



## Renseignements détaillés

### High-fidelity, directable animation transfer using facial decomposition on optimized micro-sequences

#### Détails de la recherche

<b>Année de concours :</b>	2017	<b>Année financière :</b>	2018-2019
<b>Nom de la personne :</b>	Popa, Tiberiu	<b>Institution :</b>	Concordia University
<b>Département :</b>	Computer Science and Software Engineering	<b>Province :</b>	Québec
<b>Montant :</b>	50 500	<b>Versement :</b>	1 - 1
<b>Type de programme :</b>	Subventions de recherche et développement coopérative	<b>Comité évaluateur :</b>	Cté de décision interne - PPR
<b>Sujet de recherche :</b>	Traitement des images	<b>Domaine d'application :</b>	Technologie de l'information, des ordinateurs et des réseaux de communications
<b>Chercheurs associés :</b>	Paquette, Eric E	<b>Partenaires :</b>	Audio Z

#### Sommaire du projet

\*\*The entertainment industry delivers media products around the world to people speaking a large number of distinct languages. Media products such as TV or internet spots, movies and video games, typically consist of a video and sound stream. To accommodate different languages, the producers typically re-generate the sound stream in different language in a post-production step, a process known as dubbing. While it still takes a lot of effort to re-generate the sound stream (dubbing), one of the remaining open challenges both from a research and production point of view is how to synchronize the original video stream with the new audio stream. The lack of synchronization creates a very uncanny effect that takes away from the experience since the lip motion of the actors does not correspond to the soundtrack. In this project we propose a practical solution to the dubbing synchronization problem, producing natural results that can be used in a production studio. To achieve that, we created a strategic partnership with AudioZ, a production studio located in Montreal with whom we will collaborate on this project. We propose a video synthesis method that blends animation focusing on the lip area while preserving the facial expression of the original actor. Our method uses novel optimization techniques to avoid the common undesired uncanny valley effect of video synthesis.\*\*\*\*\*