

Références :

- Adenis J. P., Robert P. Y., 1994. Décompression orbitaire selon la technique d'Olivari. *J. Fr. Ophtalmol.*, 17(1) : 686-691.
- Almeida E. S., Spilker R. L., 1997. Mixed and penalty finite element models for the non linear behavior of biphasic soft tissues in finite deformation: Part I – Alternate formulations. *CMBBE*, 1: 25-46.
- Audry F., 2002. Contribution à la caractérisation mécanique des tissus biologiques ; application à la graisse animale. Rapport de DEA en Génie Mécanique, Université Paul Sabatier, Toulouse 3.
- Bahn R. S., Garrity J. A., Gorman C. A., 1990. Diagnosis and management of Graves' ophthalmopathy (clinical review 13). *J. Clin. Endocrinol.Metab.*, 71(3): 559-563.
- Bartley G. B., Gorman C. A., 1995. Diagnostic criteria for Graves' ophthalmopathy. *Am. J. Ophthalmol.*, 119: 792-795.
- Bernardin D., 2003. Introduction à la rhéologie des fluides, approche macroscopique. Ecole de Printemps. GDR Matériaux Vitreux.
- Biot M. A., 1941. General theory of three-dimensional consolidation. *Journal of Applied Physics*, 12: 155-164.
- Biot M. A., 1972. Theory of finite deformations of porous solids. *Indiana Univers. Math. J.*, 21: 597-620.
- Bowen, 1980. Incompressible porous media models by use of the theory of mixtures. *Int. J. Eng. Science*, 18 : 1129-1148.
- Buchberger M., Mayr H., 2000. SEE-Kid: software engineering environment for knowledge-based interactive eye motility diagnostics. Proceedings of the Int. Symposium on Telemedicine, Gothenburg, Sweden.
- Burch H. B., Wartofsky L., 1993. Graves' ophthalmopathy: current concepts regarding pathogenesis and management. *Endocrine Review*, 14(6): 747-793.
- Cai Y., Chui C. K., Wang Y., Wang Z., Anderson J. H., 2002. Parametric model for interactive simulation of ophthalmologic surgery, Proceedings of MICCAI conference, 465-472.
- Campbell R.J., 1989. Immunology of Graves' ophthamopathy: retrobulbar histology and histochemistry. *Acta Endocrinologica*, 121 (Suppl. 2): 9-16.
- Cannan, S., Stephenson, M., Blacker, T., 1993. Optismoothing: an optimization-driven approach to mesh smoothing. *Finite Elements in Analysis and Design*, 13, pp. 185-190.
- Chabanas M., 2002. Modélisation de tissus mous de la face pour la chirurgie orthognathique assistée par ordinateur. Thèse de Sciences de l'Université Joseph Fourier, Grenoble 1.

- Chabanas M, Luboz V., Payan Y., 2003. Patient specific finite element model of the face for computer assisted maxillofacial surgery. *Medical Image Analysis (Media)*.
- Char D.H., 1996. Thyroid eye disease. *Br. J. Ophtalmol.*, 80: 922-926.
- Club Thyroïde, 1995. L'ophtalmopathie basedowienne. Compte rendu du 4eme Symposium du club thyroïde, Toronto.
- Cotin S., Delingette H. & Ayache N., 1999. Real-Time elastic deformations of soft tissues for surgery simulation. *IEEE Transactions Visualization and Computer Graphics*, 5(1), 62-73.
- Couteau B., Payan Y., Lavallée S., 2000. The mesh matching algorithm: an automatic 3D mesh generator for finite element structures. *J. Biomechanics*. 33(8): 1005-1009.
- Coussy O., 1991. Mécanique des milieux poreux. Technip Editions.
- Craveur J.C., 1996. Modélisation des structures: calcul par éléments finis. Masson.
- Dantzig G. B., 1990. Origins of the simplex method. In S G Nash (ed.), *A history of scientific computing*, 141-151.
