

D. LESSELIER - Dissémination académique (au 20/12/2018)

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.
- [A20] Contribution à l'imagerie ultrasonore quantitative.
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.
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- [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.
- [A30] A diffraction tomographic algorithm for eddy current imaging from anomalous fields at fictitious imaginary frequencies.
R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
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- [A31] On inverse source method of solving inverse scattering problems.
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- [A32] On the retrieval of the plane wave reflection coefficient of a seabed in shallow water.
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Acta Acustica **3**, 3, 243-249, juin 1995.
- [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.
C. Rozier, D. Lesselier,
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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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- [A37] Shape retrieval of a cylindrical obstacle immersed in shallow water from single-frequency farfields using a complete family method.
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
Inverse Problems **14**, 3, 685-706, juin 1998 (et *Preprint Series IMA* # 1531, fév. 1998)
- [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
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- 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 PICO'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.

M. Lambert, D. Lesselier,
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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.
G. Perrusson, D. Lesselier et M. Lambert, B. Bourgeois, A. Charalambopoulos et G. Dassios
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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.
D. Dos Reis, M. Lambert, D. Lesselier
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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- [A56] On a dyadic-based approach of the three-dimensional electromagnetic field in a conductive cylinder at eddy-current frequencies.

G. Micolau, G. Pichenot, D. Premel, D. Lesselier, M. Lambert
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- [A57] Modélisation de sonde courants de Foucault avec noyau ferromagnétique
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Journal of Electromagnetic Waves and Applications, et Book PIER Series **49**, 87-111, 2004.
- [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
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- (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
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- [A67] Development and validation of a 3D model dedicated to eddy current non destructive testing of tubes by encircling probes.

C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
International Journal on Applied Electromagnetics and Mechanics **25**, 1-4, 313-317, 2007.

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E. Iakovleva, S. Gdoura, D. Lesselier, G. Perrusson
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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- [A71] Hybridization of volumetric and surface models for the T/R EC probe response due to a thin opening.
L. Maurice, D. Prémel, J. Pavo, D. Lesselier, A. Nicolas
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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
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- [A75] Low-frequency electromagnetic characterization of buried obstacles by differential evolution with strategy of communication between groups and multi-resolution.
A. Bréard, G. Perrusson, D. Lesselier
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
A. Bréard, G. Perrusson, D. Lesselier
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- [A79] A multi-resolution technique based on shape optimization for the reconstruction of homogeneous dielectric objects.
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Inverse Problems **25**, 1, Article 015009 (26 pp), 2009 (online, nov. 2008)

- [A80] Low-frequency scattering from perfectly conducting spheroidal bodies in a conductive medium with magnetic dipole excitation.
P. Vafeas, G. Perrusson, D. Lesselier
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- [A81] MUSIC-type imaging of a thin penetrable inclusion from its multi-static response matrix.
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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
ESAIM: Proceedings **26**, 123-134, avril 2009.
- [A83] Reconstruction of thin electromagnetic inclusions by a level set method.
W. K. Park, D. Lesselier
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- [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).
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IEEE Transactions on Geoscience and Remote Sensing **48**, 2330-2342, 2010 (on line, fév. 2010).
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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.
B. Puel, D. Lesselier, S. Chatillon, P. Calmon,
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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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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.
R. Miorelli, C. Reboud, T. Theodoulidis, N. Poulakis, D. Lesselier
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- [A98] Localization of metal targets by time reversal of electromagnetic waves - 3D-numerical and experimental study
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- [A99] Electromagnetic response of anisotropic laminates to distributed sources.
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R. Miorelli, C. Reboud, T. Theodoulidis, J. Martinos, N. Poulakis, D. Lesselier
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— articles de diffusion de l'information scientifique (avec comité de lecture) (tous sur invitation)

- [AD1] Tomographie ultrasonore par diffraction et diagnostic médical.
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- [E3] D. Lesselier et J. Bowler, Co-Editeurs Hôtes, Section Spéciale sur pré-sélection, *Electromagnetic and Ultrasonic Nondestructive Evaluation*, du journal *Inverse Problems*, vol. 18, no. 6, pp. 1733-1958, déc. 2002.

(12 des articles, contribués sur invitation, ont au final été sélectionnés après lecture et adjudication.)

- [E4] D. Prémel, T. Sollier, D. Lesselier, Co-Editeurs, *Electromagnetic Non-Destructive Evaluation (VIII)*, Studies in Applied Electromagnetics and Mechanics **24**, Amsterdam, IOS Press, 296 pp., 2004.
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- [E7] O. Dorn et D. Lesselier, Co-Editeurs Hôtes, Section Spéciale sur contribution, *Electromagnetic Inverse Problems: Emerging Methods and Novel Applications*, du journal *Inverse Problems*, date de

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(16 des articles, contribués sur sollicitation et appel à contribution, ont au final été sélectionnés après lecture et adjudication, et ils constituent le numéro entier de juillet 2010.)

