlorophyll indices using PROSPECT simulated database and hyperspectral reflectance measurements. *Remote Sensing of Environment* 89, 1–28.
- le Maire, G., François, C., Soudani, K., Berveiller, D., Pontailler, J.Y., Bréda, N., Genet, H., Davi, H., Dufrêne, E., 2008. Calibration and validation of hyperspectral indices for the estimation of broadleaved forest leaf chlorophyll content, leaf mass per area, leaf area index and leaf canopy biomass. *Remote Sensing of Environment* 112, 3846 – 3864.
- Mathieu, R., Pouget, M., Cervelle, B., Escadafal, R., 1998. Relationships between satellite-based radiometric indices simulated using laboratory reflectance data and typic soil color of an arid environment. *Remote Sensing of Environment* 66, 17–28.
- McMurtrey, J.E., Chappelle, E.W., Kim, M.S., Meisinger, J.J., Corp, L.A., 1994. Distinguishing nitrogen-fertilization levels in-field corn (*Zea mays* L) with actively induced fluorescence and passive reflectance measurements. *Remote Sensing of Environment* 47, 36–44.
- McNairn, H., Protz, R., 1993. Mapping corn residue cover on agricultural fields in Oxford County, Ontario, using Thematic Mapper. *Canadian Journal of Remote Sensing* 19, 152–159.
- Merzlyak, M.N., Gitelson, A.A., Chivkunova, O.B., Rakitin, V.Y., 1999. Non-destructive optical detection of pigment changes during leaf senescence and fruit ripening. *Physiologia Plantarum* 106, 135–141.
- Mutanga, O., Skidmore, A., 2004a. Hyperspectral band depth analysis for a better estimation of grass biomass (*Cenchrus ciliaris*) measured under controlled laboratory conditions. *International Journal of applied Earth Observation and Geoinformation* 5, 87–96.
- Mutanga, O., Skidmore, A.K., 2004b. Narrow band vegetation indices overcome the saturation problem in biomass estimation. *International Journal of Remote Sensing* 25, 3999–4014.

- Nagler, P.L., Inoue, Y., Glenn, E., Russ, A., Daughtry, C., 2003. Cellulose absorption index (CAI) to quantify mixed soil-plant litter scenes. *Remote Sensing of Environment* 87, 310 – 325.
- Oppelt, N., Mauser, W., 2004. Hyperspectral monitoring of physiological parameters of wheat during a vegetation period using AVIS data. *International Journal of Remote Sensing* 25, 145–159. [arXiv:<http://www.tandfonline.com/doi/pdf/10.1080/0143116031000115300>](http://www.tandfonline.com/doi/pdf/10.1080/0143116031000115300)
- Peñuelas, J., Baret, F., Filella, I., 1995a. Semiempirical indexes to assess carotenoids chlorophyll-a ratio from leaf spectral reflectance. *Photosynthetica* 31, 221–230.
- Peñuelas, J., Filella, I., Lloret, P., Muñoz, F., Vilajeliu, M., 1995b. Reflectance assessment of mite effects on apple trees. *International Journal of Remote Sensing* 16, 2727–2733. [arXiv:<http://www.tandfonline.com/doi/pdf/10.1080/01431169508954588>](http://www.tandfonline.com/doi/pdf/10.1080/01431169508954588)
- Peñuelas, J., Gamon, J.A., Fredeen, A.L., Merino, J., Field, C.B., 1994. Reflectance indexes associated with physiological-changes in nitrogen-limited and water-limited sunflower leaves. *Remote Sensing of Environment* 48, 135–146.
- Peñuelas, J., Piñol, J., Ogaya, R., Filella, I., 1997. Estimation of plant water concentration by the reflectance water index WI (R900/R970). *International Journal of Remote Sensing* 18, 2869–2875. [arXiv:<http://www.tandfonline.com/doi/pdf/10.1080/014311697217396>](http://www.tandfonline.com/doi/pdf/10.1080/014311697217396)
- Qi, J., Chehbouni, A., Huete, A., Kerr, Y., Sorooshian, S., 1994. A modified soil adjusted vegetation index. *Remote Sensing of Environment* 48, 119 – 126.
