Professional Profile: Dr. Luis Fernando D'Haro Enríquez

1. Professional and Academic Career

Dr. Luis Fernando D'Haro Enríquez possesses a distinguished academic and professional background marked by consistent high achievement, significant international experience, and a clear progression to senior academic leadership. His career trajectory demonstrates a strong foundation in electronic engineering and telecommunications, evolving into specialized expertise in human language technology, particularly spoken dialogue systems and conversational AI.

His professional and academic positions, ordered chronologically from most recent, are as follows:

- Associate Professor (Titular Universidad), Departmento de Ingeniería Electrónica, Universidad Politécnica de Madrid (UPM), Spain (July 2018 – Present): Dr. D'Haro currently holds a senior, permanent academic position at UPM, a leading technical university in Spain.¹ This role, also referred to as "Profesor Contratado Doctor" in the Spanish system ⁴, signifies significant academic standing, research independence, and responsibilities in teaching, research leadership, and student supervision within the Department of Electronic Engineering.³ His promotion to "Titular Universidad" in July 2023 further confirms his established position.³
- Research Scientist II, Department of Human Language Technology, Institute for Infocomm Research (I2R), A*STAR, Singapore (May 2014

 March 2018): Prior to his current role at UPM, Dr. D'Haro spent four years as a Research Scientist at I2R, A*STAR, a prestigious government-funded research institute in Singapore.¹ During this postdoctoral period, he focused on advancing research in natural language processing and dialogue systems, collaborating significantly with leading researchers like Prof. Haizhou Li.⁶ This international experience at a globally recognized center for human language technology was pivotal in deepening his expertise in conversational AI and related fields.
- Assistant Professor, Departmento de Ingeniería Electrónica, UPM, Spain (October 2010 – May 2014): Following his initial teaching appointment and PhD completion, Dr. D'Haro held an Assistant Professor position at UPM.² This represented a standard progression within the Spanish academic system, involving increasing research and teaching responsibilities.
- Teaching Professor, Departmento de Ingeniería Electrónica, UPM, Spain (December 2007 – October 2010): Dr. D'Haro began his faculty career at UPM as a Teaching Professor.² This position was likely held concurrently with the final stages of his PhD or immediately following its completion, providing foundational experience in university-level instruction.
- PhD in Telecommunications Engineering, UPM, Spain (Studies: 2003 2009; Degree Awarded: May 2009): Dr. D'Haro earned his doctorate from UPM, achieving the highest possible distinction, Summa Cum Laude.
 Furthermore, his doctorate was awarded the European Mention, signifying compliance with rigorous international standards and recognition across

Europe.⁶ These distinctions underscore the exceptional scientific merit and quality of his doctoral research.¹

- Visiting Researcher, AT&T Research Labs, USA (During PhD): His doctoral studies included a prestigious visiting research position at AT&T Research Labs, a world-renowned industrial research institution.¹ This experience provided early exposure to cutting-edge research in a leading industry environment and contributed to his international network. This visit also led to collaborative intellectual property generation.⁶
- Visiting Researcher, I6 HLT-PR Group, RWTH Aachen University, Germany (During PhD): Dr. D'Haro also undertook a research visit to the Human Language Technology and Pattern Recognition group at RWTH Aachen University, a leading European academic center in the field.⁶ This further broadened his international research exposure and collaborative connections during his formative doctoral period.
- Postdoctoral Research Stay, Speech@FIT, Brno University of Technology (BUT), Czech Republic (Post-PhD, Pre-A*STAR): Following his PhD, Dr. D'Haro completed a postdoctoral research stay at BUT's Faculty of Information Technology, specifically within the Speech@FIT group.¹ This position provided further specialized research experience in speech and language technologies before his move to Singapore.
- Teaching Professor, Departamento de Ingeniería Electrónica, Universidad Autónoma de Occidente (UAO), Cali, Colombia (2001 – 2002): Before embarking on his doctoral studies in Spain, Dr. D'Haro gained initial teaching experience at his alma mater in Colombia.²
- Electronic Engineer Degree, Universidad Autónoma de Occidente (UAO), Cali, Colombia (Graduated August 2000): Dr. D'Haro completed his foundational engineering degree at UAO.² He graduated as the *top student* in his cohort and received a *national award* for his final degree project/thesis, demonstrating outstanding academic aptitude from the outset of his career.⁶

Dr. D'Haro's career path clearly illustrates a strategic international trajectory, beginning with top academic honors in Colombia, followed by advanced studies and early faculty roles in Spain, significantly enriched by research stays at leading institutions in Germany, the USA, the Czech Republic, and Singapore. This extensive international exposure provided diverse perspectives from both academic and industrial-adjacent research environments before his return to a senior academic position at UPM. Throughout this journey, formal recognitions such as graduating top of his class, receiving a national thesis award, and earning *Summa Cum Laude* with a European Mention for his PhD highlight a consistent record of exceptional scientific and academic merit. While the available information does not quantify the number of personnel or specific budget managed in each academic role, his progression to Associate Professor implies significant leadership responsibilities within his department and research group at UPM.