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[E11] D. Lesselier, C. Reboud, éditeurs, *Electromagnetic Non-Destructive Evaluation (XXI)*, in Series "Studies in Applied Electromagnetics and Mechanics", Volume 43, Open Access, IOS Press e-book, <http://ebooks.iospress.nl/volume/electromagnetic-non-destructive-evaluation-xxi>

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IV Chapitres d'ouvrages avec comité de lecture

[LC1] Buried, 2-D penetrable objects illuminated by line-sources: FFT-based iterative computations of the anomalous field.
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Application of Conjugate Gradient Methods to Electromagnetics and Signal Analysis, 400-438, T. K. Sarkar ed., PIER Series 5, Elsevier, New York, 1991. (Disponible on-line, <http://www.jpier.org/PIER/>)
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[LC2] Wavefield inversion of objects in stratified environments. From backpropagation schemes to full solutions.
D. Lesselier, B. Duchêne
Review of Radio Science 1993-1996, 235-268, R. Stone ed.-in-Chief, Oxford University Press, Oxford, 1996.

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- [LC3] Identification d'objets ou de milieux par inversion de signaux acoustiques ou électromagnétiques.
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- [LC5] On the characterization of objects in shallow water using rigorous inversion methods.
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- [LC6] Eddy current scattering and inverse scattering, Green's integral and variational formulations.
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- [LC10] Level set methods for structural inversion and image reconstruction
O. Dorn, D. Lesselier
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V Contributions d'actes de congrès édités ¹

¹ Certaines pourraient sans question être considérées *bona fide* comme des chapitres de livre, mais, dans la mesure où il y a congrès à l'origine, je les note en actes édités.

- [La1] Imaging inhomogeneous media by diffraction tomography techniques. Critical examination and prospects.
D. Lesselier, B. Duchêne, W. Tabbara
Inverse Problems: an Interdisciplinary Study, 35-49, P. C. Sabatier ed., Advances in Electronics and Electron. Physics, Suppl. 19, Academic Press, Londres, 1987.
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- [La2] Electromagnetic probing from boreholes. Comparison of exact and approximate methods.
W. Tabbara, D. Lesselier, H. Galan-Malaga
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- [La4] Probing one-dimensional inhomogeneous media: how can it be done ?
D. Lesselier, W. Tabbara
Electromagnetic and Acoustic Scattering: Detection and Inverse Problem, 303-316, C. Bourrely et P. Chiappetta eds., World Scientific, Singapour, 1989.
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- [La5] Computation of electromagnetic field diffracted by an inhomogeneity in metal: a first step in magnetic imaging.
R. Zorgati, A. Bernard et F. Pons, B. Duchêne, D. Lesselier et W. Tabbara
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L. Chommeloux, B. Duchêne, C. Pichot, D. Lesselier, W. Tabbara, J.-C. Bolomey
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- [La8] On the eddy current imaging of defects in a conductive half-space.
R. de Oliveira Bohbot, B. Duchêne, D. Lesselier, N. Coutanceau
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- [La9] Eddy current imaging of defects in a conductive half-space as an inverse wave scattering problem: recent algorithmic advances
D. Lesselier, R. de Oliveira Bohbot, B. Duchêne, C. Rozier, F. Brouaye, M. Lefebure
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- [La10] Eddy current characterization of 3-D bounded defects in metal tubes using a wavefield integral formulation modeling.
V. Monebhurrn, B. Duchêne, et D. Lesselier, R. Zorgati
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- [La14] Location and reconstruction of objects using a modified gradient approach.
R. E. Kleinman et P. M. Van den Berg, B. Duchêne et D. Lesselier
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A. Litman et D. Lesselier, F. Santosa
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- [La17] The inversion of objects buried in a layered embedding: the outline of a multi-pronged investigation.
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- [La18] INES: 3D eddy current imaging for a nondestructive evaluation system applied to steam generator tubes.
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- [La20] Eddy current nondestructive evaluation of a 3-D bounded defect in a metal tube using volume integral methods and nonlinearized inversion schemes.
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- [La23] 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
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- [La24] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
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- [La26] On the controlled evolution of level sets and like methods: the shape and contrast reconstruction
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- [La27] Low-frequency electromagnetic modeling and retrieval of simple orebodies in a conductive Earth.
G. Perrusson et D. Lesselier, P. Vafeas, G. Kamvyssas et G. Dassios.

