

# CURRICULUM VITAE

Pierre Dumouchel, ing., M.Sc., Ph.D.

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## EXPÉRIENCE PROFESSIONNELLE

<i>Poste occupé</i>	<i>Établissement</i>	<i>Période</i>
Professeur titulaire	École de technologie supérieure	1995-
Directeur de département	Génie logiciel et des TI, ÉTS	2011-
Directeur de programme	Maîtrise en génie, TI	2005-2011
Vice-président scientifique	Centre de recherche informatique de Montréal	2004-2012
Vice-président R-D	Centre de recherche informatique de Montréal	1999-2004
Chercheur principal	Centre de recherche informatique de Montréal	1997-1999
Chargé de cours	École de technologie supérieure	1992-1994
Chargé de laboratoire	École Polytechnique de Montréal	1990-1992
Conseiller en parole	Centre de recherche informatique de Montréal	1988-1990
Ingénieur en logiciel	CORECO	1987-1988
Assistant de recherche	INRS-Télécommunications	1985-1987

### *Professeur à l'ÉTS, Directeur de département, Directeur de programme*      *1995-*

- Professeur titulaire au département de génie logiciel et technologie de l'information depuis 2004;
- Directeur du département de génie logiciel et des TI;
- Directeur de programme de la maîtrise en technologie de l'information (programme conjoint UQAM-Téluq-ÉTS) de 2005 à 2008;
- Directeur-fondateur du programme de maîtrise en génie, concentration en technologie de l'information de 2008 à 2009;
- Membre du laboratoire de recherche en multimédia.

### *Vice-président scientifique, CRIM*      *2004-2012*

Mon rôle en tant que vice-président scientifique au CRIM consistait à :

- faire de la représentation auprès d'instances subventionnaires, d'associations, de comités en vue d'établir les orientations cohérentes des axes de recherche du centre avec les besoins de l'industrie;
- monter de grands projets multipartenaires et à en assumer la direction;
- superviser des étudiants gradués;
- conseiller les chercheurs;
- conseiller la direction du centre et gérer les relations avec les universités.

***Vice-président R-D au CRIM***

***1999-2004***

Le Centre de recherche informatique de Montréal est un centre de liaison et de transfert. Il connaissait en 1999 un exode de son personnel scientifique voyant ainsi son nombre d'employés de recherche passé de 40 à 18 personnes. C'est dans ce contexte que j'ai pris la responsabilité de la vice-présidence de la r-d. Mes tâches consistaient à :

- consolider les axes de recherche de sept à quatre en fonction du potentiel de transfert technologique vers les industries;
- recruter et rationaliser le personnel scientifique afin de former à court et moyen terme des équipes de recherche avec des masses critiques de chercheurs;
- intensifier les collaborations aux niveaux national et international;
- développer un réseau de contact auprès des chercheurs universitaires, d'industriels et des organismes subventionnaires provinciaux et fédéraux;
- valoriser les expertises et les technologies développées au CRIM;
- négocier et gérer la propriété intellectuelle avec les universités et les industries;
- rédiger et coordonner les propositions de contrats de recherche (universitaire et industrielle);
- préparer le budget de la r-d;
- assurer l'équilibre budgétaire de la recherche et du développement;
- instaurer et gérer des pratiques de suivi de projets conformes aux règles de l'art et acceptées par le personnel scientifique (ISO 9001);
- instaurer des pratiques de méthodologie de développement logiciel conformes aux règles de l'art;
- développer de nouveaux modèles de financement de la recherche (Alliance CRIM-Precarn);
- anticiper et positionner la recherche en fonction des besoins de l'industrie et des forces de recherche du Centre.

***Chercheur principal au CRIM***

***1997-1999***

Mes tâches consistaient à :

- déterminer de nouveaux thèmes de recherche ayant un potentiel de transfert technologique : fouille par transduction et adaptation bayésienne;
- recruter le personnel scientifique;
- faire le développement d'affaires de l'équipe;
- gérer le personnel de l'équipe.

***Conseiller en parole au CRIM***

***1988-1990***

Membre fondateur de l'équipe de reconnaissance de la parole du CRIM sous la supervision du Dr Renato De Mori, j'ai travaillé au niveau du modèle de langage ainsi qu'au niveau de l'acquisition de données audio. J'ai quitté l'équipe afin de poursuivre mes études de doctorat à l'INRS-Télécommunications sous la supervision du Professeur Douglas O'Shaughnessy.