- Rondeaux, G., Steven, M., Baret, F., 1996. Optimization of soil-adjusted vegetation indices. *Remote Sensing of Environment* 55, 95–107.
- Roujean, J.L., Breon, F.M., 1995. Estimating par absorbed by vegetation from bidirectional reflectance measurements. *Remote Sensing of Environment* 51, 375–384.
- Serrano, L., Peñuelas, J., Ustin, S.L., 2002. Remote sensing of nitrogen and lignin in mediterranean vegetation from AVIRIS data: Decomposing biochemical from structural signals. *Remote Sensing of Environment* 81, 355 – 364.
- Sims, D., Gamon, J., 2002. Relationships between leaf pigment content and spectral reflectance across a wide range of species, leaf structures and developmental stages. *Remote Sensing of Environment* 81, 337–354.
- Smith, R., Adams, J., Stephens, D., Hick, P., 1995. Forecasting wheat yield in a mediterranean-type environment from the NOAA satellite. *Australian Journal of Agricultural Research* 46, 113–125.

- Sohn, Y.S., McCoy, R.M., 1997. Mapping desert shrub rangeland using spectral unmixing and modeling spectral mixtures with TM data. *Photogrammetric Engineering and Remote Sensing* 63, 707–716.
- Thenkabail, P.S., Smith, R.B., Pauw, E.D., 2000. Hyperspectral vegetation indices and their relationships with agricultural crop characteristics. *Remote Sensing of Environment* 71, 158 – 182.
- Tsai, F., Philpot, W., 1998. Derivative analysis of hyperspectral data. *Remote Sensing of Environment* 66, 41–51.
- Tucker, C.J., 1979. Red and photographic infrared linear combinations for monitoring vegetation. *Remote Sensing of Environment* 8, 127–150.
- Vincini, M., Frazzi, E., D'Alessio, P., 2006. Angular dependence of maize and sugar beet VIs from directional CHRIS/PROBA data, in: Fourth ESA CHRIS PROBA Workshop. ESRIN, Frascati, Italy. pp. 19–21.
- Vogelmann, J.E., Rock, B.N., Moss, D.M., 1993. Red edge spectral measurements from sugar maple leaves. *International Journal of Remote Sensing* 14, 1563–1575.
- Whiting, M.L., Li, L., Ustin, S.L., 2004. Predicting water content using Gaussian model on soil spectra. *Remote Sensing of Environment* 89, 535–552.
- Wu, C., Niu, Z., Tang, Q., Huang, W., 2008. Estimating chlorophyll content from hyperspectral vegetation indices: Modeling and validation. *Agricultural and Forest Meteorology* 148, 1230 – 1241.
- Wu, W., 2014. The generalized difference vegetation index (GDVI) for dryland characterization. *Remote Sensing* 6, 1211–1233.
- Zarco-Tejada, P.J., Gonzalez-Dugo, V., Williams, L.E., Suarez, L., Berni, J.A.J., Goldhamer, D., Fereres, E., 2013. A PRI-based water stress index combining structural and chlorophyll effects: Assessment using diurnal narrow-band airborne imagery and the CWSI thermal index. *Remote Sensing of Environment* 138, 38–50.
- Zarco-Tejada, P.J., Miller, J.R., 1999. Land cover mapping at BOREAS using red edge spectral parameters from CASI imagery. *Journal of Geophysical Research-atmospheres* 104, 27921–27933.
- Zarco-Tejada, P.J., Pushnik, J.C., Dobrowski, S., Ustin, S.L., 2003. Steady-state chlorophyll a fluorescence detection from canopy derivative reflectance and double-peak red-edge effects. *Remote Sensing of Environment* 84, 283–294.