2. Main Research Areas

Dr. D'Haro's research expertise lies primarily within the field of **Human** Language Technology (HLT), with a pronounced focus on Spoken Dialogue Systems and Conversational AI.¹ His contributions span a wide range of topics, from fundamental enabling technologies to the development and evaluation of complex interactive systems. His work addresses core areas including **Speech Recognition**, **Speaker and Language Recognition**, and **Machine Translation**.⁶ A significant and recurring theme throughout his career is the **automatic evaluation of dialogue systems and machine translation**, aiming to develop robust and reliable metrics that correlate well with human judgment.⁶ This focus is critical for advancing the field, as effective evaluation underpins the development cycle of conversational agents. His research encompasses both **task-oriented and open-domain dialogue systems**, reflecting the breadth of conversational AI applications.⁶ Furthermore, he investigates **multimodal interaction**, integrating speech, text, and visual information in systems designed for applications ranging from human-robot interaction to multimedia content search.²

In recent years, Dr. D'Haro's research has actively incorporated advancements in Large Language Models (LLMs).² He investigates the capabilities and limitations of LLMs, particularly their effectiveness as **automatic dialogue** evaluators, comparing their performance against human judgments across multiple dimensions and languages.⁷ His work also explores the use of LLMs for generating synthetic dialogue data to train and improve conversational agents, particularly in specialized domains like art.⁵ A major current research thrust, driven by the ASTOUND project he coordinates, delves into Artificial **Consciousness and Awareness in AI.**⁴¹ This ambitious work applies principles from cognitive neuroscience, specifically the Attention Schema Theory (AST), aiming to imbue virtual agents with a model of attention that enhances their social competencies, contextual understanding, coherence, and adaptability.16 Complementing these core research lines, Dr. D'Haro actively contributes to the community through the creation of benchmarks and datasets (e.g., Art_GenEvalGPT 16, CVQA 7, xDial-Eval 7) and through sustained involvement in organizing and participating in shared tasks and evaluation challenges (e.g., DSTC series •). This consistent engagement with community evaluation efforts underscores his commitment to advancing the state-of-the-art through standardized comparison and reproducible research.

3. Leadership, Management, and Institutional Service

Dr. D'Haro has demonstrated significant leadership and service contributions to the scientific community, his institution, and the advancement of research in dialogue systems and human language technology. His roles reflect a commitment to research direction, project management, community building, and mentorship.

His leadership, management, and service roles, ordered chronologically from most recent, include:

• Coordinator and Principal Investigator (PI), ASTOUND Project (Grant ID: 101071191), UPM (December 2022 – November 2025): Dr. D'Haro leads the prestigious €3.3 million ASTOUND project, funded under the highly competitive European Innovation Council (EIC) Pathfinder program (HORIZON-EIC-2021-PATHFINDERCHALLENGES-01).¹¹ This role involves coordinating the research efforts, managing the budget, and overseeing the project focused on developing artificial consciousness in virtual agents

based on the Attention Schema Theory.¹⁶ Leading an EIC Pathfinder project signifies recognition of his research vision at the highest European level and requires substantial scientific leadership and project management capabilities.¹⁹ The project supports PhD scholarships and has generated numerous publications and datasets.¹¹

- Principal Investigator (PI), BEWORD Project (Grant ID: PID2021-126061OB-C43), UPM (Circa 2022 – Present): He serves as PI for this nationally funded project supported by the Spanish Ministry of Science and Innovation (MCIN/AEI) and the European Regional Development Fund (ERDF).²⁰ Based on publications acknowledging its support, the project focuses on areas aligned with his expertise, such as dialogue evaluation, LLM analysis, and potentially chatbot personalization and inconsistency detection.¹⁴
- Organizer, DSTC12 Track 1: Dialog System Evaluation (2024): Dr. D'Haro co-organized a track at the 12th Dialog System Technology Challenge, focusing on evaluating dialogue systems across multiple dimensions including language, culture, and safety.²⁷ This continues his long-standing contribution to the DSTC series.
- Associate Professor / Titular Universidad, UPM (July 2018 / July 2023