***Ingénieur en logiciel chez CORECO***

***1987-1988***

Développer des logiciels de reconnaissance automatique de formes en vision par ordinateur dont un logiciel de tri de sabots de frein et un logiciel de tri de rouge à lèvres.

**Agent de recherche à l'INRS-Télécommunications**

**1985-1987**

Écrire le code en C des modèles de langage à base de trigrammes pour un système de reconnaissance de la parole à très grand vocabulaire. Mon superviseur était Matthew Lennig.

**FORMATION UNIVERSITAIRE**

<i>Diplôme</i>	<i>Discipline</i>	<i>Établissement</i>	<i>Date</i>
Baccalauréat	Génie électrique	Université McGill	1982
Maîtrise	Génie en télécommunications	INRS	1985
Doctorat	Génie en télécommunications	INRS	1995

**MEMBRE DE CONSEILS D'ADMINISTRATION**

<b>Organisme</b>	<b>Statut</b>	<b>Date</b>
Centre de recherche informatique de Montréal (CRIM)	Observateur	1999-2004
Institut de la Francophonie pour l'Informatique d'Hanoi, Vietnam	Membre	2000-2002
Association des industries de la langue (AILIA)	Membre	2002-2006
Centre de recherche en technologies langagières (CRTL)	Membre	2008-

**FINANCEMENT**

<b>Source</b>	<b>Montant</b>	<b>Titre</b>	<b>Année</b>
CRSNG	125,000\$	Découverte : Speech Analytic	2012-2016
CRSNG	25000\$	Classification de sonorités téléphoniques	2011
FODAR	25000\$	Applications en psychologie	2011
CRSNG	38000\$	New Media Research Network Excellence	2008-2009
CRIM	770,000\$	Vice-présidence scientifique	2004-2009
CRSNG	38 000\$	NSERC New Media (U. Sherbrooke)	2008-2009
Patrimoine Canadien	1,3M\$	E-Inclusion	2007-2009
CRSNG	215,650\$	Managing Emotions in H-C Dialogs	2007-2009
CRSNG	81,000\$	Emotion détection by computer	2007-2011
LUB	225,000\$	Détection des émotions par ordinateur	2006-2008
Patrimoine Canadien	1,5M\$	E-Inclusion	2005-2007
Canarie	754,000\$	C3Grid Project	2004
Canarie	1,1M\$	RAP Project	2003
Canarie	422,000\$	MADIS Project	2002
TVA	471 000\$	Sous-titrage des bulletins de nouvelles	2002
Ryshco Media	256 000\$	Sous-titrage en post-production	2002
TelPlus	150 000\$	Cartes à puce sonores	2002
Locus Dialogue	150 000\$	Transducer-based speech recognizer	2001
LUB	85 000\$	Évaluation de plate-formes commerciales	2001

Défense Nationale	130 000\$	Speech Input Topic Spotting	2000
CRSNG	15 000\$	Reconnaissance de la parole	2000
Nortel/CRSNG	95 000\$	Reconnaissance de la parole : transducteur	1999
Nortel	40 000\$	Reconnaissance de la parole : transducteur	1998
CRIM	76 000\$	Reconnaissance de la parole	1999
CRIM	72 000\$	Reconnaissance de la parole	1998
CRIM	64 000\$	Reconnaissance de la parole	1997
Défense Nationale	95 000\$	Reconnaissance phonémique	1999
Défense Nationale	150 000\$	Reconnaissance de thématique	1998
Défense Nationale	119 000\$	Reconnaissance du locuteur	1998
CRSNG	22 000\$	Vérification du locuteur	1996-1999

### **SUPERVISION D'ÉTUDIANTS (5 dernières années)**

<b>NOM</b>	<b>NIVEAU</b>	<b>EMPLOI ACTUEL</b>
Najim Dehak	doctorat	Chercheur, CSAIL, MIT
Patrick Cardinal	doctorat	Post-doctorant, CSAIL, MIT
Edward Hill	doctorat	Centre santé mentale de Montréal
Yazid Attabi	doctorat	Rédaction de thèse
Mohammed Senoussaoui	doctorat	Rédaction de thèse
Gilles Boulianne	doctorat	CRIM
Chahid Ouali	doctorat	En cours
Patrice Boucher	doctorat	En cours
Narjès Boufaden	Postdoctorant	PDG, KeaTex
Themos Stafylakis	Postdoctorant	CRIM
Jahangir Alam	Postdoctorant	En cours
Martin Végiard	Maîtrise	Centre de la sécurité des télécommunications
Yazid Attabi	Maîtrise	ÉTS, doctorat
Chahid Ouali	Maîtrise	ETS, doctorat
Jean Robin Losthy	Maîtrise	Professeur au niveau collégial
Youcef Bouchaffra	Maîtrise	En rédaction
Truong Hoang Cuong	Maîtrise	Programmeur, Vietnam
Hoang Le Truong	Maîtrise	Programmeur, Vietnam
Éric Villadrich	Maîtrise	Responsable de cours, U. de Montréal