- Delaunay B., 1934. Sur la sphère. *Izvestia Akademia Nauk SSSR*, VII Seria, Otdelenie Matematicheskii i Estestvennyka Nauk. 7: 793-800.
- Fatourechi V., Garrity J.A., Bartley G.B, 1994. Graves ophthalmopathy: results of transantral orbital decompression performed primarily for cosmetic indications. *Ophtalmology*, 101(5): 938-942.
- Feldon S. E., 1993. Management of Graves' ophthalmopathy with optic nerve involvement. *Mayo Clin. Proc.*, 68: 616-617.
- Forbes G., Gehring D. G., Gorman C.A., 1985. Volume measurements of normal orbital structures by computed tomographic analysis. *A. J. R.*, 149-154.
- Forbes G., Gorman C.A., Gehring D. G., 1993. Computer analysis of orbital fat and muscle volumes in Graves' ophthalmopathy. *A.J.N.R.*, 4: 737-740.
- Freitag, L.A., Plassmann, P., 1999. Local optimization-based simplicial mesh untangling and improvement. *ANL/MCS*, 39, pp. 749-756.
- Fung Y.C., 1993. *Biomechanics: Mechanical Properties of Living Tissues*. New York: Springer-Verlag.
- Garrity J.A., Fatourechi V., Bergstrahl E.J., 1993. Results of transantral orbital decompression in 428 patients with severe graves' ophthalmopathy. *Am. J. Ophthalmology*, 116(5): 553-547.
- Gas C., 1997. Prise en charge multi-disciplinaire des orbitopathies dysthyroïdiennes. Thèse de médecine de l'Université Paul Sabatier, Toulouse 3.

- Gellrich N. C., Schramm A., Ziselmann C., Hammer B., Schipper J., Schmelzeisen R., 2003. Computer-assisted orbital reconstruction – a new gold standard for complex reconstructive surgery. Proceedings of CASH conference, p. 60.
- George J.L., 1991. La prise en charge chirurgicale des orbitopathies basedowiennes. Rev. Franc. Endocrinol. Clin., 32 : 4-5.
- Germain P., Muller P., 1995. Introduction à la mécanique des milieux continus, Editions Masson.
- Gola R., 1995. Exophthalmie basedowienne : lipectomie ou expansion orbitaire ? Ann. Chir. Plast. Esthét., 40(1) : 31-45.
- Gola R., Carreau J. P., Faissal A., 1995. Le tissu graisseux de l'orbite (rappel anatomique, déductions thérapeutiques). Revue de stomatologie et de chirurgie maxillo-faciale, 96(3): 123-136.
- Gorman C. A., 1983. Temporal relationship between onset of Graves' ophthalmopathy and diagnosis of thyrotoxicosis. Mayo Clin. Proc., 58: 515-519.
- Gunther S., 1986. Die modellmassige beschreibung der augenmuskelwirkung. Diplomarbeit am Fachbereich Physik der Universität Hamburg, Deutschland.
- Hanna K. D., Jouve F. E., Waring G. O., Ciarlet P. G., 1989. Computer simulation of accurate keratotomy for astigmatism. Refractive and Corneal Surgery. 8: 152-163.
- Hartemann P., Leclere J., Bey P., 1986. Le traitement des ophtalmopathies thyroïdiennes par la radiothérapie orbitaire externe. Am. Endocrinol., 47 : 389-394.
- Holck D. E., Boyd E. M., Nguyen J., 1999. Benefits of stereolithography in orbital reconstruction. Ophthalmology, 106(6), 1214-1218.
- Holmes, 1986. Finite deformation of soft tissue : analysis of a mixture model in uniaxial compression. J. Biomech. Eng., 108: 372-381.
- Hullo A., 1989. Muscles oculo-moteurs. E.M.C, Ophtalmologie, 21-005-A-10.
- Jin H. R., Shin S. O., Choo M. J., Choi Y. S., 2000. Relationship between the extent of fracture and the degree of enophthalmos in isolated blowout fractures of the medial orbital wall. J. Oral Maxillofac. Surg., 58 : 617-621.
