

Curriculum vitae et liste de publications de Pierre Duhamel

Septembre 2010

1 Curriculum vitae résumé

nom : Duhamel Pierre

date de naissance : 15 Janvier 1953

Formation

- Doctorat d'état obtenu en septembre 1986 à la faculté des sciences d'Orsay.
- Docteur-ingénieur de la faculté des sciences d'Orsay, Juin 1978.
- Ingénieur INSA de Rennes en 1975 (option Génie Electrique).

Expérience professionnelle

- Au CNRS (2000- present)
 - Depuis Octobre 2000, Directeur de Recherches au CNRS, Laboratoire de Signaux et Systèmes, Gif sur Yvette
 - Depuis Avril 2002 : responsable de la Division "Signaux" du LSS
- à l'Ecole Nationale Supérieure des Télécommunications (1993-2000)
 - A partir de Juin 1993 : enseignant-chercheur a l'ENST Paris, Département Signal
 - a partir d'Avril 1996 : responsable du Département Signal
 - De Janvier 1998 à Septembre 2000 : responsable du département "Traitement du Signal et des Images" à l'ENST Paris,
- à France Télécom R&D (1980-1993)
 - De Mars 1980 à Janvier 1982 : chercheur au Centre National d'Etudes des Télécommunications (CNET/PAB, Bagneux), Division Dispositifs de Traitement du Signal, département Microacoustique et Microélectronique
 - De Janvier 1982 à Juin 1993 : chercheur au CNET (centre PAB, Issy les Mx), Division Recherche en Physique de l'Environnement (unité mixte de recherche CNET/CNRS) -responsable du groupe Traitement du Signal à partir de 1984-
- Dans l'industrie (1975-1980)
 - De Septembre 1975 à Mars 1980 : ingénieur à la société Thomson-CSF, Paris, Secteur Commun des Applications Scientifiques, Laboratoire de Traitement du Signal

Parcours scientifique

Ce parcours se décompose en cinq étapes

- Aspects frontaliers avec la théorie des circuits
 - Filtrage numérique
 - Test automatique des circuits analogiques
 - Filtres à transferts de charge

- Transformées et convolutions rapides
 - Algorithmes rapides de calcul de transformées orthogonales
 - Applications à la compression d'image et du son
 - Applications au filtrage adaptatif et à l'annulation d'échos acoustiques
 - Quelques résultats en analyse spectrale et transformées en ondelettes
 - Intérêt particulier pour les aspects interaction algorithme / architecture liés à l'implantation de ces algorithmes
- Traitement du signal pour les communications
 - Égalisation aveugle, mono et multi-canal
 - Systèmes multiporteuses
 - Algorithmes itératifs ("à la turbo")
 - Théorie de l'information
 - Codage/décodage protocole/canal conjoint
- Traitement du signal / d'images pour le multimédia
 - Tatouage de signaux audiovisuels (watermarking),
 - Codage incluant des fonctionnalités,
 - Traitement des signaux audio (interaction compression / spatialisation, analyse de signaux musicaux, ...)
 - Compression robuste aux erreurs de transmission, Codage conjoint source/canal
- Théorie de l'information et algorithmie "cross layer"
 - Impact de la connaissance imparfaite des canaux sur les performances d'un système
 - Géométrie de l'information pour l'analyse et l'amélioration des algorithmes itératifs
 - Réception robuste des entêtes de blocs aux différents niveaux de la pile protocolaire
 - Allocation de ressources, algorithmie distribuée
 - Routage robuste dans les réseaux coopératifs.

Production scientifique globale, montage de contrats .

Production :

- 83 articles de revues à comité de lecture publiés ou acceptés, plus 2 en cours d'examen ou de révision
- 28 brevets
- Un livre paru en 2009 (P. Duhamel and M. Kieffer, Joint Source-Channel Decoding. A Cross-Layer Perspective with Applications in Video Broadcasting over Mobile and Wireless Networks, Academic Press)
- 4 chapitres de livre
- 3 conférences tutorielles présentées à des conférences majeures du domaine.
- 263 articles de conférence
- Plus de 50 thèses encadrées ou co-encadrées.

Impact :

- Article le plus cité (scholar google) : 1260 citations
- 9 articles cités plus de 100 fois (scholar google)
- h-number (scholar google) : 34
- Nombre total de citations d'après ISI web of knowledge, beaucoup plus sélectif que scholar google : environ 2500
- un article dans la liste des "Highly cited papers" de ISI WoS.

Initiateur de nombreux contrats coopératifs au niveau Français (RNRT puis ANR), souvent repris par des industriels en tant que "prime".