### **PUBLICATIONS**

#### **Articles publiés dans des revues scientifiques avec comité de lecture**

- [1] P. Cardinal, P. Dumouchel, and G. Boulianne, "Large Vocabulary Speech Recognition on Parallel Architectures," *IEEE Transactions on Audio, Speech, and Language Processing*, vol. PP, 2013.
- [2] E. Hill, D. Han, P. Dumouchel, N. Dehak, T. Quatieri, C. Moehs, *et al.*, "Long Term Suboxone&trade; Emotional Reactivity As Measured by Automatic Detection in Speech,"

- Randen Lee Patterson, UC Davis School of Medicine, United States of America*, vol. 8, pp. 1-14, July 2013.
- [3] Y. Attabi and P. Dumouchel, "Anchor Models for Emotion Recognition from Speech," *IEEE Transactions on Affective Computing*, p. 1, 2013.
- [4] E. Hill, P. Dumouchel, and C. Moehs, "An evidence-based toolset to capture, measure and assess emotional health," *Studies in Health Technology and Informatics - Annual Review of Cybertherapy and Telemedicine*, vol. 167, pp. 176-181, 2011.
- [5] N. Dehak, P. J. Kenny, R. Dehak, P. Dumouchel, and P. Ouellet, "Front-end factor analysis for speaker verification," *Audio, Speech, and Language Processing, IEEE Transactions on*, vol. 19, pp. 788-798, May 2011.
- [6] Y. Attabi and P. Dumouchel, "Automatic emotion recognition from speech a PhD research proposal," *Affective Computing and Intelligent Interaction*, vol. 6975, pp. 191-199, 2011.
- [7] E. Hill, P. Dumouchel, and C. Moehs, "An evidence-based toolset to capture, measure, and assess emotional health," vol. 9, pp. 143-147, 2011.
- [8] P. Kenny, P. Ouellet, N. Dehak, V. Gupta, and P. Dumouchel, "A study of interspeaker variability in speaker verification," *Audio, Speech, and Language Processing, IEEE Transactions on*, vol. 16, pp. 980-988, July 2008.
- [9] P. Kenny, G. Boulianne, P. Ouellet, and P. Dumouchel, "Joint factor analysis versus eigenchannels in speaker recognition," *Audio, Speech, and Language Processing, IEEE Transactions on*, vol. 15, pp. 1435-1447, May 2007.
- [10] P. Kenny, G. Boulianne, P. Ouellet, and P. Dumouchel, "Speaker and session variability in GMM-based speaker verification," *Audio, Speech, and Language Processing, IEEE Transactions on*, vol. 15, pp. 1448-1460, May 2007.
- [11] N. Dehak, P. Dumouchel, and P. Kenny, "Modeling prosodic features with joint factor analysis for speaker verification," *Audio, Speech, and Language Processing, IEEE Transactions on*, vol. 15, pp. 2095-2103, September 2007.
- [12] V. Gupta, P. Kenny, P. Ouellet, G. Boulianne, and P. Dumouchel, "Combining gaussianized/non-gaussianized features to improve speaker diarization of telephone conversations," *Signal Processing letters, IEEE*, vol. 14, pp. 1040-1043, December 2007.
- [13] P. Kenny, G. Boulianne, and P. Dumouchel, "Eigenvoice modeling with sparse training data," *Speech and Audio Processing, IEEE Transactions on*, vol. 13, pp. 345-354, May 2005.
- [14] P. Kenny, G. Boulianne, P. Ouellet, and P. Dumouchel, "Speaker adaptation using an eigenphone basis," *Speech and Audio Processing, IEEE Transactions on*, vol. 12, pp. 579-589, November 2004.