- Jorissen M., Feenstra L., 1992. Dysthyroid orbitopathy and orbital decompression : a review. Acta oto-rhino-laryngol. Belg., 46 : 303-309.
- Jost G., Vergnon L., Lafolle P., 1980. Etude anatomique de ma graisse orbitaire. A propos des constatations faites lors des blépharoplasties. Ann. Chir. Plast., 25(3) : 225-229.

- Lavallée S., Sautot P., Troccaz J., Cinquin P., Merloz P., 1995. Computer Assisted Spine Surgery: a technique for accurate transpedicular screw fixation using CT data and a 3D optical localizer. *J. Image Guided Surg.*, 1(1), 65-73.
- Lavallée S., 1996. Registration for Computer-Integrated Surgery: Methodology, State of the Art. In R. Taylor, S. Lavallée, G. Burdea & R. Mosges (Eds.), *Computer Integrated Surgery*. Cambridge, MA: MIT Press: 77-97.
- Lemke B. N., Shovlin J. P., 1994. Thyroid eye disease : orbital decompression. *Opht. Plast. Surg.*, 363-379.
- Li Z., Chui C. K., Cai Y., Amrith S., Goh P. S., Anderson J. H., Theo J., Liu C., Kusuma I., Nowinski W. L., 2002. Modeling of the human orbit from MR Images. Proceedings of the MICCAI conference. Springer-Verlag. 339-347.
- Lo S. H., 1991. Volume Discretization into tetrahedra – II. 3D triangulation by advancing front approach. *Computers and structures*, 39(5): 501-511.
- Luboz V., Couteau B., Payan Y., 2001A. 3D Finite element meshing of entire femora by using the mesh matching algorithm. In Proceedings of the Transactions of the 47th Annual Meeting of the Orthopaedic Research Society, p. 522. Transactions Editor, B. Stephen Trippel, Chicago, Illinois, USA.
- Luboz V., Payan Y., Swider P., Couteau B., 2001B. Automatic 3D Finite Element Mesh Generation: Data Fitting for an Atlas in Proceedings of the Fifth Int. Symposium on Computer Methods in Biomechanics and Biomedical Engineering, CMBBE.
- Luboz V., Pedrono A., Boutault F., Swider P., Payan Y., 2002. Simulation of the Exophthalmia Reduction using a Finite Element Model of the Orbital Soft Tissues. Proceedings of the Medical Image Computing and Computer Assisted Intervention Conference, MICCAI.
- Luboz V., Marécaux C., Pedrono A., Boutault F., Swider P., Payan Y., 2003. Computer aided orbital surgery for exophthalmia. Proceedings of CASH conference, p. 59.
- Luboz V., Estivalèzes E., Swider P., Payan Y., 2004. Regularization of a mesh generated with the mesh matching algorithm. *Journal of Biomechanics*, in revision.
- Manson P.N., Clifford C.M., Suc T., 1986. Mechanisms of global support and posttraumatic enophthalmos: I. The anatomy of the ligament sling and its relation to intra muscular cone orbital fat. *Plast. Reconstr. Surg.*, 77(2): 193-202.
- Metson R., Dallow R. L., Shore J. W., 1994. Endoscopic orbital decompression. *Laryngoscope*, 104 : 1020 : 950-957.
- Midoux N., 1967. Mécanique et rhéologie des fluides en génie chimique, Lavoisier, second tirage (2000) Cambridge University Press.
- Miller J. M., Demer J. L., 1999. Clinical applications of computer models for strabismus. Eds Rosenbaum, Santiago, AP, *Clinical Strabismus Management*. Pub. W. B. Saunders.

- Morax S., Bok C., Chabi M., 1997. Décompression orbitaire au cours de l'exophthalmie dysthyroïdienne. A propos de 69 cas. Ann. Chir. Plast. Esthét., 42(3) : 207-215.