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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 EXplore, 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 EXplore, 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 EXplore, 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.
- [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.
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**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. Monebhurrun, 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
Conférence 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. Monebhurrin, 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. Monebhurrin, 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.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
16th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'11), Madras/Chennai, mars 2011.
(Développé/soumis en réf. [La49])
- [Ce42] On a novel computational scheme of dyadic Green's functions of electrically-uniaxial planar layered composites.
Y. Zhong, X. Chen, M. Lambert, D. Lesselier
15th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2011), Naples, sept. 2011.
(Développé/publié en réf. [La47])
- [Ce43] On a new stable modeling of the dyadic Green's functions of an electrically uniaxial planar-layered medium and applications.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen

Contribution invitée, 2011 *International Conference on Electromagnetics in Advanced Applications (ICEAA'11)*, Turin, sept. 2011.
(Développé/publié en réf. [La48])

- [Ce44] Electromagnetic time reversal and scattering by a small dielectric inclusion.
S. Gdoura, A. Wahab, D. Lesselier
NCMIP 2012, *Second International Workshop on New Computational Methods for Inverse Problems*, Cachan, mai 2012.
(Développé/publié en réf. [A95])
- [Ce45] ECT simulation of complex narrow cracks in planar multi-layered structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis,
17th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'12), Rio de Janeiro, juillet 2012.
(Développé/publié en réf. [La52])
- [Ce46] BEM modeling for ECT simulation of complex narrow cracks in multilayered structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
Review of Progress in Quantitative Nondestructive Evaluation, Denver, juil. 2012. Proc. CD-ROM, 4 pp.
(Développé/publié en réf. [La50])
- [Ce47] Comparison of two modeling approaches of eddy current industrial non-destructive testing of steel pipes.
A. Trillon, F. Deneuville, C. Reboud, F. Foucher, D. Lesselier, L. Maurice
Review of Progress in Quantitative Nondestructive Evaluation, incorporating the 10th International Conference on Barkhausen Noise and Micromagnetic Testing, Baltimore, juil. 2013. Proc. CD-ROM, 4 pp.
(Développé/publié en réf. [La51])
- [Ce48] Fast calculation of electromagnetic scattering in anisotropic multilayers and its inverse problem.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
Contribution invitée, *19th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'14)*, Xi'an, juin 2014.
(Développé/publié en réf. [La53])
- [Ce49] Eddy-current inspection modelling of a thin crack emanating from a borehole in a conducting plate.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
19th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'14), Xi'an, juin 2014.
(N'a pas été publié dans les proceedings IOS Press de par des raisons techniques indépendantes de notre volonté)
- [Ce50] A fast integral equation model with a dedicated Green's kernel for eddy-current inspection of fastener holes in driver pickup mode.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
Review of Progress in Quantitative Nondestructive Evaluation, Boise, juil. 2014.
Proc. CD-ROM, 4 pp.
(Développé/publié en réf. [La54])
- [Ce51] MUSIC imaging method for low-high frequency inspection of composite multi-layers.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
Review of Progress in Quantitative Nondestructive Evaluation, Boise, juil. 2014.
Proc. CD-ROM, 4 pp. (Développé/publié en réf. [La55])
- [Ce52] Electromagnetic modeling of a periodic array of fibers embedded in a panel with single fiber missing.

Z. Liu, C. Li, D. Lesselier, Y. Zhong
20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'15), Sendai, sept. 2015.
Proc. paper OS7-4, pp. 80-81.
(Développé/publié en réf. [La57])

[Ce53] Impedance of an induction coil accounting for the end-effect in eddy current inspection of steam generator tubes.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'15), Sendai, sept. 2015.
Proc. paper PS-18, pp. 115-116.
(Développé/publié en réf. [La58])

[Ce54] On inverse scattering and imaging solutions for objects buried within uniaxially anisotropic media.
D. Lesselier, P.-P. Ding, G. Rodeghiero, M. Lambert, Y. Zhong
Contribution invitée, *15th Mediterranean Microwave Symposium (MMS2015)*, Lecce, déc. 2015.
(Développé/publié en réf. [La56])

[Ce55] Electromagnetic retrieval of missing fibers in periodic fibered laminates via sparsity concepts.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
EUSIPCO 2016, Budapest, août 2016.
(Développé/publié en réf. [La59])

[Ce56] Fast models dedicated to simulation of eddy current thermography.
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
22st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2017), Saclay, sept. 2017.
(*A. Ratsakou a reçu, avec son poster, le troisième prix de ENDE*)
(Développé/publié en réf. [La60])

[Ce57] Fast simulation approach dedicated to infrared thermographic inspection of delaminated planar pieces
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
45th Annual Review of Progress in Quantitative Nondestructive Evaluation, Burlington, juil. 2018
Texte étendu soumis en [Las61]

[Ce58] Semi-analytical modelling of induction thermography for inspection of delaminated planar pieces
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
23th International Workshop on Electromagnetic Non-Destructive Evaluation, Detroit, sept. 2018.
Texte étendu soumis en [Las62]

VIII Rapports de contrat : ceux-ci, de par leur nature spécifique, ne sont pas listés ici.