### Chapitres de livres

- [1] P. Dumouchel, G. Boulianne, and J. Brousseau, in *Audiovisual translation in close-up: practical and theoretical approaches*, ed: Bern, Berlin, Bruxelles, Frankfurt am Main, New York, Oxford, Wien.: Peter Lang, 2011, p. 320.
- [2] G. Boulianne, J.-F. Beaumont, M. Boisvert, J. Brousseau, P. Cardinal, C. Chapdelaine, *et al.*, in *Listening to Subtitles: Shadow Speaking for Real-Time Closed-Captioning of TV Broadcasts in French*, ed, 2010, p. 235. in A. Matamala and P. Orero, *Listening to subtitles : subtitles for the deaf and hard of hearing*. Bern ; New York, N.Y.: Peter Lang, 2010.

- [3] P. Ouellet and P. Dumouchel, in *Heuristic Syllabification and Statistical Syllable-Based Modeling for Speech-Input Topic Identification*, ed, 2001, pp. 13-14.

#### Articles dans des comptes rendus de conférences

- [1] T. Stafylakis, P. Kenny, P. Ouellet, J. Perez, M. Kockmann, and P. Dumouchel, "Text-dependent speaker recognition using PLDA with uncertainty propagation," in *14th Annual Conference of the International Speech Communication Association, Interspeech 2013*, 2013, p. 1401.
- [2] T. Stafylakis, P. Kenny, V. Gupta, and P. Dumouchel, "Compensation for Inter-Frame Correlations in Speaker Diarization Recognition," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2013, pp. 7731-7735.
- [3] M. Senoussaoui, P. Kenny, P. Dumouchel, and T. Stafylakis, "Efficient Iterative Mean Shift based Cosine Dissimilarity for Multi-Recording Speaker Clustering," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), May 26-31, 2013, Vancouver, Canada*, 2013, pp. 4311-4315.
- [4] M. Senoussaoui, P. Kenny, P. Dumouchel, and N. Dehak, "New Cosine Similarity Scorings to Implement Gender-independent Speaker Verification," in *14th Annual Conference of the International Speech Communication Association, Interspeech 2013*, 2013, p. 265.
- [5] P. Kenny, T. Stafylakis, P. Ouellet, M. J. Alam, and P. Dumouchel, "PLDA for Speaker Verification with Utterances of Arbitrary Duration," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2013, pp. 7649-7653.
- [6] E. Hill, C. Moehs, and P. Dumouchel, "An evidence-based toolset to capture, measure, analyze & assess emotional health," in *ASAM's 44th Annual Medical-Scientific Conference, Chicago, Illinois*, 2013.
- [7] G. Boulianne and P. Dumouchel, "Unsupervised Topic Model for Broadcast Program Segmentation," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2013, pp. 8455-8459.
- [8] Y. Attabi, M. J. Alam, P. Dumouchel, P. Kenny, and D. O'Shaughnessy, "Multiple Windowed Spectral Features For Emotion Recognition," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2013, pp. 7527-7531.
- [9] M. J. Alam, Y. Attabi, P. Dumouchel, P. Kenny, and D. O'Shaughnessy, "Amplitude Modulation Features for Emotion Recognition from Speech," in *14th Annual Conference of the International Speech Communication Association, Interspeech 2013*, 2013, p. 1616.
- [10] T. Stafylakis, P. Kenny, M. Senoussaoui, and P. Dumouchel, "PLDA using Gaussian Restricted Boltzmann Machines with application to Speaker Verification," in *Proceedings of the 13th Annual Conference of the International Speech Communication Association, Portland, OR, USA*, 2012, pp. 1692-1696.
- [11] T. Stafylakis, P. Kenny, M. Senoussaoui, and P. Dumouchel, "Preliminary Investigation of Boltzmann Machine Classifiers for Speaker Recognition," in *Proceedings Odyssey Speaker and Language Recognition Workshop*, 2012.
- [12] T. Stafylakis, V. Katsouros, P. Kenny, and P. Dumouchel, "A mean shift algorithm for manifolds of exponential families," in *Information Science, Signal Processing and their Applications (ISSPA), 2012 11th International Conference on*, 2012, pp. 511-516.

