

Journal Articles*Submitted / Under revision*

Gonzalez-Diaz I, Molina-Moreno M, Benois-Pineau J, **de Rugy A** (Under revision) Asymmetric multi-task learning for interpretable gaze-driven grasping action forecasting. *IEEE Journal of Biomedical Health Informatics*.

Lento B, Leconte V, Bardisbanian L, Doat E, Segas E, **de Rugy A** (Under Revision) Bioinspired head-to-shoulder reference frame transformation for movement-based arm prosthesis control. *IEEE Robot and Automation Letters*.

Lento B, Segas E, Leconte V, Doat E, Danion F, Péteri R, Benois-Pineau J, **de Rugy A** (Under Revision) 3D-ARM-Gaze: a public dataset of 3D Arm Reaching Movements with Gaze information in virtual reality. *Scientific Data*.

Segas E, Leconte V, Doat E, Cattaert D, **de Rugy A** (Submitted) Movement-based prosthesis control with angular trajectory is getting closer to natural arm coordination. *Journal of Neuroengineering and Rehabilitation*.

Preprints

1. Lento B, Segas E, Leconte V, Doat E, Danion F, Péteri R, Benois-Pineau J, **de Rugy A** (2024) 3D-ARM-Gaze: a public dataset of 3D Arm Reaching Movements with Gaze information in virtual reality. *bioRxiv*. <https://www.biorxiv.org/content/10.1101/2024.01.30.577386v1>
2. Segas E, Leconte V, Doat E, Cattaert D, **de Rugy A** (2024) Movement-based prosthesis control with angular trajectory is getting closer to natural arm coordination. *Authorea*. DOI: [10.22541/au.171386556.60813345/v1](https://doi.org/10.22541/au.171386556.60813345/v1)
3. Cattaert D, Guemann M, Paclat F, Chung B, Oudeyer PY, **de Rugy A** (2024) Role of spinal sensorimotor circuits in triphasic command: a simulation approach using Goal Exploration Process, *bioRxiv*, <https://www.biorxiv.org/content/10.1101/2023.12.22.572982v1>

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4. Coudière A, **de Rugy A**, Danion F (2024) Right-left hand asymmetry in manual tracking: When poorer control is associated with better adaptation and interlimb transfer. *Psychological Research*, 88(2) 594-606.
5. Ségas E, Mick S, Leconte V, Dubois O, Klotz R, Cattaert D, **de Rugy A** (2023) Intuitive movement-based prosthesis control enables arm amputees to reach naturally in virtual reality. *eLife* 12, RP87317 <https://elifesciences.org/articles/87317>
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Conferences

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121. Chye L, Riek S, **de Rugy A**, Carroll TJ (2014) Force twitches evoked by TMS in a passive limb shift according to the direction of impending contralateral muscle activation late in motor preparation, 12th Int. Conf. on Cognitive Neuroscience, Australia, Brisbane, 27-31 July 2014.
122. Carroll T, Poh E, Duarte Ferreira T, **de Rugy A** (2013) Inter-limb generalization of visuomotor adaptation is similar for sagittal and horizontal plane reaching, *Society for Neuroscience 2013*, Society for Neuroscience: Washington.
123. Chye L, Riek S, **de Rugy A**, Carroll TJ (2013) Do TMS-evoqued twitches shift towards a ballistic training direction in extrinsic or muscle-based coordinates? *Society for Neuroscience 2013*, Society for Neuroscience: Washington.
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127. Marinovic W, Tresilian J, **de Rugy A**, Sidhu S, Riek S (2013) Corticospinal excitability and the early release of prepared responses by loud sounds 11th Motor Control and Human Skill Conference, Melbourne, 27-29 November 2013.
128. **de Rugy A** (2012) Optimisation du contrôle des muscles pour les neuroprothèses. *Journées Intégration corporelle de la technique*, Nov 29-30, ISIR/UPMC Paris, France.
129. **de Rugy A**, Loeb GE, Carroll TJ (2012) Motor coordination is habitual rather than optimal. *XIX Congress of the International Society of Electrophysiology and Kinesiology*, Brisbane, Australia.

130. Carroll TJ, **de Rugy A**, Howard IS, Ingram JN, Wolpert DM (2012) Inter-limb transfer of a force-field perturbation aligned in extrinsic and joint-based coordinates is limited. *XIX Congress of the International Society of Electrophysiology and Kinesiology*, Brisbane, Australia.
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132. Jahanabadi H, Carroll TJ, Cresswell AG, Loeb GE, Davoodi R, **de Rugy A** (2012). Energy cost implications of changes in load sharing between muscles during the isometric condition at the wrist predicted via a model of muscle energetics. *XIX Congress of the International Society of Electrophysiology and Kinesiology*, Brisbane, Australia.
133. Selvanayagam VS, Riek S, **de Rugy A**, Carroll TJ (2012). Use-dependent learning generalizes in extrinsic coordinates and can be explained by altered synaptic weights in a population coding model. *XIX Congress of the International Society of Electrophysiology and Kinesiology*, Brisbane, Australia.
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141. **de Rugy A**, Marinovic W, Wallis G, (2011) Neural compensation for complex accelerations in object interception. The 10th Motor Control and Human Skill Conference, Nov 29 – dec 2, 2011, Mandurah, WA.
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145. Carroll TJ, **de Rugy A** (2010) Inter-limb generalization of isometric visuomotor adaptation is enhanced when the perturbation is aligned in retinal and joint coordinates. *Society for Neuroscience CD-ROM 2010, Society for Neuroscience: Chicago*.
146. Stosic J, Carroll TJ, **de Rugy A** (2010) Force synchrony enhances the stability of rhythmic multijoint arm coordination. *The 15th Annual Congress of the ECSS, Antalya, Turkey*, July 2010.
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Seminar/Invited talks

