

# ARNAUD ALLEMANG--TRIVALLE

+33(0) 6-32-97-86-96 ◊ Stuttgart, Germany

[arnaudallemang@gmail.com](mailto:arnaudallemang@gmail.com) ◊ [linkedin.com/in/arnaud-allemang-trivalle](https://www.linkedin.com/in/arnaud-allemang-trivalle) ◊ [arnaudat.me](http://arnaudat.me)

## EDUCATION

---

### Doctor of Philosophy in Computer Science

IMT Atlantique (FR) and Max Planck Institute for Intelligent Systems (DE) 2021-2025 (expected)

Thesis: “Automated Assessment and Intervention Models for Maximizing Situation Awareness”

Co-advised by: Dr. Mathieu Chollet, Dr. Caroline G.L. Cao and Dr. Katherine Kuchenbecker

### Master of Science in Human and Biological Robotics

Imperial College London (UK) 2020 - 2021

Thesis: “Human Capability in Trimanual Manipulation”

Advised by: Dr. Etienne Burdet

### Master of Science in Engineering - Diplôme d’Ingénieur

IMT Atlantique (FR) 2018 - 2021

### Preparatory Classes (CPGE), MPSI - MP\*,

Lycée Janson-de-Sailly (FR) 2016 - 2018

## RESEARCH INTERESTS

---

Human Factors, Multimodal Interactive Systems, Social Signal Processing, Human-Computer Interaction, Wearable Devices

## RESEARCH AND PROFESSIONAL EXPERIENCE

---

### Research Assistant

IMT Atlantique (FR) Jul - Nov 2021

Topic: Literature review on human factors modelling and monitoring in manufacturing setting.

### Research and Development Trainee Engineer

Light & Shadows (FR) Jun - Sept 2020

Topic: Development of tools, solutions and scenarios around interactive manipulation in virtual reality.

## AWARDS AND SCHOLARSHIPS

---

**Travel Grant**, Summer School on Situation Awareness in Cognitive Technologies (ISACT) 2021

**Dual Degree Scholarship** (“Bourse de mobilité diplômante”), Fondation Mines-Télécom 2020

**Scholarship** for outstanding M.Sc. applicants, Department of Bioengineering, Imperial College London 2020

**Envoléo Grant**, Région Pays de la Loire 2020

**Audience Award**, Medical Augmented Reality Summer School (MARSS) 2019

**Start Up Award**, IMT Disrupt’Campus Challenge 2019

## PUBLICATIONS

---

### Journal Articles

- [J1] A. Allemang–Trivalle, J. Donjat, G. Bechu, G. Coppin, M. Chollet, O. W. Klaproth, A. Mitschke, A. Schirrmann, and C. G. Cao, “Modeling Fatigue in Manual and Robot-Assisted Work for Operator 5.0,” *IISE Transactions on Occupational Ergonomics and Human Factors*, vol. 0, no. 0, pp. 1–13, 2024. DOI: [10.1080/24725838.2024.2321460](https://doi.org/10.1080/24725838.2024.2321460).

### Peer-Reviewed Conference Papers

- [C1] A. Allemang–Trivalle, J. Donjat, G. Bechu, G. Coppin, O. W. Klaproth, A. Mitschke, A. Schirrmann, M. Chollet, and C. G. L. Cao, “Human Model For Industrial System And Product Design In Industry 5.0: A Case Study,” in *IISE Annual Conference & Expo 2023*, 2023.
- [C2] A. Allemang–Trivalle, J. Eden, E. Ivanova, Y. Huang, and E. Burdet, “How long does it take to learn trimanual coordination?” In *2022 31st IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)*, ISSN: 1944-9437, 2022, pp. 211–216. DOI: [10.1109/RO-MAN53752.2022.9900646](https://doi.org/10.1109/RO-MAN53752.2022.9900646).
- [C3] A. Allemang–Trivalle, J. Eden, Y. Huang, E. Ivanova, and E. Burdet, “Comparison of human trimanual performance between independent and dependent multiple-limb training modes,” in *2022 9th IEEE RAS/EMBS International Conference for Biomedical Robotics and Biomechatronics (BioRob)*, ISSN: 2155-1782, 2022, pp. 1–6. DOI: [10.1109/BioRob52689.2022.9925417](https://doi.org/10.1109/BioRob52689.2022.9925417).

### Short Peer-Reviewed Conference Papers and Abstracts

- [S1] A. Allemang–Trivalle, “Enhancing Surgical Team Collaboration and Situation Awareness through Multimodal Sensing,” in *International Conference on Multimodal Interaction*, ser. ICMI '23, New York, NY, USA: Association for Computing Machinery, 2023, pp. 716–720. DOI: [10.1145/3577190.3614233](https://doi.org/10.1145/3577190.3614233).

### Posters

- [P1] N. Mekhenane, C. Cormi, A. Allemang–Trivalle, D. Azoulay, R. Adam, D. Cherqui, E. Vibert, and M.-A. Allard, *Identification des erreurs et évènements indésirables peropérateur avec un système “boite noire” au cours d’hépatectomies électives*, Poster, 19ème Congrès Commun Francophone de Chirurgie Digestive et Hépatobilio-Pancréatique (SFCD-ACHBT), 2023.
- [P2] A. Allemang–Trivalle, M. Chollet, C. G. L. Cao, and K. J. Kuchenbecker, *Monitoring The Surgical Team: Approaches and Challenges*, Poster, Stuttgart ELLIS (European Lab for Learning & Intelligent Systems), 2022.

### INVITED TALKS

---

Max Planck Institute for Intelligent Systems

2021

### TEACHING

---

#### Graduate Courses

**Soft Skills** (Lecturer, 3h, 74 scrub-nurse students)

Institut de formation des infirmiers de bloc opératoire de l’AP-HP (IFIBODE)

Feb 2023

Paris, FR

#### Undergraduate Courses

**Database and Interactive Software** (Teaching assistant, 32h, 21 engineering students)

IMT Atlantique

Mar - Jun 2022

Nantes, FR

## PROFESSIONAL SERVICES

---

### Student Volunteer

**Conference:** 2023 25th ACM International Conference on Multimodal Interaction (ICMI)

### Reviews

**Conference Papers:** IEEE International Conference on Robotics and Automation (ICRA), IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)

## LEADERSHIP AND SERVICE

---

**IMT Atlantique Junior Enterprise (Junior Atlantique),** Communication Manager *2018-2019*

**IMT Atlantique Graduation Gala,** Sponsorship and Partnership Manager *2019*