- [13] T. Stafylakis, V. Katsouros, P. Kenny, and P. Dumouchel, "Mean shift algorithm for exponential families with applications to speaker clustering," in *Odyssey 2012-The Speaker and Language Recognition Workshop*, 2012.
- [14] M. Senoussaoui, N. Dehak, P. Kenny, R. Dehak, and P. Dumouchel, "First attempt of Boltzmann Machines for Speaker Verification," in *Odyssey 2012-The Speaker and Language Recognition Workshop*, 2012.
- [15] E. Hill and P. Dumouchel, "An evidence-based toolset to capture, measure, analyze & assess emotional health," in *International Conference and Exhibition on Addiction Research and Therapy, Las Vegas, Nevada*, 2012.
- [16] P. Cardinal, G. Boulianne, and P. Dumouchel, "The A\* speech recognition system on parallel architectures," in *Information Science, Signal Processing and their Applications (ISSPA), 2012 11th International Conference on*, 2012, pp. 108-113.
- [17] P. Cardinal, G. Boulianne, and P. Dumouchel, "Using A\* for the parallelization of speech recognition systems," in *Acoustics, Speech and Signal Processing (ICASSP), 2012 IEEE International Conference on*, 2012, pp. 4433-4436.
- [18] Y. Attabi and P. Dumouchel, "Anchor Models and WCCN Normalization For Speaker Trait Classification," in *13th Annual Conference of the International Speech Communication Association 2012, INTERSPEECH 2012*, 2012, pp. 522-525.
- [19] Y. Attabi and P. Dumouchel, "Emotion recognition from speech : WOC-NN and class-interaction," in *Information Science, Signal Processing and their Applications (ISSPA), 2012 11th International Conference on*, 2012, pp. 126-131.
- [20] M. Senoussaoui, P. Kenny, P. Dumouchel, and F. Castaldo, "Well-calibrated heavy tailed Bayesian speaker verification for microphone speech," in *Acoustics, Speech and Signal Processing (ICASSP), 2011 IEEE International Conference on*, 2011, pp. 4824-4827.
- [21] M. Senoussaoui, P. Kenny, N. Brummer, E. de Villiers, and P. Dumouchel, "Mixture of PLDA models in I-vector space for gender independent speaker recognition," in *Interspeech 2011 12th Annual Conference of the International Speech Communication Association (ISCA)*, 2011, pp. 25-28.
- [22] Y. Attabi and P. Dumouchel, "Weighted Ordered Classes-Nearest Neighbors : A New Framework for Automatic Emotion Recognition From Speech," in *Interspeech 2011 12th Annual Conference of the International Speech Communication Association (ISCA)*, 2011, pp. 3125-3128.
- [23] M. Senoussaoui, P. Kenny, N. Dehak, and P. Dumouchel, "An i-vector Extractor Suitable for Speaker Recognition with both Microphone and Telephone Speech," in *Proc Odyssey Speaker and Language Recognition Workshop, Brno, Czech Republic, June 2010*, 2010.
- [24] E. Hill and P. Dumouchel, "An evidence-based toolset to capture, measure and assess emotional health," in *Canadian Society Addiction Medicine, Charlottetown, PEI*, 2010.
- [25] P. Dumouchel, N. Dehak, Y. Attabi, R. Dehak, and N. Boufaden, "Cepstral and long-term features for emotion recognition," in *Tenth Annual Conference of the International Speech Communication Association*, 2009.
- [26] N. Dehak, P. Kenny, R. Dehak, O. Glembek, P. Dumouchel, L. Burget, *et al.*, "Support vector machines and joint factor analysis for speaker verification," in *Acoustics, Speech and Signal Processing, 2009. ICASSP 2009. IEEE International Conference on*, 2009, pp. 4237-4240.
- [27] N. Dehak, R. Dehak, P. Kenny, N. Brummer, P. Ouellet, and P. Dumouchel, "Support vector machines versus fast scoring in the low-dimensional total variability space for