177. **de Rugy A** (2024) Hybrid sensorimotor control of a prosthetic arm. Séminaire de laboratoire, INCIA, 4 Septembre, Bordeaux, France.
178. **de Rugy A** (2023) Contrôle sensorimoteur hybride d'une prothèse de bras. Séminaire de laboratoire, le CeRCA, 14 Novembre 2023, Poitiers, France.
179. **de Rugy A** (2022) Contrôle sensorimoteur hybride d'une prothèse de bras. 1^{ère} Edition de l'Ecole du GT8, Apprentissage et Neurosciences pour la robotique (GDR Robotique), 17-20 Octobre 2022, Moliets et Maa, France.
180. **de Rugy A** (2021) Contrôle sensorimoteur hybride d'une prothèse de bras. Journée scientifique de l'INCIA, 25 Nov 2021, Bordeaux.
181. **de Rugy A** (2021) Biomimetic prosthesis and robotic arm control from residual movements plus contextual information. Workshop - Many-core architectures in robotics, image analysis and signal processing, Nov 3-5 2021, Budapest, Hungary.
182. **de Rugy A** (2021) Le temps dans les mécanismes sensorimoteur du contrôle de l'action. *1ère matinale interdisciplinaire de l'ED SP2*, 24 Mars 2021, Bordeaux.
183. **de Rugy A** (2019) Stratégie de contrôle bio inspiré d'une prothèse robotique de bras avec vision artificielle. *Journée de restitution Osez l'Interdisciplinarité de la MITI (Mission pour les Initiatives Transverses et Interdisciplinaire)*, Siège du CNRS, 20-21 Nov 2019, Paris.
184. **de Rugy A** (2019) Hybrid sensorimotor control of a prosthetic arm. Talk at School of Psychology, Curtin University, June 21st, Perth, Australia.

185. **de Rugy A** (2019) Hybrid sensorimotor control of a prosthetic arm. Talk at the center for sensorimotor performance, HMNS, The University of Queensland, June 13th, Brisbane, Australia.
186. **de Rugy A** (2019) Contrôle sensorimoteur hybride d'une prothèse de bras. *Workshop Pluridisciplinaire «Avancées en contrôle hybride robotique des prothèses des membres supérieurs»*, May 24th, 1019, UGECAM Aquitaine, La Tour de Gassies, Bordeaux.
187. **de Rugy A**, Lapeyre E (2019) La bionique au service de l'homme réparé: exemple chez les amputés. Conférence-débat grand public dans le cadre de la Semaine du Cerveau (SdC), médiathèque Jacques Ellul de Pessac, 15 Mars 2019, Bordeaux.
188. **de Rugy A** (2018) Contrôle sensorimoteur hybride d'une prothèse de bras. 2^{ème} journée Scientifique du centre d'excellence BIND, innovation technologique et maladies neurodégénératives, 23 novembre 2018, Bordeaux.
189. **de Rugy A** (2018) Contrôle sensorimoteur hybride d'une prothèse de bras. 2^{ème} journée d'appareillage: Les amputés du membre supérieur et leurs appareillages, 14 Septembre 2018, Bordeaux.
190. **de Rugy A** (2017) Hybrid sensorimotor control of a prosthetic arm. Talk at the faculty of information technology and bionics, Pazmany Peter Catholic University, Decembre 15th 2017, Budapest, Hungaria.
191. **de Rugy A** (2017) Contrôle sensorimoteur hybride d'une prothèse de bras. Séminaire au CIRRIIS, Université Laval, 8 Décembre 2017, Québec, Canada.
192. **de Rugy A** (2017) Contrôle sensorimoteur hybride d'une prothèse de bras. CogTalk de L'ASCOERGO (association des étudiants en sciences cognitives et ergonomie), 21 Novembre 2017, Bordeaux.
193. **de Rugy A** (2017) Toward biomimetic and adaptable myoelectric controls for prosthesis. *Club du Motoneurone & CMLR Meeting, 15-16 May 2017, Bordeaux.*
194. **de Rugy A** (2017) Toward biomimetic and adaptable myoelectric controls for prosthesis. *Bordeaux Neurocampus Day, 5 April, Bordeaux.*
195. **de Rugy A** (2016) Toward biomimetic and adaptable myoelectric controls for prosthesis. *Journée du GT8 Robotique et Neurosciences du CNRS, 17 Nov 2016, Bordeaux.*
196. **de Rugy A** (2015) Natural control of muscles and implications for myoelectric prosthesis – 17 Sept 2015, Séminaire INRIA, Bordeaux, France.
197. **de Rugy A** (2014) Optimizing muscle control for neural prosthesis – 1 Oct 2014, Séminaire de l'Institut des Sciences du Mouvement Etienne-Jules Marey, Marseille, France.
198. **de Rugy A** (2014) Optimizing muscle control for neural prosthesis – 14 Feb 2014, Séminaire de l'équipe POTIOC (M Hachet & F. Lotte), INRIA, Bordeaux, France.
199. **de Rugy A** (2014) Optimizing muscle control for neural prosthesis – 13 Feb 2014, Séminaire de l'équipe FLOWERS (P.-Y. Oudeyer), INRIA, Bordeaux, France.
200. **de Rugy A** (2014) Muscle coordination is habitual rather than optimal – 12 Feb 2014, Journal Club INCIA, Bordeaux, France.
201. **de Rugy A**, Loeb GE, Carroll TJ (2013) Optimisation du contrôle des muscles pour les neuroprothèses. 8 March 2013, seminar of the FNB (Fédération Bordeaux Neurosciences), Bordeaux, France.
202. **de Rugy A**, Loeb GE, Carroll TJ (2012) Optimizing muscle control for neural prosthesis – 17 dec 2012, Séminaire de l'Institut de Recherche en Informatique de Toulouse (IRIT), Toulouse, France
203. **de Rugy A**, Loeb GE, Carroll TJ (2012) Optimizing muscle control for neural prosthetics. 23 Nov 2012, seminar of the Sport Centre, University of Malaya, Kuala Lumpur, Malaysia.
204. **de Rugy A**, Loeb GE, Carroll TJ (2012) Muscle coordination is habitual rather than optimal. 12 Jan 2012, seminar of INSERM U1093, Dijon, France.
205. **de Rugy A**, Loeb GE, Carroll TJ (2011) Motor coordination is habitual rather than optimal – 7 Nov 2011, seminar series on Engineering, Neuroscience and Health, University of Southern California L.A.
206. **de Rugy A**, Loeb GE, Carroll TJ (2011) Motor coordination is habitual rather than optimal – 12 august 2011, HMS seminar, The University of Queensland, Brisbane, Australia.