- Nombreuses thèses financées par contrat CIFRE (environ 15), avec une production scientifique importante
- Participant à de nombreux contrats RNRT, puis ANR

- Nombreux contrats directs
- Participation à trois réseaux d'excellence Européens (ECRYPT, NEWCOM et NEWCOM++, voir ci dessous pour les deux derniers).
- Montant global de contrats négociés et obtenus d'environ 1200 kEuros lors du dernier contrat quadriennal.

Distinctions diverses

- "Fellow" Eurasip, 2008
- Lauréat du Grand Prix France Télécom de l'Académie des Sciences pour l'année 2000
- "Distinguished speaker", IEEE Signal Processing Society, 1999
- Co-récipiendaire du "best paper award" de la revue IEEE Transactions on Signal Processing, 1998
- "Fellow IEEE", 1998
- "senior member" IEEE, 1987

Responsabilités principales dans le milieu scientifique

- Membre de l'Executive Board de deux réseaux d'excellence européens successifs (NEWCOM et NEWCOM++) et responsable à chaque fois de la moitié des aspects recherche ("Cluster" couche physique), participant au comité de rédaction.
- Chairman successivement de deux comités techniques IEEE, actuellement membre d'un comité
- Membre du comité IEEE "Kilby Medal Committee" pour l'attribution du prix correspondant.
- Editeur associé IEEE à diverses occasions (IEEE Trans. on SP, IEEE Signal Processing Letters, IEEE Trans. on Forensics and Security).
- co-Technical Chair de la conférence ICASSP 2006, à Toulouse, et de plusieurs workshops IEEE.
- Co-rapporteur puis rapporteur de la commission 2 du RNRT depuis sa création jusqu'à son intégration dans l'ANR (commission : Traitement du signal et circuits associés), puis membre du comité d'évaluation du programme Télécommunications de l'ANR jusqu'en, 2008
- membre d'un groupe de travail de l'alliance ALLISTENE.

2 Publications

Articles dans des revues à comité de lecture (83 parus) .

2010 [1] [2]
2009 [3] [4] [5] [6] [7] [8] [9] [10]
2008 [11] [12] [13] [14] [15] [16] [17]
2007 : [18] [19] [20] [21] [22] [23] [24] [25] [26]
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[67] [68] [69] [70] [71] [72] [73] [74] [75] [76] [77] [78] [79] [80] [81] [82] [83]

Articles soumis dans des revues à comité de lecture (2) .

[84] [85]

Ouvrages [86]

Chapitres d'ouvrages (4) .

[87] [88] [89] [90]

Exposés tutoriaux dans des conférences internationales (3) .

[91] [92] [93]

Thèses .

[94] [95]

Brevets (28) .

[96] [97] [98] [99] [100] [101] [102] [103] [104] [105] [106] [107] [108] [109] [110] [111] [112] [113] [114]
[115] [116] [117] [118] [119] [120] [121] [122] [123]

Articles invités dans des conférences internationales .

[124] [125]

Communications à des congrès à comité de lecture (262) :

2009 : [126] [127] [128] [129] [130] [131] [132] [133]
2008 : [134] [135] [136] [137] [138] [139] [140] [141] [142] [143]
2007 : [144] [145] [146] [147] [148] [149] [150] [151] [152] [153] [154] [155] [156] [157]
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2005 : [184] [185] [186] [187] [188] [189] [190] [191] [192] [193] [194] [195] [196] [197] [198] [199] [200]
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2004 : [211] [212] [213] [214] [215] [216] [217] [218] [219] [220] [221] [222] [223] [224] [225] [226] [227]
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2003 : [237] [238] [239] [240] [241] [242] [243] [244] [245] [246] [247] [248] [249] [250] [251]
2002 : [252] [253] [254] [255] [256] [257]
2001 : [258] [259] [260] [261] [262] [263] [264] [265] [266]

2000 : [267] [268] [269] [270] [271] [272] [273] [274] [275] [276] [277] [278] [279] [280] [281]
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 [374] [375] [376] [377] [378] [379] [380] [381] [382] [383] [384] [385] [386] [387]

Rapports techniques de contrats (12) .

[388] [389] [390] [391] [392] [393] [394] [395] [396] [397] [398] [399]

Références

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- [2] A. Mokraoui-Zergainoh and P. Duhamel. Multiresolution analysis adapted to irregularly spaced data. *EURASIP Journal on Advances in Signal Processing*, 2009. Article Number : 293952.
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- [5] H. Nguyen and P. Duhamel. Iterative joint source–channel decoding of vlc exploiting source semantics over realistic radio–mobile channels. *IEEE Trans on Communications*, 57(6) :1701–1711, June 2009.
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