Curriculum Vitae LAURENT DAVID COHEN

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39 years of experience as Researcher or Engineer in various fields of Applied Mathematics and Computer Science, mainly in Image Processing.

Born :11/16/1962. Nationality: French. Married. 3 children.

CURRENT POSITION:

CNRS University –Paris- Dauphine: Scholar Research Position, Directeur de Recherche 1st class at the Applied Mathematics Laboratory CEREMADE (director of Lab: Vincent Rivoirard, I am leader of the Image group, included in the Analysis Team), on applications of variational methods and Partial Differential Equations to Image Processing. (CR1 Since January 1990, DR2 since October 1998, DR1 since October 2006).

PRAIRIE Chair since 2019, (PaRis AI Research InstitutE), one of the four 3IA.

Supervisor for 29 PhD students (25 defenses since 1992, 4 in progress) and 35 Master Theses.

Coauthor of more than 300 (mostly international) publications, including about 100 journals and book chapters (main: 7 International Journal of Computer Vision, 8 Journal of Mathematical Imaging and Vision, 7 Computer Vision and Image Understanding, 6 IEEE Transactions on PAMI/TIP/TMI, 2 Medical Image Analysis) and 181 proceedings[1] (main: 5 ICCV, IEEE International Conference on Computer Vision, 10 ECCV, European Conference on Computer Vision, 10 CVPR, IEEE Computer Vision and Pattern Recognition, 9 ICPR, IEEE International Conference on Pattern Recognition, 9 ICIP, IEEE International Conference on Image Processing, 13 ISBI, IEEE International Symposium on Biomedical Imaging, 22 other IEEE, 7 MICCAI, International Conference on Medical Image Computing and Computer Assisted Intervention, 18 SSVM, Scale Space and Variational Methods, 10 EMMCVPR, Energy Minimization Methods in Computer Vision and Pattern Recognition). Coauthor of 7 patents. More than 60 invited talks or keynotes in international conferences.

Obtained 3 ANR grants, 1 as PI coordinator, 2 as team leader, and member of 2 other ANR grants.

University Teaching: Master 2 at ENS Paris-Saclay and at Paris-Dauphine University on applications of variational methods and Partial Differential equations to Image Processing (Since 1989).

Responsible for major on applied mathematics, image and signal processing Institut de Technologie et d'Innovation (PSL- ITI) predoctoral year. Organization of 80 hours, followed by seminars and internships (2014-2019).

Editorial and Review activities: Has been Editorial member for the Journal of Mathematical Imaging and Vision (jan. 1996- dec. 2015), and of Medical Image Analysis (Mar. 1996- dec. 2007), Machine Vision and Applications (oct. 2004-mar. 2011), International Journal for Computational Vision and Biomechanics IJCV&B (jan. 2008-), Computer Methods in Biomechanics and Biomedical

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[1] **In image processing, very selective conference proceedings are often preferred to journal papers and have almost similar value.**

Engineering: Imaging & Visualization (Taylor and Francis), (mar. 2013-), and Journal of Visusal Communication and Image Representation (jun. 2015-jan.2019). Guest editor for 6 special issues of Journal of Mathematical Imaging and Vision (between 2001 and 2015) and 1 IRBM. Member of the program committee for about 60 international conferences.

Founder and Member of Conference board for nine conferences on Mathematics and Image Analysis (between 2000 and 2018, up to 250 participants).

Reviewer for main international journals (IEEE PAMI, TMI,TIP; IJCV; CVGIP; JMIV) and conferences (IEEE ICCV, CVPR; ECCV) (Since 1989).

Consulting: Expert Consultant in Image Processing for various industrial projects in Image Segmentation, Restauration, Compression, Pattern Recognition, ... (between 1988 and 2013).

Prizes/Distinctions: Laureate 2009 for « Grand Prix EADS de l'Académie des Sciences » in Information Science. (see http://www.ceremade.dauphine.fr/⬚cohen/GP09.html)

IEEE Fellow 2010 for contributions to computer vision technology for medical imaging.

Taylor & Francis Prize: 2006 prize for "Outstanding innovation in computer methods in biomechanics & biomedical engineering."

CS02 Prize by Company CS, Communications and Systems, SMAI and ASTI, in Signal and Image Processing in June 2002.

5 best papers, 4 best thesis prizes for my students. Two papers with respectively more than 2000 and 3500 citations.

EDUCATION:

"Habilitation à diriger des recherches": University Paris-9 Dauphine, 1995. "Variational Methods for Image Processing".

Ph.D. in Applied Mathematics: University Paris 6, Mathematics, 1986. "On some parabolic and elliptic semilinear problems." Supervisor: Pr H.BREZIS.

M.Sc.: DEA in Numerical Analysis at Paris 6, June 1983.

"Agrégation" in Mathematics, Admitted 1st, July 1983, (French National competitive exam for graduate students).

Ecole Normale Supérieure: 45 rue d'Ulm, Paris, student in mathematics from 1981 to 1985.

PREVIOUS EMPLOYMENT:

1990-1998: Expert Scientist at INRIA Rocquencourt for the Medical Image Analysis group EPIDAURE directed by N.AYACHE. Supervision of PhD and Master students on applications of deformable models for extraction, segmentation and shape reconstruction in medical images.

January-December 1989: INRIA Rocquencourt (Institut National de Recherche en Informatique et Automatique, Rocquencourt, France) : Research Scientist at the Medical Image Analysis group EPIDAURE directed by N.AYACHE. Project on deformable models for segmenting medical images.

January-December 1988: INRIA Rocquencourt : Research Scientist at the Image processing and computer graphics group SYNTIM directed by A. GAGALOWICZ. Project in Stereovision.

May 1985-November 1987: . SCHLUMBERGER Palo Alto Research (SPAR) (Palo Alto, California, U.S.A.): Research in the "Perception & Graphics" group directed by A. WITKIN. Followed by SCHLUMBERGER Montrouge Recherche (SMR). Leader of Computer Science & Algorithmics project. Jobs in Cryptography, Data Security, text and Image Data Compression, Image Processing.

COMPUTER EXPERIENCE: Unix, PC windows 98 to 11, SUN, DEC VAX/VMS, Symbolics LISP Machine; C, LISP, PASCAL, FORTRAN, SMP, HTML, Matlab, Latex.