IX Brevet(s)

[B1] Perfectionnements apportés à un dispositif correcteur d'efficacité pour appareil d'échantillonnage de signaux.
D. Brunol, P. Combes, J. Garnault, D. Lesselier, J. L. Petit, F. Papat
Anvar n°76.23.679, Brevet en France, août 1976.

(Ce brevet, sur travaux conduits lors de mon stage de 2^e année d'Ecole, n'a pas connu de développement industriel.)

- [B2] Procédé et dispositif de détection et de caractérisation d'un élément réflecteur dans un objet.
P. Brédif, E. Iakovleva, D. Lesselier, O. Roy, K. Sy
no. 01659860, Brevet déposé 12/10/2016.
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**X Communications à des colloques nationaux/internationaux/ sans actes/actes à diffusion restreinte
(Certaines ont fait l'objet ultérieur d'actes édités, référés en [La...])**

- [N1] Méthodes numériques pour la diffraction inverse.
J.-C. Bolomey, C. Durix, D. Lesselier, W. Tabbara
Journées de Diffraction Inverse, Marseille, avril 1976.
- [N2] Pénétration d'impulsions électromagnétiques dans une lame inhomogène et dispersive.
J.-C. Bolomey, C. Durix, D. Lesselier
Journée d'Etudes SEE : Méthodes Numériques en Protection Electromagnétique, Gif-sur-Yvette,
nov. 1977.
- [N3] Caractérisation temporelle d'une structure électromagnétique stratifiée.
J.-C. Bolomey, C. Durix, D. Lesselier, W. Tabbara
*Ecole d'Eté du Trégor : Théorie et pratique des mesures temporelles; application à la
caractérisation des matériaux, dispositifs et systèmes*, CNET, Le Trégor, juil. 1978.
- [N4] Approximations physiques dans les problèmes inverses: diagnostic acoustique et électromagnétique
de coquilles cylindriques.
J.-C. Bolomey, B. Duchêne, D. Lesselier, C. Pichot, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1981.
- [N5] 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
Journées Problèmes Inverses et Applications, CNRS-LCPC, Paris, janv. 1983.
Recueil des Journées, 28-30.
- [N6] Diagnostic d'un milieu stratifié au moyen d'un dipôle magnétique.
D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1983.
- [N7] Contribution à l'analyse de la tomographie ultrasonore par diffraction.
B. Duchêne, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1984.
- [N8] Contribution à l'imagerie ultrasonore quantitative.
B. Duchêne, D. Lesselier, W. Tabbara
2° Colloque sur la Diffusion des Ondes Ultrasonores, Univ. Paris-VII, Paris, déc. 1984.
- [N9] Experimental and numerical evaluation of an acoustical diffraction tomography technique in fluids.
D. Lesselier, B. Duchêne, W. Tabbara
Contribution invitée, *US-FRANCE Conference on Near-Field Microwave Imaging*, Georgia
Institute of Technology, Atlanta, juin 1985.
- [N10] Tomographie par diffraction appliquée à l'imagerie ultrasonore d'objets enfouis.
B. Duchêne, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1985.
- [N11] Imaging inhomogeneous media by diffraction tomography techniques. Critical examination and
prospects.
D. Lesselier, B. Duchêne, W. Tabbara

- Rencontre Interdisciplinaire Problèmes Inverses*, RCP 264, Montpellier, déc. 1986.
(Développé/publié en réf. [La1].)
- [N12] Electromagnetic probing from boreholes. Comparison of exact and approximate methods.
W. Tabbara, D. Lesselier, H. Galan-Malaga
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1986.
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- [N13] Logging invaded boreholes. Approximate solutions.
D. Lesselier, H. Galan-Malaga, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1987.
- [N14] Imagerie acoustique d'objets enterrés.
B. Duchêne, D. Lesselier, W. Tabbara
Colloque Diffusion Electromagnétique et Acoustique. Détection et Problème Inverse, marseille, mai 1988.
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- [N15] Caractérisation de milieux stratifiés plans: bilan et perspectives. Application au diagnostic du fond marin.
D. Lesselier, W. Tabbara
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(Développé/publié en réf. [La4].)
- [N16] Caractérisation d'un fond marin par des méthodes exactes et approchées.
R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1989.
(Développé/publié en réf. [La6].)
- [N17] Méthodes de calcul pour la diffraction par des corps cylindriques.
V. Gérard, D. Lesselier, F. Molinet
Atelier Section efficace radar de corps parfaitement conducteurs ou recouverts, Journées Internationales sur les Antennes, Nice, nov. 1990.
- [N18] Caractérisation acoustique de milieux stratifiés plans. Application au diagnostic du fond marin.
R. De Oliveira-Bohbot, D. Lesselier
Réunion Groupe d'Etudes sur la Propagation Acoustique, Bordeaux, déc. 1990.
- [N19] Inversion de défauts de conductivité dans des matériaux métalliques. Tomographie par diffraction et inversion généralisée.
B. Duchêne, D. Lesselier et R. de Oliveira Bohbot, R. Zorgati, F. Pons et N. Coutanceau
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1991.
- [N20] Imagerie qualitative et quantitative de défauts affectant un demi-espace homogène. Applications au contrôle non destructif en ultrasons, microondes et courants de Foucault.
D. Lesselier, C. Pichot
Séminaire Intern. Problèmes Inverses en Electromagnétisme, Toulouse, nov. 1992.
- [N21] Caractérisation acoustique de milieux stratifiés plans. Application au diagnostic du fond marin.
D. Lesselier, M. Lambert, R. de Oliveira Bohbot, C. Rozier, W. Tabbara
Réunion Groupe d'Etudes sur la Propagation Acoustique, Lyon, sept. 1995.
- [N22] The inversion of buried structures in a nonlinearized wavefield framework.
Contribution collective invitée présentée par D. Lesselier, *1st EMSL User Workshop*, Ispra, avril 1996.
(Développé/publié en réf. [La17].)

