

D. LESSELIER - Dissémination académique (au 02/08/2019)

I Thèses

- [T1] Etude temporelle de la propagation du champ électromagnétique dans les lames inhomogènes dispersives. Application au diagnostic.
Thèse de Doctorat de 3ème Cycle, soutenue devant M. Françon (Président), E. Roubine, J. Cea et J.-C. Bolomey, fév. 1978.
- [T2] Diagnostic optimal de la lame inhomogène en régime temporel. Application à l'électromagnétisme et à l'acoustique.
Thèse de Doctorat d'Etat ès Sciences Physiques, soutenue devant E. Roubine (Président), J. Cea, H. Blok, W. Tabbara (Rapporteurs), Y. Leroy, J.-C. Bolomey (Examineurs), mars 1982.
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II Publications dans des revues spécialisées avec comité de lecture

- [A1] Générateur d'impulsions pour un banc automatique de réflectométrie.
D. Brunol, C. Durix, D. Lesselier, F. Pupat
Onde Electrique **57**, 12, 761-765, déc. 1977.
- [A2] Time domain integral equation approach for inhomogeneous and dispersive slab problems.
J.-C. Bolomey, C. Durix, D. Lesselier
IEEE Transactions on Antennas and Propagation **AP-26**, 5, 658-667, sept. 1978.
- [A3] Determination of index profiles by time-domain reflectometry.
D. Lesselier
Journal of Optics (Paris) **9**, 6, 349-358, déc. 1978.
- [A4] Determination of conductivity profiles by time domain reflectometry.
J.-C. Bolomey, C. Durix, D. Lesselier
IEEE Transactions on Antennas and Propagation **AP-27**, 2, 244-248, mars 1979.
- [A5] Etude numérique des antennes épaisses par l'équation intégrale d'Albert et Synge.
J.-C. Bolomey, F. Hillaire, D. Lesselier
Annales des Télécommunications **35**, 5-6, 183-192, mai-juin 1980.
- [A6] Spectral and time domain approach to some inverse scattering problems.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara
Article invité, IEEE Transactions on Antennas and Propagation, Special Issue on Inverse Problems
AP-29, 2, 206-212, mars 1981.
- [A7] Conical antennas as coupling structures for microwaves and infrared devices.
J.-C. Bolomey, J. Cashman, S. El Habiby, D. Lesselier
International Journal on Infrared and Millimeter Waves **2**, 4, 859-877, juil. 1981.
- [A8] Optimization theory and time-domain inverse scattering.
D. Lesselier
Radio Science **16**, 6, 1059-1063, nov.-déc. 1981.
- [A9] Diagnostic de milieux inhomogènes unidimensionnels par échographie électromagnétique.
D. Lesselier
Revue du CETHEDDEC **68**, 1-42, 3ème trim. 1981.
- [A10] Optimization techniques and inverse problems: reconstruction of conductivity profiles in the time-domain.

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Article primé (1982 Ronold W. P. KING Award), *IEEE Transactions on Antennas and Propagation* **AP-30**, 1, 59-65, janv. 1982.

- [A11] Practical problems in the time domain probing of lossy dielectric media.
J.-C. Bolomey, D. Lesselier, G. Peronnet
IEEE Transactions on Antennas and Propagation **AP-30**, 5, 993-998, sept. 1982.
- [A12] Optimization techniques and inverse problems: probing of acoustic impedance profiles in time domain.
D. Lesselier
Journal of the Acoustical Society of America **72**, 4, 1276-1284, oct. 1982.
- [A13] Physically motivated approximations in some inverse scattering problems.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara
Article invité, *Radio Science* **17**, 6, 1567-1578, nov.-déc. 1982.
- [A14] P-wave transient scattering by 2-D penetrable targets: a direct solution.
D. Lesselier
Journal of the Acoustical Society of America **74**, 4, 1274-1278, oct. 1983.
- [A15] Détermination de la permittivité et de la conductivité d'un milieu stratifié à l'aide d'un dipôle enterré.
F. Falchetti, D. Lesselier, W. Tabbara
Revue du CETHEDC **76**, 27-33, 3ème trim. 1983.
- [A16] Multiple scattering calculations for non-spherical particles based on the vector radiative transfer theory.
A. Ishimaru, D. Lesselier, C. Yeh
Radio Science **19**, 5, 1356-1366, sept-oct. 1984.
- [A17] First-order multiple scattering theory for nonspherical particles.
A. Ishimaru, C. Yeh, D. Lesselier
Applied Optics **23**, 22, 4132-4139, 15 nov. 1984.
- [A18] Probing of a stratified medium by means of a magnetic dipole: a geometrical optics approach.
F. Falchetti, D. Lesselier, W. Tabbara
IEEE Transactions on Geoscience and Remote Sensing **GRS-23**, 6, 819-826, nov. 1985.
- [A19] Diffraction tomography approach to acoustical imaging and media characterization.
B. Duchêne, D. Lesselier, W. Tabbara
Journal of the Optical Society of America A, Feature Issue: Inverse Problems in Propagation and Scattering **2**, 11, 1943-1953, nov. 1985.
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B. Duchêne, D. Lesselier, W. Tabbara
Traitement du Signal **2**, 5 Sp., 473-477, 4ème trim. 1985.
- [A21] Iterative solution of some direct and inverse problems in electromagnetics and acoustics.
D. Lesselier, D. Vuillet-Laurent, F. Jouvie, W. Tabbara
Article invité, *Electromagnetics, Special Double Issue on Iterative Methods in Electromagnetics* **5**, 2-3, 147-189, 1985.
- [A22] Acoustical imaging of 2-D fluid targets buried in a half-space: a diffraction tomography approach.
B. Duchêne, D. Lesselier, W. Tabbara
IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control **UFFC-34**, 5, 540-549, sept. 1987.