207. **de Rugy, A.** (2009) Influence des contraintes neuromusculaires et biomécaniques sur le contrôle des mouvements multi-articulaires du bras. Séminaire LNB, Laboratoire de Neurobiologies de la Cognition, St Charles, Marseille, 5 Oct 2009.
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210. **de Rugy, A.** (2006). Neuro-Musculo-Skeletal Couplings in Rhythmic Multijoint Arm Movement. Presentation for the Alfred E. Mann Institute for Biomedical Engineering, University of Southern California, Los Angeles, USA, le 19 Octobre 2006.
211. **de Rugy, A.** (2006). Neuro-Musculo-Skeletal Couplings in Rhythmic Multijoint Arm Movement. Presentation pour the Health and Exercise Science Unit, School of Medical Sciences, University of New South Wales, Australia, le 4 Septembre 2006.
212. **de Rugy, A.** (2006). Neuro-Musculo-Skeletal Couplings in Rhythmic Multijoint Arm Movement. Presentation pour the School of Human Movement Studies , University of Queensland, Australia, le 26 Mai 2006.
213. **de Rugy, A.** (2004). Control and adaptation of rhythmic movements: Model and experiment. Seminar of the Perception and Motor Control Laboratory, University of Queensland, Australia, le 4 Mars 2004.
214. **de Rugy, A.** (2003). Contrôle et adaptation des mouvements rythmiques: modèle et expérience. Séminaire de l'INCM, Marseille, le 21 Novembre 2003.
215. **de Rugy, A., Yu, H., Wei, K., Sternad, D.** (2003). Control of different rhythmic movement: Model and experiment. Action Club, Dpt. of Kinesiology, Pennsylvania State University, USA, le 14 fevrier 2003.
216. **de Rugy, A., Montagne, G., Buekers M.J., Taga, G., & Laurent, M.** (2001). Information and model for human locomotor pointing control. Dpt. of Exercise and Sport Science, Manchester Metropolitan University, England, le 12 avril 2001.
217. **de Rugy, A., Montagne, G., Buekers M.J., Taga, G., & Laurent, M.** (2001). Information and model for human locomotor pointing control. Action Club, Dpt. of Kinesiology, Pennsylvania State University, USA, le 2 mai 2001.
218. **de Rugy, A., Montagne, G., Buekers M.J., & Laurent, M.** (2000). How to reach with a foot while viewing with the eyes. National Rehabilitation Center for the Disabled, Namiki, Tokorozawa, Japan, le 27 novembre 2000.
219. **de Rugy, A., Montagne, G., Buekers M.J., & Laurent, M.** (2000). Perception-Action coupling during locomotor pointing. Dpt. of Physical Education, University of Tokyo, Japan, le 12 decembre 2000.