- Mow V. C., Kuei S. C., Lai W. M., Armstrong C.G., 1980. Biphasic creep and stress relaxation of articular cartilage in compression: theory and experiments. Journal of Biomechanical Engineering, 102: 73-84.
- Mow V. C., Kwan M. K., Lai W. M., Holmes M. H., 1986. A finite deformation theory for non linearly permeable cartilage and other soft hydrated connective tissues. Frontier in Biomechanics, Springer Verlag: 73-84.
- Nkenke E., Kramer M., Benz M., Maier T., Wiltfang J., Hausler G., Neukam F. W., 2001. Application of optical 3D imaging in exophthalmometry. Proceedings of the CASH conference, Elsevier Science, p. 1407.
- Nugent R.A., Belkin R.I., Neigel J.M., 1990. Graves orbitopathy: correlation of CT and clinical findings. Radiology, 177: 675-682.
- Nguyen D., Ivanov N., Aziz A., Nowinski W. L., 2003. A digital atlas of the human orbit: atlas construction and atlas-to-data registration. Proceedings of the CARS conference. p. 1289.
- Olivari N., 1991. Transpalpebral decompression of endocrine ophthalmopathy (Graves' disease) by removal of intra orbital fat: experience with 147 operations over 5 years. Plast. Reconstr. Surg., 87(4): 627-641.
- Olivari N., 2001. Endocrine Ophthalmopathy - Surgical treatment. Kaden verlag.
- Owen S., 1998. A survey of unstructured mesh generation technology. Proceedings of the 7th International Meshing Roundtable, Sandia National Lab: 239-267.
- Panton R.L., 1984. Incompressible flow. John Wiley & Sons Inc.
- Payan Y., 2002. Etude de la modélisation des tissus mous du vivant pour la planification et le guidage de gestes chirurgicaux. Habilitation à diriger des recherches, Université Joseph Fourier, Grenoble 1.
- Peyster R.G., Ginsberg F., Silber J.H., Adler L.P., 1986. Exophthalmos caused by excessive fat: CT volumetric analysis and differential diagnosis. A.J.R., 146: 459-464.
- Power E. D., Stitzel J. D., West R. L., Herring I. P., Duma S. M., 2001. A non linear finite element model of the human eye for large deformation loading. Proceedings of the 25th Annual Meeting of Biomechanics, San Diego, 44-45.
- Quintard M., Cherblanc F., Whitaker S., 2001. Dispersion in Heterogeneous Porous Media: One-Equation Non-Equilibrium Model. Transport in Porous Media 44(1): 181-203.

- Raskin E. M., Millman A. L., Lubkin V., Della Rocca R. C., Lisman R. D., Maher E. A., 1998. Prediction of late exophthalmos by volumetric analysis of orbital fractures. *Ophtalmic Plast. Reconstr. Surg.*, 14(1): 19-26.
- Riemann C.D., Foster J.A., Kosmorsky G.S., 1999. Direct orbital manometry in patients with thyroid-associated orbitopathy; vol. 106: pp. 1296-1302.
- Roncevic R., 1992. Decompression of ophthalmopathy (discussion). *Plast. Reconstr. Surg.*, 90(2) : 337-338.
- Roncevic R., Jackson I. T., 1989. Surgical treatment of thyrotoxic exophthalmos. *Plast. Reconstr. Surg.*, 84(5): 754-760.
- Rougier J., Tessier P., Hervouet F., 1977A. Les exophthalmies. L'expansion de la cavité orbitaire. *Chirurgie Plastique Orbito-palpébrale* (Chap. XIV) – Masson.
- Rougier J., Tessier P., Hervouet F., 1977B. Anatomie chirurgicale et moyens d'exploration de l'orbite. *Chirurgie Plastique Orbito-palpébrale* (Chap. I) – Masson.
- Rouvière H., Delmas A., 1991. Anatomie humaine descriptive, topographique et fonctionnelle. Ed. Masson, Paris, Tome 1.