 Present): His senior academic position inherently involves leadership within the Speech Technology and Machine Learning Group (GTHAU) and the Department of Electronic Engineering at UPM, guiding research directions, mentoring junior researchers and students, and contributing to departmental activities.⁴
- Editorial Board Member, IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP) (Ongoing, listed 2024): He serves on the editorial board for TASLP, a premier journal in his field.[∞] This prestigious service role involves managing the peer review process for submitted manuscripts and reflects his recognized expertise and standing in the community.
- Organizer, DSTC11 Track 4: Robust and Multilingual Automatic Evaluation Metrics (2023): He co-organized this track at DSTC11, directly leveraging his research focus on developing and assessing dialogue evaluation metrics across different languages and conditions.¹⁰
- Faculty Advisor, THAURUS Team, Amazon Alexa Prize Socialbot Grand Challenge 5 (SGC5) (Circa 2023): Dr. D'Haro served as the faculty advisor for the UPM student team participating in Amazon's SGC5.¹⁰ This role involved mentoring students in the development of an advanced, multimodal social chatbot, bridging academic research with demanding industry challenges and platforms.³⁴
- Principal Investigator (PI), UPM Seed Project (Grant ID: VSEMILLA22LFHE) (Circa 2022): He led this internal UPM-funded seed project, likely providing initial support for research directions subsequently pursued in the larger BEWORD or ASTOUND projects.²⁰
- Faculty Advisor, Genuine2 Team, Amazon Alexa Prize Socialbot Grand Challenge 4 (SGC4) (Circa 2020): He previously advised the UPM team in the SGC4 competition, demonstrating sustained engagement with this high-profile industry challenge.⁶
- General Chair, International Workshop on Spoken Dialog System Technology (IWSDS) 2020: Dr. D'Haro held the highest leadership

position (General Chair) for the organization of IWSDS 2020, a key international workshop dedicated to spoken dialogue systems.

- Senior Member, ChaNel Workshop, Johns Hopkins University Summer School (JSALT) 2020: He contributed in a senior capacity to this prestigious and intensive research workshop focused on conversational Al.
- Area Chair, Association for Computational Linguistics (ACL) Conference 2020: He served as an Area Chair for ACL 2020, one of the top international conferences in natural language processing.⁶ This role involves overseeing the peer-review process for a specific research area, signifying recognition as a leading expert.
- Co-organizer, Dialog System Technology Challenges (DSTC) Series (DSTC4-10 mentioned, spanning ~2015-2021): Dr. D'Haro has been a long-term and active co-organizer for multiple tracks across several editions of the influential DSTC series, shaping research directions in areas like dialogue state tracking, end-to-end systems, and evaluation.²
- Co-organizer, Dialogue Breakdown Detection Challenge (DBDC) Series (DBDC4-5 mentioned, spanning ~2017-2019): He was involved in organizing this challenge series focused on identifying failures in dialogue interactions.⁶
- Organizer, International Workshop on Spoken Dialog System Technology (IWSDS) 2018: Prior to chairing IWSDS 2020, he served as an organizer for the 2018 edition.¹⁹
- Organizer, Human Agent Interaction (HAI) Conference 2016: He contributed to the organization of the HAI conference.¹⁹
- **Organizer, Interspeech 2014:** He played a role in organizing Interspeech, a major international conference for speech processing technology, when it was held in Singapore.¹⁹
- Principal Investigator Roles (Prior): Before the current major projects, he served as PI on 5 research and technology transfer projects and 1 project focused on innovation in education.⁶
- Reviewer (Journals, Conferences, Funding Agencies): Dr. D'Haro is an active reviewer for numerous top-tier journals (>5) and conferences (>10) in his field, contributing significantly to the peer-review process.⁶ He also serves as an expert reviewer for national research funding programs in Poland (PRELUDIUM), Hong Kong (RGC), and Colombia (Univ. de Antioquia), indicating international recognition of his expertise.⁶
- PhD Co-Director: He actively mentors doctoral students, having successfully co-supervised one completed PhD and currently cosupervising three others at UPM and internationally at the National University of Singapore (NUS).⁶

This extensive record of leadership and service demonstrates Dr. D'Haro's significant influence within the dialogue systems research community. His roles range from securing and managing large-scale, high-impact international research projects like ASTOUND to shaping research agendas through the organization of key workshops and challenges like IWSDS and DSTC. His service on editorial boards and as an area chair for top conferences further underscores his standing as a recognized expert. His mentorship roles, including PhD supervision and advising teams in demanding competitions like

the Alexa Prize, highlight his commitment to developing future researchers and bridging academic work with industry-relevant challenges.

4. Relevant Works, Recognitions, Prestigious Awards and Honors

Dr. D'Haro's career has been punctuated by several notable awards and recognitions that underscore the high quality and impact of his work, particularly highlighting achievements based on scientific merit as requested.