- [A23] Diffraction tomography: contribution to the analysis of some applications in microwaves and ultrasonics.
W. Tabbara, B. Duchêne, C. Pichot, D. Lesselier, L. Chommeloux, N. Joachimowicz
Article invité, *Inverse Problems* **4**, 2, 305-331, mai 1988.
- Cet article a été celui choisi comme le représentant de l'année 1988 du Journal au titre de son 25ème anniversaire, cet été 2010, comme cité : "25th Year Anniversary Collection : To celebrate the last 25 years of high-quality, thought provoking research articles published in Inverse Problems, we have compiled a special collection of papers. The 25th Anniversary Collection is representative of the exceptional effort made by all of our authors and referees over the past 25 years and comprises an outstanding paper from each year of publication."*
- [A24] Experimental investigation of a diffraction tomography technique in fluid ultrasonics.
B. Duchêne, D. Lesselier, W. Tabbara
IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control **UFFC-35**, 4, 437-444, juil. 1988.
- [A25] Problèmes unidimensionnels de diffraction inverse en acoustique et électromagnétisme. Etude bibliographique.
D. Lesselier, W. Tabbara
Journal d'Acoustique **1**, 363-384, déc. 1988.
- [A26] Dipole approximations applied to the inverse problem in boreholes. A numerical study.
H. Galan-Malaga, D. Lesselier, W. Tabbara
Article invité, *Wave Motion, Special Issue on Inverse Methods*, **11**, 137-150, mai 1989.
- [A27] Analyse de quelques approximations utiles à la caractérisation acoustique du fond marin.
P. Grassin, R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
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- [A28] Eddy current testing of anomalies in conductive materials. Part I: qualitative imaging via diffraction tomography techniques.
R. Zorgati, B. Duchêne, D. Lesselier, F. Pons
IEEE Transactions on Magnetics **MAG-27**, 6, 4416-4437, nov. 1991.
- [A29] Eddy current testing of anomalies in conductive materials. Part II: quantitative imaging via generalized inverse techniques.
R. Zorgati, D. Lesselier, B. Duchêne, F. Pons
IEEE Transactions on Magnetics **MAG-28**, 3, 1850-1862, mai 1992.
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R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
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- [A32] On the retrieval of the plane wave reflection coefficient of a seabed in shallow water.
M. Lambert, D. Lesselier
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- [A33] Born-type schemes for the acoustic probing of 1-D fluid media from time-harmonic planar reflection coefficients at two incidences.
M. Lambert, R. de Oliveira Bohbot, D. Lesselier

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- [A34] Inversion of a cylindrical vibrating body in shallow water from aspect-limited data using filtered SVD and the L-curve.
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- [A35] Mapping voids in a conductive half-space by simulated annealing with connectivity and size as constraints.
R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
Journal of Electromagnetic Waves and Applications **10**, 7, 983-1004, juil. 1996.
- [A36] Modified gradient approach to inverse scattering for binary objects in stratified media.
L. Souriau, B. Duchêne, D. Lesselier, R. E. Kleinman
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C. Rozier et D. Lesselier, T. S. Angell et R. E. Kleinman
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- [A38] Evaluation of a 3-D bounded defect in the wall of a metal tube at eddy current frequencies: the direct problem.
V. Monebhurrun, D. Lesselier, B. Duchêne
Journal of Electromagnetic Waves and Applications **12**, 3, 315-347, mars 1998.
- [A39] Reconstruction of a 2-D binary obstacle by controlled evolution of a level set.
A. Litman, D. Lesselier, F. Santosa
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- [A40] 3-D inversion of eddy current data for non-destructive evaluation of steam generator tubes.
V. Monebhurrun, B. Duchêne, D. Lesselier
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- [A41] The retrieval of a buried cylindrical obstacle by a constrained modified gradient method in the H-polarization case and for Maxwellian materials.
M. Lambert, D. Lesselier, B. J. Kooij
Inverse Problems **14**, 5, 1265-1283, oct. 1998.
- Featured article (avait été sélectionné pour présentation et libre accès en 1998-1999, *Journal Information Page for Inverse Problems*, du site WWW de l'Institute of Physics)
- [A42] On attenuation-matched inversion methods of diffusive wavefields.
A. Litman, D. Lesselier
Article invité, *Inverse Problems, Special Issue Article PICOF'98* **15**, 99-111, fév. 1999.
- [A43] Nonlinear inversion of a buried object in transverse electric scattering.
B. J. Kooij, M. Lambert, D. Lesselier
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- [A44] Electromagnetic scattering by a triaxial homogeneous penetrable ellipsoid: low-frequency derivation and testing of the localized nonlinear approximation.
G. Perrusson, M. Lambert et D. Lesselier, A. Charalambopoulos et G. Dassios
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- [A45] Distributed source method for retrieval of the cross-sectional contour of an impenetrable cylindrical object in a shallow water waveguide.