- speaker verification," in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2009*, 2009, pp. 4237-4240.
- [28] P. Cardinal, P. Dumouchel, and G. Boulianne, "Using parallel architectures in speech recognition," in *Tenth Annual Conference of the International Speech Communication Association, INTERSPEECH 2009*, 2009, pp. 3039-3042.
- [29] G. Vishwa, G. Boulianne, P. Kenny, and P. Dumouchel, "Advertisement Detection in French Broadcast News Using Acoustic Repetition and Gaussian Mixture Models," in *9th Interspeech Annual Conference of the International Speech Communication Association, Brisbane, Australia*, 2008, pp. 2538-2541.
- [30] P. Kenny, N. Dehak, P. Ouellet, V. Gupta, and P. Dumouchel, "Development of the primary CRIM system for the NIST 2008 speaker recognition evaluation," in *Ninth Annual Conference of the International Speech Communication Association, INTERSPEECH 2008*, 2008, pp. 1401-1404.
- [31] P. Kenny, N. Dehak, V. Gupta, and P. Dumouchel, "A new training regimen for factor analysis of speaker variability," in *Proceedings of 2008 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2008.
- [32] P. Kenny, N. Dehak, R. Dehak, V. Gupta, and P. Dumouchel, "The role of speaker factors in the NIST extended data task," in *Proc. IEEE Odyssey Workshop*, 2008.
- [33] V. Gupta, G. Boulianne, P. Kenny, P. Ouellet, and P. Dumouchel, "Speaker Diarization of French Broadcast News," in *Proceedings of the 2008 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2008), Las Vegas, Nevada, March 30-April 4, 2008.*, 2008, pp. 4365-4368.
- [34] V. Gupta, G. Boulianne, P. Kenny, P. Ouellet, and P. Dumouchel, "Speaker diarization of French broadcast news," in *Acoustics, Speech and Signal Processing, 2008. ICASSP 2008. IEEE International Conference on*, 2008, pp. 4365-4368.
- [35] V. Gupta, G. Boulianne, P. Kenny, and P. Dumouchel, "Advertisement detection in french broadcast news using acoustic repetition and gaussian mixture models," in *Ninth Annual Conference of the International Speech Communication Association, INTERSPEECH 2008*, 2008, pp. 2538-2541.
- [36] R. Dehak, N. Dehak, P. Kenny, and P. Dumouchel, "Kernel combination for SVM speaker verification," in *Proceedings of the Speaker and Language Recognition Workshop (Odyssey)*, 2008.
- [37] N. Dehak, R. Dehak, P. Kenny, and P. Dumouchel, "Comparison between factor analysis and GMM support vector machines for speaker verification," in *The Speaker and Language Recognition Workshop (Odyssey 2008), Stellenbosch, South Africa*, 2008.
- [38] P. Cardinal, P. Dumouchel, G. Boulianne, and M. Comeau, "GPU accelerated acoustic likelihood computations," in *Ninth Annual Conference of the International Speech Communication Association, INTERSPEECH 2008*, 2008, pp. 964-967.
- [39] N. Boufaden and P. Dumouchel, "Leveraging Emotion Detection using emotions from Yes-no answers," in *Ninth Annual Conference of the International Speech Communication Association, INTERSPEECH 2008*, 2008, pp. 241-244.
- [40] V. Gupta, P. Kenny, P. Ouellet, G. Boulianne, and P. Dumouchel, "Multiple feature combination to improve speaker diarization of telephone conversations," in *Automatic Speech Recognition & Understanding, 2007. ASRU. IEEE Workshop on*, 2007, pp. 705-710.
- [41] R. Dehak, N. Dehak, P. Kenny, and P. Dumouchel, "Linear and non linear kernel GMM supervector machines for speaker verification," in *Eighth Annual Conference of the*

- International Speech Communication Association, INTERSPEECH 2007*, 2007, pp. 733-736.
- [42] N. Dehak, P. Kenny, and P. Dumouchel, "Continuous prosodic features and formant modeling with joint factor analysis for speaker verification," in *Eighth Annual Conference of the International Speech Communication Association, INTERSPEECH 2007*, 2007, pp. 853-856.
- [43] N. Boufaden, T. L. Hoang, and P. Dumouchel, "Détection et prédiction de la satisfaction des usagers dans les dialogues personne-machine," in *Actes de la Conférence sur le Traitement Automatique des Langues Naturelles (TALN), Toulouse, 2007*.
- [44] P. Kenny, V. Gupta, G. Boulianne, P. Ouellet, and P. Dumouchel, "Feature normalization using smoothed mixture transformations," in *Ninth International Conference on Spoken Language Processing, INTERSPEECH 2006*, 2006, pp. 25-28.
- [45] P. Kenny, G. Boulianne, P. Ouellet, and P. Dumouchel, "The Geometry of the Channel Space in GMM-Based Speaker Recognition," in *Speaker and Language Recognition Workshop, 2006. IEEE Odyssey 2006 : The*, 2006, pp. 1-5.
- [46] P. Kenny, G. Boulianne, P. Ouellet, and P. Dumouchel, "Improvements in factor analysis based speaker verification," in *Acoustics, Speech and Signal Processing, 2006. ICASSP 2006 Proceedings. 2006 IEEE International Conference on*, 2006, pp. 113-116.
- [47] M. Mihoubi, D. O'Shaughnessy, and P. Dumouchel, "Relevant Information Extraction for Discriminative Training Applied to Speaker Identification," in *Ninth European Conference on Speech Communication and Technology*, 2005, pp. 3097-3100.
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- [49] M. Mihoubi, D. O'Shaughnessy, and P. Dumouchel, "The Use of Typical Sequences for Robust Speaker Identification," in *Eighth International Conference on Spoken Language Processing*, 2004.
- [50] P. Kenny and P. Dumouchel, "Disentangling speaker and channel effects in speaker verification," in *Acoustics, Speech, and Signal Processing, 2004. Proceedings.(ICASSP'04). IEEE International Conference on*, 2004, pp. 37-40.
- [51] P. Kenny and P. Dumouchel, "Experiments in speaker verification using factor analysis likelihood ratios," in *ODYSSEY04-The Speaker and Language Recognition Workshop*, 2004.
- [52] M. Mihoubi, G. Boulianne, and P. Dumouchel, "Discriminative Training and Maximum Likelihood Detector for Speaker Identification," in *Eighth European Conference on Speech Communication and Technology*, 2003.
- [53] P. Kenny, M. Mihoubi, and P. Dumouchel, "New MAP estimators for speaker recognition," in *Eighth European Conference on Speech Communication and Technology*, 2003.
- [54] G. Boulianne, J.-F. Beaumont, P. Cardinal, M. Comeau, P. Ouellet, and P. Dumouchel, "Automatic segmentation of film dialogues into phonemes and graphemes," in *Eighth European Conference on Speech Communication and Technology*, 2003.
- [55] N. Smali, P. Cardinal, G. Boulianne, and P. Dumouchel, "Disambiguation of finite-state transducers," in *Proceedings of the 19th international conference on Computational linguistics-Volume 1*, 2002, pp. 1-7.