- [N23] On the inversion of binary objects in a nonlinearized wavefield framework.
B. Duchêne, M. Lambert, D. Lesselier, A. Litman, V. Monebhurrn, C. Rozier, et L. Souriau, T. S. Angell et R. E. Kleinman, F. Santosa
Contribution collective invitée présentée par D. Lesselier
3ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique, Clermont-Ferrand, juin 1997.
- [N24] The modified gradient algorithm in three-dimensional inverse scattering with multi-frequency data.
R. E. Kleinman, P. M. Van den Berg, D. Lesselier et B. Duchêne
Contribution invitée, *3ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique*, Clermont-Ferrand, juin 1997.
- [N25] Inversion d'objets binaires en courants de Foucault dans un formalisme d'ondes. Application au contrôle de plaques et de tubes
V. Monebhurrn, A. Litman, D. Lesselier, B. Duchêne
Contribution invitée, *Les Ateliers de la Recherche EDF*, Clamart, nov. 1997.
- [N26] Integral methods and nonlinearized inversion of buried obstacles.
M. Lambert, D. Lesselier
Contribution invitée, *4ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique*, Clermont-Ferrand, mai 1999.
- [N27] Shape reconstruction by controlled evolution of a level set: from a min-max formulation to numerical experimentation.
C. Ramanajaona, M. Lambert et D. Lesselier, J.-P. Zolésio
RCP-264: Inverse Problems and Nonlinearity, Montpellier, juin 2000.
- [N28] On the characterization of 2-D buried obstacles by nonlinearized wavefield inversions.
M. Lambert, D. Lesselier
Contribution invitée, *RCP-264: Inverse Problems and Nonlinearity*, Montpellier, juin 2000.
- [N29] On the retrieval of a binary object using a fixed-point method.
C. Ramanajaona, M. Lambert et D. Lesselier, J.-P. Zolésio
Conference on Applied Inverse Problems: Theoretical and Computational Aspects, Montecatini Terme, juin 2001.
- [N30] Problèmes inverses : état de l'art.
D. Lesselier, M. Lambert, G. Perrusson
Contribution invitée, *Journées Scientifiques CNFRS, Interaction du champ électromagnétique avec l'environnement*, Paris, fév. 2005.
- [N31] Imagerie électromagnétique MUSIC d'une collection de petites inclusions 3-D.
E. Iakovleva, D. Lesselier et G. Perrusson, H. Ammari
Réunion Générale Interférences d'Ondes, GDR ONDES, Besançon, nov. 2005
- [N32] Caractérisations de familles d'inclusions en électromagnétisme 3D. Points clés et perspectives.
E. Iakovleva, D. Lesselier et G. Perrusson, H. Ammari
Contribution invitée, *Journée Thématique Diffusion Multiple, GDR ONDES-GDR ULTRASONS*, Gif-sur-Yvette, fév. 2006
- [N33] 3-D electromagnetic inverse scattering methodologies with emphasis on the retrieval of small objects.
E. Iakovleva, D. Lesselier, G. Perrusson, et S. Gdoura, H. Ammari
Contribution invitée, *2nd Workshop on Advanced Computational Electromagnetics*, Gand, mai 2006
- [N34] On level set methods for inverse scattering.

D. Lesselier, O. Dorn

Contribution invitée, Scattering Theory and Related Problems, Conference at the occasion of the 60th birthday of Professor George Dassios, Patras, août 2006.