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- [A46] Binary-constrained inversion of a buried cylindrical obstacle from complete and phaseless magnetic fields.
M. Lambert, D. Lesselier
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- [A47] Conductive masses in a half-space Earth in the diffusive regime: Fast hybrid modeling of a low-contrast ellipsoid.
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- [A48] High-Tc SQUIDS and eddy-current NDE: a comprehensive investigation from real data to modeling.
A. Ruosi, M. Valentino et G. Pepe, V. Monebhurrin, D. Lesselier et B. Duchêne
Measurement Science and Technology **11**, 11, 1639-1648, nov. 2000.
- [A49] Shape reconstruction by controlled evolution of a level set: from a min-max formulation to numerical experimentation.
C. Ramananjaona, M. Lambert et D. Lesselier, J.-P. Zolésio
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- [A50] Shape inversion from TM and TE real data by controlled evolution of level sets.
C. Ramananjaona, M. Lambert et D. Lesselier
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- [A51] A novel approach to the low-frequency scattering problem: the localized nonlinear approximation in ellipsoidal geometry.
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- [A52] Extended Born domain integral models of diffusive fields.
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IEEE Transactions on Magnetics **MAG-38**, 2, 577-580, mars 2002.
- [A53] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
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- [A54] On novel developments of the controlled evolution of level sets in the field of inverse shape problems.
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- [A55] Eddy-current evaluation of three-dimensional defects in a metal plate.
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G. Micolau, G. Pichenot, D. Premel, D. Lesselier, M. Lambert
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- [A59] Adaptive multiscale reconstruction of buried objects.
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- [A62] Shared issues of wavefield inversion and illustrations in 3-D diffusive electromagnetics
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- [A63] Calculation of eddy current testing probe signal with global approximation.
J. Pavo, D. Lesselier
IEEE Transactions on Magnetics **42**, 4, 1419-1422, avril 2006.
- [A64] Level set methods for inverse scattering problems.
O. Dorn, D. Lesselier
Contribution sollicitée, *Topical review, Inverse Problems*, **22**, R67-131, août 2006.
- (Cet article a fait partie des 3% des articles les plus téléchargés de tous les journaux de l'Institute of Physics durant l'année 2006.)
(Selon l'éditeur, compté à partir de données SCOPUS, cet article constitue entre 2006 et 2010 inclus le 2^{ème} article le plus cité parmi tous les articles du journal qui sont parus entre 2006 et 2009 inclus.)
- [A65] MUSIC-type electromagnetic imaging of a collection of small 3-D bounded scatterers.
H. Ammari, E. Iakovleva, D. Lesselier, G. Perrusson
SIAM Journal on Scientific Computing **29**, 2, 674-709, 2007.
- [A66] On the calculation of ECT signals due to thin cracks in a plate using a global approximation of the dipole density.
J. Pavo, L. Maurice, D. Prémel, D. Lesselier
International Journal on Applied Electromagnetics and Mechanics **25**, 1-4, 347-356, 2007.
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- C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
International Journal on Applied Electromagnetics and Mechanics **25**, 1-4, 313-317, 2007.
- [A68] Multi-static response matrix of a 3-D inclusion in a half space and MUSIC imaging.
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IEEE Transactions on Antennas and Propagation **55**, 9, 2598-2609, sept. 2007.
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M. Benedetti, M. Donelli, D. Lesselier, A. Massa
Antennas and Wireless Propagation Letters **6**, 592-595, déc. 2007.
- [A70] New discretisation scheme based on splines for Volume Integral Method: application to eddy-current testing of tubes.
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- [A72] Localization and characterization of simple defects in finite-size photonic crystals.
J.-P. Groby, D. Lesselier, *Journal of the Optical Society of America A* **25**, 1, 146-152, janv. 2008.
- [A73] Multi-Static Response matrix of spherical scatterers and the back-propagation of singular fields.
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- [A74] Electromagnetic modeling of a damaged ferromagnetic tube by a volume integral equation.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne
IEEE Transactions on Magnetics **44**, 3, 623-632, mars 2008.
- [A75] Low-frequency electromagnetic characterization of buried obstacles by differential evolution with strategy of communication between groups and multi-resolution.
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in *Journal of Physics: Conference Series (6th International Conference on Inverse Problems in Engineering Theory and Practice ICIPE 2008), Dedicated to J.A.G. (Andrew) Temple*, **135**, 12024 (8pp), IOP Science, London, 2008.
- [A76] Hybrid differential evolution and retrieval of buried spheres in subsoil.
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- [A77] 3D eddy-current imaging of metal tubes via gradient-based, controlled evolution of level sets.
J. Abascal, M. Lambert, D. Lesselier, O. Dorn
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- [A78] Low-frequency electromagnetic modeling of conductive obstacles buried in subsoil as coupled ellipsoids
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- [A79] A multi-resolution technique based on shape optimization for the reconstruction of homogeneous dielectric objects.
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- [A81] MUSIC-type imaging of a thin penetrable inclusion from its multi-static response matrix.
W. K. Park, D. Lesselier
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- [A82] Imaging of a small dielectric sphere buried in a half space.
S. Gdoura, D. Lesselier, P. C. Chaumet, G. Perrusson
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- [A83] Reconstruction of thin electromagnetic inclusions by a level set method.
W. K. Park, D. Lesselier
Inverse Problems, **25**, 8, Article 085010 (24pp), 2009 (on line, juillet 2009).
- [A84] Level set methods for inverse scattering – some recent developments.
O. Dorn, D. Lesselier
Sollicité, Inverse Problems **25**, 12, Article 125001 (11pp), 2009 (on line, déc. 2009).
- (Cet article a été choisi comme un des hauts points de 2009 : **Highlights of 2009** - The Editorial Board has selected their highlights from *Inverse Problems* in 2009. This is intended not as a list of the 'best' articles, but as an interesting and stimulating reading list. Articles were selected for many reasons, some contain outstanding research and breakthroughs, some may have an especially clear exposition and are beautifully presented, others are instructive, containing results and tools useful to many readers. These highlights contain several review articles from the *Inverse Problems 25th Year Special Issue* published last year. (Selon l'éditeur, il fut en 2010 le 14^{ème} article le plus téléchargé de tous les volumes de *Inverse Problems* depuis l'origine.)
- [A85] Electromagnetic MUSIC-type imaging of perfectly conducting, arc-like cracks at single frequency.
W. K. Park, D. Lesselier
Journal of Computational Physics **228**, 8093–8111, 2009 (on line, août 2009).
- [A86] Multiple-shape reconstruction by means of multiregion level sets.
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Quarterly of Applied Mathematics **68**, 513-536, sept. 2010 (on line, mai 2010).
- [A88] Ultrasonic NDT optimization using Randomized Adaptive Differential Evolution.
B. Puel, S. Chatillon, D. Lesselier
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- [A89] Adaptive metamodels for crack characterization in eddy-current testing.
R. Douvenot, M. Lambert, D. Lesselier
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- [A90] Fast electromagnetic imaging of thin inclusions in half-space affected by random scatterers.
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- [A91] Optimization of ultrasonic arrays design and setting using a differential evolution.
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- [A92] Electromagnetic low-frequency dipolar excitation of two metal spheres in a conductive medium.
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Journal of Applied Mathematics **2012**, ID 62861 (37 pp), doi:10.1155/2012/628261, 2012.
- [A93] 3D Generalized Finite-Difference modeling of electromagnetic time reversal – Impact of the density of dipoles for the localization of a dielectric obstacle in free space.
M. Benhamouche, L. Bernard, L. Pichon, D. Lesselier
IEEE Transactions on Magnetics **48**, 2, 359-362, fév. 2012.
- [A94] Eddy current modeling of narrow cracks in planar-layered metal structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
IEEE Transactions on Magnetics **48**, 10, 2551-2559, oct. 2012.
- [A95] Electromagnetic time reversal and scattering by a small dielectric inclusion
S. Gdoura, A. Wahab, D. Lesselier
Journal of Physics: Conference Series (New Computational Methods for Inverse Problems NCMIP 2012), L. Blanc-Féraud et P.-Y. Joubert eds, **386**, 012010 (6 pp), 2012.
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W.-K. Park, D. Lesselier
Journal of Physics: Conference Series (IC-MSQUARE 2012: International Conference on Mathematical Modelling in Physical Sciences), T. Kosmas, E. Vagenas, and D. Vlachos eds, **410**, 012018 (6 pp), IOP Science, London, 2013.
- [A97] Efficient modeling of ECT signals for realistic cracks in layered half-space.
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- [A98] Localization of metal targets by time reversal of electromagnetic waves - 3D-numerical and experimental study
M. Benhamouche, L. Bernard, M. Serhir, L. Pichon, D. Lesselier
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- [A99] Electromagnetic response of anisotropic laminates to distributed sources.
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- [C134] Transient wave imaging of small scatterers in electromagnetics.
S. Gdoura, D. Lesselier
7ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'12, Marseille, juil. 2012.
Proc., 64-65
- [C135] Localisation de cibles métalliques par retournement temporel d'ondes électromagnétiques – étude numérique 3-D et expérimentale.
M. Benhamouche, M. Sehrir, L. Bernard, L. Pichon, D. Lesselier
7ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'12, Marseille, juil. 2012.
Proc., 52-53
- [C136] An efficient interpolation for calculation of the response of composite layered material and its implementation in MUSIC imaging.
G. Rodeghiero, Y. Zhong, D. Lesselier, M. Lambert, X. Chen
19th Conference on the Computation of Electromagnetic Fields (COMPUMAG 2013), Budapest, juil. 2013.
Proc. (USB key), pc5-11 (2 pp)
- [C137] Wide-band electromagnetic time reversal: selecting the instant of focus for scatterer localization.
M. Benhamouche, L. Bernard, M. Sehrir, L. Pichon, D. Lesselier
19th Conference on the Computation of Electromagnetic Fields (COMPUMAG 2013), Budapest, juil. 2013.
Proc. (USB key), oa2-1 (2 pp)
- [C138] Eddy-current inspection modelling of a thin crack located in the vicinity of a fastener borehole.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
The 30th International Review of Progress in Applied Computational Electromagnetics (ACES 2014 Conference), Jacksonville, mars 2014.
- [C139] Electromagnetic small-scale modeling of composite panels involving periodic arrays of circular fibers.
C. Li, D. Lesselier, Y. Zhong
META'14, the 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Singapore, mai 2014.
- [C140] Contrôle électromagnétique de structures multicouches anisotropes et la méthode MUSIC.
G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier
Journées CONFédération Française des Essais Non Destructifs (COFREND), COFREND Days, Bordeaux, mai 2014.
On-line, site COFREND
(G. Rodeghiero a reçu, avec son poster, lors de la journée des doctorants, le prix Claude Birac, en troisième prix.)
- [C141] Calcul de la variation de l'impédance d'une bobine due à un défaut avec alésage à partir d'une formulation modale.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
Journées CONFédération Française des Essais Non Destructifs (COFREND), Bordeaux, mai 2014.
- [C142] Low-high frequency inspection of composite multi-layers and MUSIC-type electromagnetic imaging.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier

Inverse Problems from Theory to Applications Conference (IPTA 2014), Bristol, août 2014.

- [C143] Electromagnetic MUSIC imaging and 3-D retrieval of defects in anisotropic, multi-layered composite materials.
G. Rodeghiero, M. Lambert, D. Lesselier, and P.-P. Ding
Contribution invitée, *The 9th International Conference on Computational Physics (ICCP9)*, Singapore, janv. 2015.
Proc. paper A05-05
- [C144] Fast calculation of scattering problem in layered uniaxial media.
Y. Zhong, X. Chen, P.-P. Ding, M. Lambert, D. Lesselier
The 9th International Conference on Computational Physics (ICCP9), Singapore, janv. 2015.
Proc. paper B11-05
- [C145] Full-wave model and numerical study of electromagnetic plane-wave scattering by multilayered, fiber-based periodic composites.
C. Li, D. Lesselier, Y. Zhong
1st URSI Atlantic Radio Science Conference (URSI AT-RASC), Gran Canaria, mai 2015.
(*C. Li a été sélectionné parmi les 10 contributeurs proposés au final pour la compétition étudiante orale, et, avec sa présentation, a reçu le troisième prix.*)
- [C146] Subspace-based optimization method for reconstructing 3-D scatterers in anisotropic laminates.
P.-P. Ding, M. Lambert, D. Lesselier
Contribution invitée, *20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE 2015)*, Sendai, sept. 2015.
Proc. paper OS4-3, pp. 53-54.
- [C147] Development of methods for characterizing defects based on TFM multimode imaging.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy
15th Anglo-French Physical Acoustics Conference (AFPAC 2016), Croydon, janv. 2016.
Proc. 34-35.
- [C148] A modified gradient descent reconstruction algorithm for breast cancer detection using microwave radar and digital breast tomosynthesis.
M. Tivnan, C. Rappaport, M. Lambert, D. Lesselier
The 10th European Conference on Antennas and Propagation (EUCAP 2016), Davos, avril 2016.
doi: 10.1109/EuCAP.2016.7481582 (4 pp)
- [C149] Modeling of periodically-structured fiber-reinforced laminates with multiple fibers absent.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
META'16, 7th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Malaga, juil. 2016.
- [C150] Electromagnetic near-field imaging of missing fibers in periodic fiber-reinforced laminates.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2016)*, Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7735485
- [C151] On recent advances in modeling and electromagnetic imaging of perturbed composite laminates
D. Lesselier, M. Lambert
Contribution invitée - Keynote, *Progress in Electromagnetics Research Symposium (PIERS 2016)*, Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7734271
- [C152] On the radiation of antennas within a subwavelength-separated wire distribution, super-localization and time-reversal