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## Brevets

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*Autres contributions*

- [1] Dumouchel, P., Lecturer, Association des industries de la langue, Montréal, Canada, October 20<sup>th</sup>, 2011
- [2] Dumouchel, P., Lecturer, Canada-EU Future Internet Workshop, March 23<sup>rd</sup> – 24<sup>th</sup> 2011, Waterloo, Canada
- [3] Dumouchel, P., Keynote Lecturer, Metrics in Closed Captioning, Barcelona University, July 2009
- [4] Dumouchel, P., Lecturer, 2<sup>nd</sup> E-Inclusion Symposium, March 6<sup>th</sup>, 2009, Montréal, Qc
- [5] Dumouchel, P., Lecturer, Languages and The Media, 7<sup>th</sup> International Conference on Language Transfer in Audiovisual Media, October 29-31, 2008, Berlin, Germany
- [6] Dumouchel, P., Keynote Lecturer, Audiovisual Translation, Montpellier, France, July 2007
- [7] Dumouchel, P., Lecturer, Canada-Europe E-Inclusion Symposium, March 15, 2007, Montréal, Québec, Canada
- [8] Dumouchel, P., Keynote Lecturer, *Real-Time Closed Captioning*, 2007 Canadian Hard of Hearing Association Conference, Vancouver, BC, June 2007
- [9] Dumouchel, P., Keynote Lecturer at the APEC Telecommunications and Information Working Group, *C3Grid and E-Inclusion*, Calgary, Canada, 23-28 April 2006
- [10] Dumouchel, P., Keynote Lecturer at Canadian Booth, *E-Inclusion, a new Canadian Initiative*, E-Challenges, Ljubljana, Slovenia, October 19-21, 2005
- [11] Dumouchel, P., Keynote Lecturer, *Exploiting Audio-visual Metadata*, Canadian Metadata Forum, Ottawa, Canada, September 27-28, 2005
- [12] Dumouchel, P., Keynote Lecturer, *CRIM's work on speech recognition and Captioning*, Commonwealth Hansard Editors Association Conference, Alberta, Canada, August 8<sup>th</sup>, 2005
- [13] Dumouchel, P., Keynote Lecturer, *Real-Time Closed Captioning*, 2005 Canadian Hard of Hearing Association Conference, Kelowna, BC, June 5<sup>th</sup>, 2005
- [14] Dumouchel, P., Keynote Lecturer, *L'indexation et la recherche d'information dans un document audio-visuel: est-ce possible aujourd'hui?*, Petits Déjeuners Innovation, Laboratoires universitaires Bell, April 16, 2004.
- [15] Dumouchel, P., Keynote Lecturer at Quebec Booth, *Modèle d'infrastructure de logiciel libre en éducation*, World Summit on the Information Society, Geneva Palexpo, December 10-12, 2003.
- [16] Dumouchel, P., Keynote Lecturer at Canadian Booth, *R&D at CRIM*, IST2003, Milan, Italy, October 2-4, 2003.
- [17] Dumouchel, P., Keynote Lecturer at ED-Media 2000, World Conference on Educational Multimedia, Hypermedia and Telecommunications, June 26 - July 1<sup>st</sup>, 2000, Montreal, Canada.