- [N35] Low-frequency interaction of magnetic dipoles and perfectly conducting ellipsoidal bodies in a conductive medium.
P. Vafeas, G. Perrusson, D. Lesselier
Scattering Theory and Related Problems, Conference at the occasion of the 60th birthday of Professor George Dassios, Patras, août 2006.
- [N36] Sur l'imagerie électromagnétique MUSIC de petites inclusions volumétriques enfouies dans un demi-espace.
S. Gdoura, E. Iakovleva, D. Lesselier, et G. Perrusson,
Journée thématique Retournement Temporel, GDR ONDES - GDR IMCODE, Paris, janv. 2007.
- [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.
A. Breard, G. Perrusson, D. Lesselier
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [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
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N39] Localisation et caractérisation de défauts simples dans les cristaux photoniques de dimension finie.
J.-P. Groby, D. Lesselier, H. Ammari
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N40] Modélisation d'inspection des tubes ferromagnétiques par une approche d'intégrale de volume.
A. Skarlatos, G. Pichenot, M. Lambert, D. Lesselier, B. Duchêne
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N41] Modélisation d'inspection des tubes ferromagnétiques avec CIVA par une approche en intégrale de volume.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne
Journée thématique Contrôle non destructif par courants de Foucault : de la mesure à l'imagerie, GDR ONDES – COFREND, Paris, janv. 2008.
- [N42] Localisation et caractérisation de défauts simples dans un cristal photonique 2D de dimension finie.
J-P. Groby, D. Lesselier
3ème édition des journées d'Imagerie Optique Non-Conventionnelle (GDR ONDES-GDR ISIS-SFO-EEA), Paris, mars 2008.
- [N43] Fissures minces et la faisabilité de leur imagerie électromagnétique non-itérative.
W. K. Park, D. Lesselier
Journée thématique Imagerie non-itérative, GDR ONDES, Paris, déc. 2008
- [N44] Adaptive database and eddy current testing.
G. Franceschini, M. Lambert, D. Lesselier
DIGITEO FORUM, Gif-sur-Yvette, oct. 2008.
- [N45] Non-iterative imaging of electromagnetic thin inclusions.
W. K. Park, D. Lesselier, H. Ammari
DIGITEO FORUM, Gif-sur-Yvette, oct. 2008.

- [N46] Tomorrow's R&D in electromagnetic and elastic nondestructive testing.
D. Lesselier, A. Le Brun
Contribution invitée, DIGITEO FORUM, Paris, oct. 2008.
- [N47] MUSIC-Type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, S. Gdoura, G. Perrusson, W.-K. Park
Contribution invitée, Workshop Imaging Microstructures-Mathematical and Computational Challenges, Paris, juin 2008.
- [N48] On the level-set evolution of thin electromagnetic screens in the wave propagation regime.
W.-K. Park and D. Lesselier
Proc. Workshop on Electromagnetic Inverse Problems, School of Mathematics, Univ. Manchester, juin 2009.
- [N49] Utilisation de méthodes d'optimisation appliquées au contrôle non destructif.
R. Douvenot, M. Lambert, D. Lesselier
OPTIMEO, Gif-sur-Yvette; oct. 2009.
- [N50] CAPVERS : Conception de capteurs et de techniques CND par méthodes inverses.
B. Puel, D. Lesselier, S. Chatillon
DIGITEO FORUM, Palaiseau, oct. 2009.
- [N51] Méthodes d'inversion utilisant des bases de données séquentielles appliquées au CND par Courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
DIGITEO FORUM, Palaiseau, oct. 2009.
- [N52] Bases de données séquentielles et méthodes inverses appliquées au CND par courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Paris, nov. 2009
Proc. en téléchargement sur le site web du GDR ONDES
- [N53] Conception de traducteurs et techniques multi-éléments optimisés pour le contrôle non destructif ultrasonore.
B. Puel, S. Chatillon, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Paris, nov. 2009.
Proc. en téléchargement sur le site web du GDR ONDES
- [N54] Sur une imagerie électromagnétique rapide d'écrans minces en demi-espace affecté d'inclusions aléatoires.
D. Lesselier, W.-K. Park
Manipulation spatiale et temporelle des ondes pour l'imagerie - Journées thématiques GDR ONDES, Marseille, mai 2010.
- [N55] Dyadic Green's functions of planar-layered anisotropic composites and applications from eddy currents to microwaves.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N56] Modélisation du contrôle non-destructif par courants de Foucault d'entailles de très faible ouverture.
R. Miorelli, C. Reboud, T. Theodoulidis, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES

- [N57] Localisation d'obstacles tridimensionnels par retournement temporel d'ondes électromagnétiques et cartographie de l'énergie.
M. Benhamouche, M. Serhir, L. Bernard, L. Pichon, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N58] Optimisation particulière par métamodèle appliquée au CND par courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N59] On a preliminary analysis of the electromagnetic small-scale modeling of composite panels: periodic arrangement of circular cylindrical fibers.
C. Li, D. Lesselier
Journées Scientifiques, URSI France, L'électromagnétisme, 150 - 1, une science en pleine action, Paris, mars 2013.
- [N60] An efficient interpolation for calculation of the response of composite layered material and its implementation in MUSIC imaging
G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013
Proc. en téléchargement sur le site web du GDR ONDES
- [N61] Electromagnetic small-scale modeling of composite panels
C.Y. Li, D. Lesselier, Y. Zhong, M. Lambert
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013.
Proc. en téléchargement sur le site web du GDR ONDES
- [N62] On the electromagnetic modeling of anisotropic panels.
Y. Zhong, P. Ding, G. Rodeghiero, M. Lambert, D. Lesselier, X. Chen, C. Li
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013.
Proc. en téléchargement sur le site web du GDR ONDES
- [N63] Développement de méthodes de caractérisation de défauts plans basées sur les reconstructions FTP.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy
Réunion Générale Interférences d'Ondes, GDR ONDES, Lyon, oct. 2015.
- [N64] Nondestructive testing of fiber array with multiple missing fibers.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
Réunion Générale Interférences d'Ondes, GDR ONDES, Lyon, oct. 2015.
- [N65] Nondestructive testing of fiber array with multiple missing fibers.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
2ème Edition des Doctoriales de la COFREND, Marne-la-Vallée, nov. 2016.
- [N66] On Electromagnetic modeling and imaging of defects in periodic fibered laminates
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Contribution invitée, Réunion Générale Interférences d'Ondes, GDR ONDES, Nice Sophia Antipolis, nov. 2017.
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XI. Autres manifestations (séminaires, ...) (tous par D. Lesselier sauf si précisé)

- [S1] Inverse scattering: optimization techniques.
D. Lesselier

Séminaire sur les méthodes de calcul modernes en électromagnétisme, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1984.

- [S2] Inverse problems. Modelization and numerical techniques.
W. Tabbara, D. Lesselier
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Sect. Française, Gif-sur-Yvette, sept. 1986. (Actes, 8, 1, 1-8.)
- [S3] Inverse problems. Imaging of inhomogeneous media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986. (Actes, 8, 2,1-5.)
- [S4] Inverse problems. Characterization of stratified media.
D. Lesselier, W. Tabbara
Conférence invitée, *Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging*, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S5] Inverse problems. Characterization of stratified media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S6] Inverse problems. Modelization and numerical techniques.
W. Tabbara, D. Lesselier
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S7] Inverse problems. Imaging of inhomogeneous media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S8] Recent advances and critical issues in imaging and sounding.
D. Lesselier
IEEE San Diego Section, Monthly Meeting, San Diego, juin 1987.
- [S9] Electromagnetic and acoustic applications of diffraction tomography.
B. Duchêne, D. Lesselier, W. Tabbara
Ecole CEA-EDF-INRIA Problèmes Inverses, Rocquencourt, mars 1990.
- [S10] Caractérisation acoustique de milieux stratifiés plans : application au fond marin.
D. Lesselier
Séminaire INRIA (projets Ident, etc.), Rocquencourt, mars 1991.
- [S11] Eddy current nondestructive testing in a wave scattering framework.
D. Lesselier, B. Duchêne
Séminaire IzfP, Sarrebrück, Allemagne, fév. 1994.
- [S12] Sur les problèmes inverses de diffraction des ondes et leurs applications à l'évaluation non-destructive de structures.
D. Lesselier, B. Duchêne
Séminaire LMA, Marseille, France, oct. 1994.
- [S13] Wavefield inversion of objects embedded in layered media using aspect-limited data; from backpropagation schemes to nonlinearized solutions.
D. Lesselier, B. Duchêne, L. Souriau, A. Litman, C. Rozier, V. Monebhurrin

Ecole des Ondes INRIA Problèmes Inverses et Propagation d'Ondes, Rocquencourt, nov. 1995.