H. Tu, S. Xiao, D. Lesselier, M. Serhir
Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7735486

- [C153] A new optimization method for solving electromagnetic inverse scattering problems.
Y. Zhong, D. Lesselier, M. Lambert
Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
doi: 10.1109/PIERS.2016.7734526
- [C154] From small-scale modeling to imaging of disorganized periodic structures (link is external)
Z. Liu, C. Li, D. Lesselier, Y. Zhong
21st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2016),
Lisbonne, sept. 2016.
Proc. 2pp.
- [C155] On a Bayesian inversion approach in eddy-current testing.
C. Cai, M. Lambert, T. Rodet, D. Lesselier
21st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2016),
Lisbonne, sept. 2016.
Proc. 60-61.
- [C156] Electromagnetic non-destructive testing of damaged fibered-reinforced composite laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Journées Confédération Française des Essais Non Destructifs (COFREND) - COFREND Days,
Strasbourg, mai 2017.
- [C157] Caractérisation de défauts plans en bordure de soudure par imagerie TFM sélective.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy
Journées Confédération Française des Essais Non Destructifs (COFREND) - COFREND Days,
Strasbourg, mai 2017.
- [C158] Electromagnetic modeling and imaging of damaged layered fiber-based laminates.
Z. Liu, D. Lesselier, C. Li, Y. Zhong
2017 International Applied Computational Electromagnetics Society Symposium in China (ACES-China 2017), Suzhou, août 2017
- [C159] Computational modeling and imaging of damaged fibered laminates from low frequency to resonance.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
22st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2017), Saclay,
sept. 2017.
- [C160] Nonlinear imaging of 3D defect in anisotropic laminate using joint sparsity constraints.
H. Zaimaga, A. Fraysse, M. Lambert, D. Lesselier
18th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2017),
Chamonix, sept. 2017.
- [C161] Electromagnetically locating damages in layered fiber-reinforced periodic laminates with a joint-sparsity-based method.
Contribution invitée, Z. Liu, D. Lesselier, Y. Zhong
Progress in Electromagnetics Research Symposium (PIERS 2017), Singapour, nov. 2017.
- [C162] On the electromagnetic probing of man-made and natural buried structures
Contribution invitée, M. Serhir, M. Lambert, D. Lesselier, X. Ye
2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018),
Chengdu, mai 2018.
Proc. IEEE Xplore 8563966 (3 pp), déc. 2018.

- [C163] On the modeling and diagnosis of a micro-structured wire antenna system.
H. Tu, M. Serhir, P. Ran and D. Lesselier
2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018),
Chengdu, mai 2018.
Proc. IEEE Xplore 8563875 (3 pp), déc. 2018.
- [C164] Full-wave model of 3D scattering by a fibered laminate
C. Li, D. Lesselier, Y. Zhong, Z. Liu
2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018),
Chengdu, mai 2018.
Proc. IEEE Xplore 8563533 (3 pp), déc. 2018.
- [C165] Computational imaging of micro-structured media at small scale - from one-shot first-order solutions to full-wave iterative ones.
Z. Liu, P. Ran, Y. Zhong, M. Serhir, and D. Lesselier
Speaker invité (D. Lesselier) (*tutorial*) *Workshop on Qualitative and Quantitative Approaches to Inverse Scattering Problems, Institute for Mathematical Sciences, National University of Singapore*, Singapour, sept. 2018
- [C166] Impact of root diameter and water content on tree roots detection using Ground Penetrating Radar.
A. Aboudourib, M. Serhir, D. Lesselier
13th European Conference on Antennas and Propagation (EUCAP 2019), convened session : Theoretical, Algorithmic, and Experimental Advances in GPR, Cracovie, mars-avril 2019.
Proc. IEEE Xplore 8739825 (5 pp), juin 2019.
- [C167] Diagnostic within a dielectric micro-structure: time-reversal and sparsity-constrained imaging.
P. Ran, Z. Liu, D. Lesselier, M. Serhir
13th European Conference on Antennas and Propagation (EUCAP 2019), Cracovie, mars-avril 2019.
Proc. IEEE Xplore 8740223 (5 pp), juin 2019.
- [C168] Retrieving missing elements of a 2-D micro-structure: joint-sparsity inversion and convolutional neural networks.
P. Ran, Y. Qin, D. Lesselier, M. Serhir
9th International Conference on New Computational Methods for Inverse Problems, Cachan, mai 2019.
- [C169] Statistical analysis of indoor human exposure based on resampled polynomial chaos expansion.
Z. Liu, D. Lesselier, B. Sudret, J. Wiart
3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Heraklion, juin 2019.
- [C170] Model-based source optimisation for eddy-current thermography in planar specimens using meta-modelling.
R. Miorelli, A. Skarlatos, C. Reboud, A. Ratsakou, D. Lesselier
22nd International Conference on the Computation of Electromagnetic Fields, International Compumag Society, Paris, juil. 2019.
- [C171] Adaptive TFM imaging in anisotropic steels using optimization algorithms coupled to a surrogate model.
C. Ménard, S. Robert, P. Calmon, D. Lesselier
46th Annual Review of Progress in Quantitative Nondestructive Evaluation, Portland, juil. 2019.
- [C172] Electromagnetic imaging of a dielectric micro-structure via convolutional neural networks.
P. Ran, Y. Qin, D. Lesselier
27th European Signal Processing Conference, A Coruña, sept. 2019.

- [C173] Fast 3D model dedicated to thermographic inspections of planar composite structures.
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
The 24th International Workshop on Electromagnetic Nondestructive Evaluation, Chengdu, sept. 2019.
- [C174] A mixed strategy for efficient acousto-electric tomography based on complete electrode model.
C. Li, K. An, K. Zheng, D. Lesselier
The 24th International Workshop on Electromagnetic Nondestructive Evaluation, Chengdu, sept. 2019.
- [C175] On the Direct Sampling Method in 3-D far-field inverse scattering, from theory to testing on controlled laboratory data
S. Kang, M. Lambert, D. Lesselier
19th International Symposium on Applied Electromagnetics and Mechanics, Nanjing, sept. 2019.
- [C176] 3D reconstruction of tree roots under heterogeneous soil conditions using Ground Penetrating Radar
A. Aboudourib, M. Serhir, D. Lesselier
Near Surface Geoscience Conference 2019, EAGE, The Hague, sept. 2019.
- [C177] Near-field characterization of root systems, from computational modeling and simulations to controlled laboratory experiments.
M. Serhir, A. Aboudourib, D. Lesselier
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C178] Conductivity reconstruction based on current-to-voltage map for acousto-electric tomography.
P. Ran, Z. Liu, D. Lesselier, M. Serhir
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C179] Improving the quality of images of a homogeneous anisotropic weld mold with a local optimization scheme based on a surrogate model.
C. Ménard, S. Robert, D. Lesselier
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C180] Nonlinearized electromagnetic imaging of complex biological structures - towards data fusion.
Y. Qin, T. Rodet, M. Lambert, D. Lesselier
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C181] Convolutional neural networks for imaging of micro-structures.
P. Ran, D. Lesselier, M. Serhir
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C182] Near-field characterization of root systems, from computational modeling and simulations to controlled laboratory experiments.
M. Serhir, A. Aboudourib, D. Lesselier
PIERS Photonics & Electromagnetics Research Symposium, Xiamen, déc. 2019.