### ***Transferts technologiques vers l'industrie***

#### **Projets industriels**

- [1] Projet de recherche avec Bell Canada pour la détection des émotions des clients d'Émilie à partir du signal de parole.
- [2] Développement de STDirect, un système de production des sous-titres d'émissions de télévision en temps réel. Les clients actuels sont: Groupe TVA, RDS, Chambre des Communes et TQS.
- [3] RAP: projet en collaboration avec CNRC-ITI en indexation automatique de documents audio de la Chambre des Communes
- [4] MADIS : projet en collaboration avec l'Office national du film en indexation automatique de documents audiovisuels
- [5] Transfert technologique à Ryshco Media de la technologie de la parole pour une application de post-synchronisation de film.
- [6] Projet de recherche avec Locus Dialogue dans le domaine de la recherche de graphe par transduction.
- [7] Projet de recherche avec le Speech Business Unit de Nortel dans le domaine de la recherche de graphe par transduction.
- [8] Projet de recherche avec la Défense nationale du Canada dans le domaine de la détection automatique de thèmes à partir du signal de parole.
- [9] Projet de recherche avec la Défense nationale du Canada dans le domaine de l'identification du locuteur à partir du signal téléphonique.
- [10] Développement d'un prototype de reconnaissance du locuteur pour Ovalsys.

#### **Prix**

- [1] 2004 Canarie IWAY Award winner: Adaptive Technology
- [2] Prix OCTAS 2005 Partenariat stratégique de la Fédération informatique du Québec
- [3] Prix Innovation 2005 de l'ADRIQ, Catégorie Partenariat
- [4] 2005 CATAAlliance Innovation Awards
- [5] Interspeech 2009 Emotion Challenge Award, Open Performance Sub-Challenge Prize

#### **Activités de représentations actuelles**

- [1] Membre de l'Ordre des ingénieurs du Québec
- [2] Membre de l'IEEE
- [3] Membre de l'International Speech Communication Association
- [4] Membre du comité de rédaction des Annales des Télécommunications
- [5] Membre du comité d'évaluation de bourses du FQRNT
- [6] Membre du comité d'évaluation des professeurs (ETS)

#### **Activités de représentation passées**

- [1] Membre du comité de programme du Colloque de l'OIQ en 2010

- [2] Membre du comité de programme du IEEE Workshop on Automatic Speech Recognition and Understanding, 2009
- [3] Membre du comité bi-partite sur la tâche professorale (ETS)
- [4] Membre du comité organisateur de la Boule de cristal du CRIM 2009
- [5] Membre du comité organisateur de la Boule de cristal du CRIM 2008
- [6] Membre du comité industriel sur la refonte du programme FQRNT
- [7] Représentant québécois du Consortium Canada-Europe IST-EC de la communauté européenne
- [8] Représentant canadien du Réseau francophone des industries de la langue (Francil) de l'Association Universitaire Francophone (AUF)
- [9] Chroniqueur scientifique en technologie de l'information à l'émission Les Années Lumières de la radio de Radio-Canada pendant deux années
- [10] Membre du comité d'orientation de la réorganisation des revues savantes du FCAR
- [11] Professeur-invité à l'INRS-Télécommunications
- [12] Membre du comité d'orientation de l'Institut de technologie de l'information du CNRC, Ottawa, Canada
- [13] Membre du comité de gestion du Laboratoire universitaire Bell (LUB)
- [14] Représentant québécois du comité de gestion pan-canadien du Réseau Alliance-Partner de Precarn

#### **Autres activités**

- [1] Chef d'orchestre et arrangeur musical du Grand Orchestre de Châteauguay (GOC) depuis 21 années. Le GOC est un orchestre philharmonique de 50 musiciens qui a accompagné plusieurs artistes dont : France D'Amour, Daniel Lavoie, Martin Deschamps, Éric Lapointe, IMA, Nanette Workman, Yves Duteil, Marc Hervieux, Marie-Ève Janvier, Jean-François Breau, Richard Séguin, Marie-Denise Pelletier, Johanne Blouin, Patrick Norman, Luce Dufault, Élisabeth Blouin-Bratwaite et Natasha St-Pier.
- [2] Musicien de l'année 2007 au Concours de musique classique Vallée des Champs.