- [S14] Problèmes inverses des ondes : reconstruction d'objets binaires enfouis en milieux stratifiés.
D. Lesselier
Observatoire Français des Techniques Avancées (OFTA), Paris, sept. 1997.
- [S15] On some novel wavefield inversion methods applied to binary objects.
D. Lesselier
Department of Mathematics, University of Delaware, Newark, oct. 1997.
- [S16] Novel algorithms for wavefield inversion with emphasis on eddy current nondestructive evaluation.
D. Lesselier
INFM - Université Federico II, Naples, sept. 1998.
- [S17] Méthodes intégrales et inversion nonlinéarisée d'objets enfouis.
M. Lambert, D. Lesselier
Séminaire INRIA (projets Ident, etc.), Rocquencourt, juin 1999.
- [S18] Problèmes inverses des ondes en régime diffusif.
Contribution collective présentée par D. Lesselier, avec les apports particuliers doctoraux ou post-doctoraux de G. Perrusson, V. Monebhurrin et V. Bertrand
Séminaire INRIA (projets Ident.), Rocquencourt, oct. 1999.
- [S19] Sur la reconstruction non-linéarisée du contour d'un objet cylindrique de paramètres électriques prescrits par l'utilisateur.
C. Ramananjaona, M. Lambert, D. Lesselier, J.-P. Zolésio
Séminaire Ecole Polytechnique (Centre de Mathématiques Appliquées), Palaiseau, avril 2001.
- [S20] Problèmes inverses des ondes et géosciences.
D. Lesselier
Schlumberger-Riboud Center Clamart, mai 2002.
- [S21] Méthodologies approchées pour la modélisation du CND CF et problèmes inverses.
D. Lesselier, M. Lambert
Journée courants de Foucault et CND (COFREND), Clamart, oct. 2004.
- [S22] On the MUSIC-type electromagnetic imaging of a collection of small 3-D bounded inclusions.
D. Lesselier, E. Iakovleva, H. Ammari, G. Perrusson
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S23] Modeling and inversion of ellipsoid-like objects in the diffusive regime using low-frequency scattering approaches and Born-extended hybrids.
G. Perrusson, D. Lesselier
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S24] Integral methods and non-linearized inversion of buried obstacles.
M. Lambert, D. Lesselier
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S25] 3-D electromagnetics, asymptotic models and MUSIC-type imaging of a collection of small scatterers.
D. Lesselier (travail conjoint avec E. Iakovleva, H. Ammari, S. Gdoura, G. Perrusson)
Schlumberger Doll Research, Ridgefield, mars 2006.
- [S26] Level-set methods and 3D geophysical applications.
O. Dorn, D. Lesselier
Schlumberger Doll Research, Ridgefield, mars 2006.

- [S27] MUSIC-type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, « pour illustrer un ensemble de travaux coopératifs sur la thématique conduit avec H. Ammari, P. C. Chaumet, S. Gdoura, E. Iakovleva, et G. Perrusson »
IHP Paris, janv. 2008.
- [S28] MUSIC-type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, « pour illustrer un ensemble de travaux coopératifs sur la thématique conduit avec H. Ammari, P. C. Chaumet, S. Gdoura, E. Iakovleva, et G. Perrusson »
Univ. Cergy Pontoise, sept. 2008.
- [S29] An introduction to Non-Destructive Evaluation (NDE) with adaptive databases as main illustration in eddy-current testing.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S30] On low-frequency electromagnetic scattering by simple bodies in conductive medium, and extensions to subsurface probing.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S31] MUSIC-type imaging from asymptotic formulations within the full Maxwell system and additional examples.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S32] Une combinaison de [S29] et [S31] a fait l'objet de [S32].
D. Lesselier *et al.*
University of Trento, nov. 2010.
- [S33] Modeling and simulation of electromagnetic interactions with complex 3-D structures, and application to the field of non-destructive testing.
D. Lesselier *et al.*
National University of Singapore, mars 2012.
- [S34] On non-destructive testing and evaluation and recent advances in electromagnetic modeling.
D. Lesselier *et al.*
Institute for Infocomm Research, Singapour, mars 2013.
- [S35] Broad-band electromagnetic small-scale modeling of periodically-composed laminates: a rigorous theoretical and numerical investigation.
D. Lesselier *et al.*
Xidian University, Xi'an, juin 2014
- [S36] Broad-band electromagnetic small-scale modeling of periodically-composed laminates: a rigorous theoretical and numerical investigation.
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.
- [S37] Electromagnetic modeling and imaging of anisotropic media: a short guided tour.
D. Lesselier *et al.*
Xidian University, Xi'an, juin 2014.
- [S38] Electromagnetic modeling and imaging of anisotropic media: a short guided tour.
D. Lesselier *et al.*

UESTC, Chengdu, juin 2014

- [S39] MUSIC-type imaging from asymptotic field formulations in 2-D and 3-D full Maxwell systems with additional examples.
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.
- [S40] A recap on Non-Destructive Testing: whys and hows!
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.

*Les séminaires S41 à S44 furent donnés à Singapour en août 2015 (NUS, TEMASEK LABS & NUS, IHPC A*STAR) :*

- [S41] Eddy-current non-destructive testing: towards efficient modeling and simulation of interactions with damaged metal structures.
K. Pipis, 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
donné by P.-P. Ding
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
Technical University of Denmark, Lyngby, nov. 2017.

- [S52] Non-destructive Testing and Evaluation (NdT-NdE)
D. Lesselier *et al.*
Tsinghua University, Beijing, mai 2018.

Invité à *Northwestern Polytechnical University* et *Xidian University*, à Xi'an, fin octobre 2018, j'y donnerai, ainsi que à *Xi'an Jiaotong University*, une série de séminaires, titres en attente.

XII. Rapports internes et autres

- [R11] Experimental and numerical evaluation of an acoustical diffraction tomography technique in fluids.
D. Lesselier, B. Duchêne, W. Tabbara
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.
- [R12] Quelques compléments : impédiographie 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
Rapport 96 du Center for the Mathematics of Waves, University of Delaware, Newark.

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.