**VII. Communications ayant fait l'objet ultérieur d'actes édités (ou ouvrage)
(alors référées en tant que [La ...] ou [Lc ...])**

- [Ce1] On the microwave and ultrasonic imaging of buried targets.
L. Chommeloux, B. Duchêne, C. Pichot, D. Lesselier, W. Tabbara, J.-C. Bolomey
NATO Advanced Research Workshop on Direct and Inverse Methods in Radar Polarimetry, Bad-Winsheim, sept. 1988. Invitation (D. Lesselier) au Workshop.
(Développé/publié en réf. [La7].)

- [Ce2] Computation of electromagnetic field diffracted by an inhomogeneity in metal: a first step in magnetic imaging.
R. Zorgati, A. Bernard, F. Pons, B. Duchêne, D. Lesselier, W. Tabbara
3rd. International Symposium on Nondestructive Characterization of Materials, Saarbrück, oct. 1988.
(Développé/publié en réf. [La5].)
- [Ce3] On the eddy current imaging of defects in a conductive half-space.
R. de Oliveira Bohbot, B. Duchêne, D. Lesselier, N. Coutanceau
SPIE International Symposium on Optical Applied Science and Engineering Conference, San Diego, juil. 1992.
(Développé/publié en réf. [La8].)
- [Ce4] Eddy current imaging of defects in a conductive half-space as an inverse wave scattering problem.
D. Lesselier, R. de Oliveira Bohbot, B. Duchêne, C. Rozier, F. Brouaye, M. Lefebure
Contribution invitée, *Conference Methoden und Verfahren der Mathematischen Physik*, Oberwolfach, déc. 1993.
(Développé/publié en réf. [La9].)
- [Ce5] Eddy current characterization of 3-D bounded defects in metal tubes using a wavefield integral formulation modeling.
V. Monebhurrin, B. Duchêne, et D. Lesselier, R. Zorgati
1st Int. Workshop on Electromagnetic Nondestructive Evaluation, Londres, sept. 1995.
(Développé/publié en réf. [La10].)
- [Ce6] Mapping 2-D defects in a conductive half-space by eigenfunction expansions in K-space of Fourier-Laplace transforms.
A. Litman et D. Lesselier, C. De Mol
1st Int. Workshop on Electromagnetic Nondestructive Evaluation, Londres, sept. 1995.
(Développé/publié en réf. [La11].)
- [Ce7] Optimal shape reconstruction of a perfect target placed in shallow water.
C. Rozier et D. Lesselier, T. Angell
3rd European Conference on Underwater Acoustics, Heraklion, juin 1996.
(Développé/publié en réf. [La12].)
- [Ce8] On the retrieval of an extended vibrating source in shallow water.
C. Rozier, D. Lesselier
3rd European Conference on Underwater Acoustics, Heraklion, juin 1996.
(Développé/publié en réf. [La13].)
- [Ce9] INES: 3D eddy current Imaging for a Nondestructive Evaluation System applied to steam generator tubes
R. Zorgati, V. Monebhurrin, P. Gros, B. Duchêne, D. Lesselier, C. Chavant
23rd Review of Progress in Quantitative Nondestructive Evaluation, Brunswick, juil. 1996.
(Développé/publié en réf. [La18].)
- [Ce10] Location and reconstruction of objects using a modified gradient approach.
R. E. Kleinman et P. M. Van den Berg, B. Duchêne et D. Lesselier
Contribution invitée, *Conférence on Inverse Problems of Wave Propagation and Diffraction*, Aix-les-Bains, sept. 1996.
Proc, 9-22.
(Développé/publié en réf. [La14].)
- [Ce11] Reconstruction of an impenetrable obstacle immersed in a shallow water acoustic waveguide.
C. Rozier et D. Lesselier, T. Angell et R. E. Kleinman
Conférence on Inverse Problems of Wave Propagation and Diffraction, Aix-les-Bains, sept. 1996.

Recueil des Résumés, 30.
(Développé/publié en réf. [La15].)

- [Ce12] A level-set approach for eddy current imaging of defects in a conductive half-space.
A. Litman et D. Lesselier, F. Santosa
Conference on Inverse Problems of Wave Propagation and Diffraction, Aix-les-Bains, sept. 1996
Recueil des Résumés, 64.
(Développé/publié en réf. [La16].)
- [Ce13] Multifrequency version of the modified gradient algorithm for reconstruction of complex refractive indices.
R. E. Kleinman, P. M. Van den Berg et B. J. Kooij, B. Duchêne, D. Lesselier et M. Lambert
Contribution invitée, SPIE Annual Meeting, Conf. on Computational, Experimental, and Numerical Methods for Solving Ill-Posed Inverse Imaging Problems: Medical and Nonmedical Applications, San Diego, juil.-août 1997.
(Développé/publié en réf. [La19].)
- [Ce14] Eddy current nondestructive evaluation of a 3-D bounded defect in a metal tube using volume integral methods and nonlinearized inversion schemes.
V. Monebhurrun, D. Lesselier, B. Duchêne
3rd International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'97), Reggio de Calabria, sept. 1997.
(Développé/publié en réf. [La20].)
- [Ce15] Optimal contour reconstruction of a sound-hard obstacle in a shallow water acoustic waveguide.
M. Bocly, M. Lambert, C. Rozier, D. Lesselier
4th European Conference on Underwater Acoustics (ECUA'98), Rome, sept. 1998.
(Développé/publié en réf. [La21].)
- [Ce16] Eddy current nondestructive evaluation using SQUIDS.
V. Monebhurrun, D. Lesselier, et B. Duchêne, A. Ruosi, M. Valentino, G. Pepe et G. Peluso
4th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'98), Chatou, sept. 1998.
Recueil des Résumés, 48-49
(Développé/publié en réf. [La22].)
- [Ce17] On nonlinearized wavefield inversion methods and the identification of buried objects.
D. Lesselier
Contribution invitée, International Conference on Applied Mathematics, in memory of R. E. Kleinman, Newark, nov. 1998, F. Santosa *et al.* eds, CRC Press LLC, Boca Raton, 1999.
(A donné naissance sous une forme co-signée avec B. Duchêne à [Lc4].)
- [Ce18] On the numerical modeling of eddy current nondestructive evaluation with the FEM-BEM TRIFOU software in controlled configurations.
V. Bertrand, D. Lesselier, et S. Mastorchio
5th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'99), Des Moines, août 1999.
(Développé/publié en réf. [La23].)
- [Ce19] On the characterization of obstacles in shallow water using rigorous inversion methods.
M. Lambert, D. Lesselier, B. Duchêne
1st Workshop on Inverse Problems in Underwater Acoustics, Heraklion, Crete, mai 1999.
(A donné naissance sous une forme co-signée avec B. Duchêne à [Lc5].)
- [Ce20] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
D. Dos Reis, M. Lambert, D. Lesselier