- Sagar M.A., Bullivant D., Mallinson G.D., Hunter P.J., Hunter I.W., 1994. A virtual environment and model of the eye for surgical simulation. *Supercomputing*; Vol. 2: No. 7.
- Salvi M., Zhang Z.G., Haegert D., 1990. Patients with endocrine ophthalmopathy not associated with thyroid disease have multiple thyroid immunological abnormalities. *J. Clin. Endocrinol. Metab.* 70(1) : 89-94.
- Saraux H., Biais B., Rossazza C., 1987. *Ophtalmologie*, Chap. 22 : Pathologie de l'orbite. Ed. Masson., 341-353.
- Shore J. W., Carvajal J., Westfall C. T., 1992. Miniplate reconstruction of the lateral orbital rim after orbital decompression for Graves disease ophtalmology, 99(9) : 1433-1439.
- Simon B.R., Wu J.S.S., Carlton M.W., Evans J.H., Kazarian L.E. , 1985. Structural models for human spinal motion segments based on a poroelastic view of the intervertebral disk. *Journal of Biomechanical Engineering*, 107: 327-335.
- Sobotta, 1994. *Atlas d'anatomie humaine*. Editions médicales internationales, Paris, Tome I.
- Stanley R.J., McCaffrey T.V., Offord K.P., DeSanto L.W., 1989. Superior and transantral orbital decompression procedures. Effects on increased intra-orbital pressure and orbital dynamics. *Archive of Otolaryngology Head Neck Surgery*; vol. 115: pp. 369-373.
- Szeliski R. and Lavallée S., 1996. Matching 3-D anatomical surfaces with non-rigid deformations using octree-splines. *Int. J. of Computer Vision*, 18(2): 171-186.
- Taylor R., Lavallée S., Burdea G., Mosges R., 1996. *Computer-Integrated Surgery. Technology and clinical applications*, Cambridge, MA: MIT Press.

- Terzaghi K., Peck R. B., Mesri G. 1948. Soil mechanics in engineering practice. 3rd edition (1996), John Wiley and Sons Editions.
- Touzot G., Dahtt G., 1984. Une représentation de la méthode des éléments finis. Collection université de Compiègne.
- Troccaz J., Peshkin M., Davies B., 1998. Guiding systems for Computer-assisted Surgery (CAS) : introducing synergistic devices and discussing the different approaches. Medical Image Analysis, 2(2):101-119.
- Troccaz J., Henry D., Laieb N., Champleboux G., Bosson J.L., Pichot O., 2000. Simulators for medical training : application to vascular ultrasound imaging. Journal of Visualization and Computer Animation, 11:51-65, Wiley.
- Uchio E., Ohno S., Kudoh J., Aoki K., Kisielewicz L.T., 1999. Simulation model of an eyeball based on finite element analysis on a supercomputer. Journal of Ophthalmology. 83(10):1101-2.
- Weisman R.A., Osguthorpe J.D., 1994. Orbital decompression in Graves' disease. Arch. Otolaryngol. Head Neck Surg., 120: 831-834.
- Wendling S., Canadas P., Chabrand P., 2003. Toward a generalized tensegrity model describing the mechanical behaviour of the cytoskeleton structure. Computer Methods in Biomechanics and Biomedical Engineering, 6 (1): 45-52.
- Wilson W.B., Manke W.F., 1991. Orbital decompression in Graves' disease. The predictability of reduction of proptosis. Archive of Ophthalmology; vol. 109: pp. 343-345.
- Yab K., Tajima S., Ohba S., 1997. Displacement of the eyeball in orbital blowout fractures. Plast. Reconstr. Surg., 100: 1409-1417.
- Yu C. P., Jagannathan L., Srinivasan R., Nowinski W. L., 1998. Development of an eye model from multimodal data. Proceedings SPIE Medical Imaging. Image display. 3355: 93-99.
- Zienkiewicz O.C., Taylor R.L., 1994. The Finite Element Method, fourth edition. McGraw-Hill Book Company.