10th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2001), Tokyo, mai 2001.

(Développé/publié en réf. [La24].)

[Ce21] Eddy-current evaluation of 3-D defects in a metal plate: a first analysis of a contrast-source gradient method.

D. Dos Reis, M. Lambert, D. Lesselier

7th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'01), Kobé, mai 2001.

(Développé/publié en réf. [La25].)

[Ce22] On the controlled evolution of level sets and like methods in scalar inverse scattering.

C. Ramananjaona, M. Lambert, D. Lesselier

Colloque AMRTMA : Acoustics, Mechanics, and the Related Topics of Mathematical Analysis, Fréjus, juin 2002.

(Développé/publié en réf. [La26].)

[Ce23] Three-dimensional electromagnetic field in a conductive cylinder at eddy-current frequencies.

G. Micolau, G. Pichenot, D. Prémel, D. Lesselier, M. Lambert

8th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'02), Sarrebrück, juin 2002.

(Développé en réf. [La30].)

[Ce24] A fast model of eddy-current ferrite-cored probes for NDE.

F. Buvat, G. Pichenot, D. Prémel, M. Lambert, D. Lesselier

9th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'03), Saclay, mai 2003.

(Développé/publié en réf. [La28].)

[Ce25] Volumetric and surface flaw models for the computation of the EC T/R probe signal due to a thin opening flaw.

J. Pavo, L. Maurice, D. Prémel, D. Lesselier, A. Nicolas

11th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'06), Iwata, juin 2006.

(Développé/publié en réf. [La31].)

[Ce26] Numerical modeling of eddy current nondestructive evaluation of ferromagnetic tubes via an integral equation approach.

A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne

12th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'07), Cardiff, juin 2007.

(Développé/publié en réf. [La35].)

[Ce27] MUSIC-type imaging of dielectric spheres from single-frequency, asymptotic and exact array data.

S. Gdoura, D. Lesselier, G. Perrusson, P.-C. Chaumet

Progress in Electromagnetics Research Symposium (PIERS 2007), Prague, août 2007.

(Développé/publié en réf. [La33].)

[Ce28] Low-frequency interaction of magnetic dipoles and perfectly conducting spheroidal bodies.

P. Vafeas, G. Perrusson, D. Lesselier

8th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering, Lefkada, septembre 2007.

(Développé/publié en réf. [La36].)

[Ce29] Retrieval of an unknown number of buried spheres by differential evolution with multi-resolution multi-zone features.

A. Bréard, G. Perrusson, D. Lesselier

6th International Conference on Inverse Problems in Engineering: Theory and Practice (ICIPE 2008), Dourdan, juin 2008.

(Développé/publié en réf. [A75])

[Ce30] Nonlinearized mapping of volumetric defect affecting a metal tube.

J. Abascal, M. Lambert, D. Lesselier, O. Dorn

13th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'08), Seoul, juin 2008.

(Développé/publié en réf. [La38])

[Ce31] On the imaging of two-dimensional thin inclusions by a MUSIC-type algorithm from boundary measurements.

W. K. Park, H. Ammari, D. Lesselier

13th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'08), Seoul, juin 2008.

(Développé/publié en réf. [La39])

[Ce32] Non-iterative MUSIC type algorithm for reconstructing two-dimensional thin dielectric inclusions.

W. K. Park, H. Ammari, D. Lesselier

EU-Korea Conference on Science and Technology (EKC'2008), Heidelberg, août 2008.

(Développé/publié en réf. [La37])

[Ce33] A qualitative two-step inversion approach for the reconstruction of subsurface defects.

M. Donelli, M. Benedetti, M., D. Lesselier, A. Massa

IEEE International Geoscience and Remote Sensing Symposium (IGARSS'09), Cape Town, juil. 2009.

(Développé/publié en réf. [La34])

[Ce34] Level set method for reconstruction of thin electromagnetic inclusions.

W. K. Park, H. Ammari, D. Lesselier

EU-Korea Conference on Science and Technology (EKC'2009), Reading, août 2009.

(Développé/publié en réf. [La42])

[Ce35] On the retrieval of electromagnetically thin screens by non-iterative fast solution methods.

D. Lesselier, W. K. Park

Contribution invitée, *International Conference on Electromagnetics in Advanced Applications (ICEAA 09)*, Turin, sept. 2009.

(Développé/publié en réf. [La40])

[Ce36] Low-frequency modeling of the interaction of a magnetic dipole and two perfectly conducting spheres in a conductive medium.

P. Vafeas, D. Lesselier

9th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering, Patras, oct. 2009.

(Développé/publié en réf. [La41])

[Ce37] Ultrasonic NDT optimization using Randomized Adaptive Differential Evolution

B. Puel, S. Chatillon, D. Lesselier, P. Calmon

6th Conference of the GDR 2501 Research on Ultrasound Propagation for NDT jointly with the 10th Anglo-French Physical Acoustics Conference (AFPAC), Lake District, janvier 2010.

(Développé/publié en réf. [A88])

[Ce38] Metamodels as input of an optimization algorithm for solving an inverse eddy current testing problem.

R. Douvenot, M. Lambert, D. Lesselier

15th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'10),
Szczecin, juin 2010.
(Développé/publié en réf. [La45])

[Ce39] MUSIC-type algorithm for eddy-current non-destructive evaluation of small defects in metal plates
T. Henriksson, M. Lambert, D. Lesselier
15th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'10),
Szczecin, juin 2010.
(Développé/publié en réf. [La46])

[Ce40] Particle optimization with metamodel for crack characterization.
R. Douvenot, M. Lambert, D. Lesselier
URSI International Symposium on Electromagnetic Theory (EMTS 2010), Berlin, août 2010.
(Développé/publié en réf. [La43])

[Ce41] Fast simulation method of multiple narrow crack in planar stratified media.
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- [N5] Détermination de la permittivité et de la conductivité d'un milieu stratifié à l'aide d'un dipôle enterré.
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- [N25] Inversion d'objets binaires en courants de Foucault dans un formalisme d'ondes. Application au contrôle de plaques et de tubes
V. Monebhurrin, A. Litman, D. Lesselier, B. Duchêne
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- [N34] On level set methods for inverse scattering.
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- [N35] Low-frequency interaction of magnetic dipoles and perfectly conducting ellipsoidal bodies in a conductive medium.
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- [N37] Caractérisation électromagnétique basse-fréquence d'objets enfouis dans le sol à l'aide d'un algorithme d'évolution différentielle avec stratégie de communication entre groupes et multi-résolution.
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- [N38] Gradient-based level set reconstruction of a 3D-defect embedded in a non-magnetic material using eddy-currents.

J. Abascal, M. Lambert, D. Lesselier, O. Dorn
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- [N49] Utilisation de méthodes d'optimisation appliquées au contrôle non destructif.
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- [N50] CAPVERS : Conception de capteurs et de techniques CND par méthodes inverses.
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R. Douvenot, M. Lambert, D. Lesselier
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- [N53] Conception de traducteurs et techniques multi-éléments optimisés pour le contrôle non destructif ultrasonore.
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XI. Autres manifestations (séminaires, ...) (tous par D. Lesselier sauf si précisé)

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- [S2] Inverse problems. Modelization and numerical techniques.
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- [S3] Inverse problems. Imaging of inhomogeneous media.
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- [S30] On low-frequency electromagnetic scattering by simple bodies in conductive medium, and extensions to subsurface probing.
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- [S37] Electromagnetic modeling and imaging of anisotropic media: a short guided tour.
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- [S39] MUSIC-type imaging from asymptotic field formulations in 2-D and 3-D full Maxwell systems with additional examples.
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- [S40] A recap on Non-Destructive Testing: whys and hows!
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- [S41] Eddy-current non-destructive testing: towards efficient modeling and simulation of interactions with damaged metal structures.
K. Papis, R. Miorelli, C. Reboud, T. Skarlatos, D. Lesselier, with thanks to T. Theodoulidis,
- [S42] Electromagnetic scattering by anisotropic laminates, from computational modeling to imaging and inversion.
P.-P. Ding, G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier
- [S43] On novel imaging and inversion modalities involving sparsity as an implicit or explicit prior.
H. Tu, H. Zaimaga, M. Tivnan, S. Gdoura, M. Lambert, D. Lesselier

- [S44] Electromagnetic scattering by fiber-reinforced, periodically-structured planar layers as a preliminary to imaging.
C. Y. Li, Z. C. Liu, Y. Zhong, D. Lesselier
donné by C. Li
- [S45] Fast calculation of electromagnetic scattering in anisotropic multilayers and its inverse problem
P.-P. Ding, M. Lambert, D. Lesselier
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UESTC, Chengdu, oct. 2015.
- [S46] Imaging of damaged composites in a small-scale perspective.
D. Lesselier *et al.*
UESTC, Chengdu, juil. 2016.
- [S47] On electromagnetic modeling and imaging of defects in periodic fibered laminates: How to model the response of damaged laminates and image them with sparsity concepts.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Institut Fresnel, Marseille, mars 2017.
- [S48] Electromagnetic modeling and imaging of disorganized fiber-based laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Fudan University, Shanghai, juil. 2017.
- [S49] Electromagnetic modeling and imaging of disorganized fiber-based laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
National University of Singapore, Singapore, juil. 2017.
- [S50] Eddy-current non-destructive testing, sparse-grid surrogate model, Bayesian inversion, and model choice.
C. Cai, S. Bilicz, M. Lambert, T. Rodet, D. Lesselier
*A*STAR*, Singapore, juil. 2017.
- [S51] Eddy-current non-destructive testing, sparse-grid surrogate model, Bayesian inversion, and model choice.
C. Cai, S. Bilicz, M. Lambert, T. Rodet, D. Lesselier
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- [S52] Non-destructive Testing and Evaluation (NdT-NdE)
D. Lesselier *et al.*
Tsinghua University, Beijing, mai 2018.
- [S53+] Invité à *Northwestern Polytechnical University* et *Xidian University*, à Xi'an, fin octobre 2018, j'y ai donné, ainsi que à *Xi'an Jiaotong University*, une série de séminaires reprenant les grands thèmes précédents.
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XII. Rapports internes et autres

- [RI1] Experimental and numerical evaluation of an acoustical diffraction tomography technique in fluids.
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Paru en *Partie B, Chap. II-2, de la thèse d'Etat* de B. Duchêne, Caractérisation ultrasonore de milieux fluides inhomogènes. Application au diagnostic et à l'imagerie, mars 1986.
- [RI2] Quelques compléments : impédigraphie et diagnostic optimal.
D. Lesselier, R. de Oliveira Bohbot

Paru en *Partie IV.3, de la thèse de Docteur en Sciences* de R. de Oliveira Bohbot, Caractérisation exacte et approchée de milieux stratifiés plans à l'aide de sources acoustiques. Application au diagnostic du fond sous-marin. déc. 1990.

- [R13] Uniqueness and complete families for an acoustic waveguide problem.
T. S. Angell et R. E. Kleinman, C. Rozier et D. Lesselier
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Notons : Problèmes inverses de diffraction des ondes, D. Lesselier, Contribution invitée, *Dossier de Presse*, **5**, XXVème Assemblée Générale de l'URSI, Lille, août-sept. 1996.