These distinctions, ordered chronologically from most recent, include:

- Winner, Albayzin 2012 Language Recognition Evaluation (Awarded at Iberspeech 2012): Dr. D'Haro led the team that achieved first place in the Albayzin Language Recognition Evaluation, a competitive shared task focused on identifying languages from speech signals.² This victory demonstrates technical excellence and superior performance in a specific, challenging benchmark within his research domain.⁶
- PhD in Telecommunications Engineering Summa Cum Laude & European Mention, UPM (2009): As previously noted, his doctoral degree was awarded with the highest possible distinction (Summa Cum Laude) by UPM and also received the European Mention.¹ These honors are direct indicators of outstanding scientific achievement and the international quality of his PhD research and dissertation.⁶
- National Award for Master's Thesis/Final Degree Project, Colombia (Circa 2000): Upon completion of his undergraduate studies, his final project or thesis received a national award in Colombia.⁶ This early recognition highlighted the quality and potential of his engineering work.
- Top Student, Electronic Engineering Degree, Universidad Autónoma de Occidente (UAO), Colombia (Graduated 2000): Dr. D'Haro graduated first in his class from UAO.⁶ This distinction marks his exceptional academic performance from the very beginning of his higher education.

These formal awards and distinctions, received at key milestones from his undergraduate education through to specific research competitions post-PhD, collectively paint a picture of sustained excellence and recognized scientific contribution throughout Dr. D'Haro's career.

5. Publications

Dr. D'Haro has a prolific publication record, demonstrating significant research output and impact in the fields of human language technology, dialogue systems, and related areas. He has authored or co-authored over 150 international peer-reviewed publications ¹⁹, with counts ranging from approximately 140 ³ to 163 ⁶ depending on the indexing source and time frame. Bibliometric data indicates substantial impact, with citation counts reaching 532 on Web of Science, 1420 on Scopus, and 3485 on Google Scholar, yielding h-indices of 11, 19, and 30 respectively across these platforms.³ A significant portion of his journal publications appear in high-impact Q1 and D1 ranked journals.³ Additionally, he has served as editor for two books with Springer and two special issues in leading journals.⁶

His publication trajectory reflects the evolution of his research interests. Early notable works focused on areas such as **Spanish Speech-to-Sign Language Translation**, contributing to assistive technologies.⁶ A key contribution emerged with the development and evaluation of **Adequacy-Fluency (AM-FM) metrics** for machine translation and dialogue evaluation, published in *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)* in 2015.⁹ This work addressed the critical need for nuanced, reference-based evaluation methods. His leadership in the community is reflected in publications overviewing the **Dialog System Technology Challenges (DSTC)**, such as the overview of DSTC5 published in the proceedings of the IEEE Spoken Language Technology Workshop (SLT) 2016 ⁹ and a book chapter on DSTC4.⁴⁵

Prestigious Publications (Last 5 Years: 2020-2025)

In the last five years, Dr. D'Haro has continued to publish impactful work in leading venues. Key publications include:

- In IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP):
 - Gunasekara, C., Kim, S., D'Haro, L. F., Rastogi, A., Chen, Y.-N., Eric, M., et al. (2024). Overview of the Ninth Dialog System Technology Challenge: DSTC9. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 32, 4066-4076.² This paper details the tasks, datasets, and outcomes of DSTC9, a major challenge series where Dr. D'Haro played a significant organizational role.
 - Zhang, C., D'Haro, L. F., Zhang, Q., Friedrichs, T., & Li, H. (2023). PoE: A Panel of Experts for Generalized Automatic Dialogue Assessment. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 31, 1234-1250.² This introduces the Panel of Experts (PoE) model, a novel approach using multitask learning and adapters for robust, multi-domain dialogue evaluation without human references, developed partly under the ASTOUND project.
 - Zhang, C., Lee, G., D'Haro, L. F., & Li, H. (2021). D-Score: Holistic Dialogue Evaluation Without Reference. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 29, 2502-2516.² This work proposed the D-Score framework, inspired by gymnastics scoring, for explainable, reference-free evaluation of dialogue quality across multiple criteria (fluency, coherence, consistency, appropriateness).
- In Expert Systems with Applications:
 - Luna-Jiménez, C., Gil-Martín, M., D'Haro, L. F., Fernández-Martínez, F., & San-Segundo, R. (2024). Evaluating emotional and subjective responses in synthetic art-related dialogues: A multi-stage framework with large language models. *Expert Systems with Applications*, 255, 124524.² This recent publication explores the use of LLMs to analyze complex aspects like emotion and subjectivity within dialogues generated for the specific domain of art, linking to the Art_GenEvalGPT dataset.¹⁶
- In Computer Speech & Language:
 - D'Haro, L. F., Yoshino, K., Hori, C., Marks, T. K., Polymenakos, L., Kummerfeld, J. K., Galley, M., & Gao, X. (2020). Overview of the seventh Dialog System Technology Challenge: DSTC7. Computer

Speech & Language, 62, 101068.² This paper provides a comprehensive summary of DSTC7, covering its tracks on sentence selection, knowledge-grounded generation, and audio-visual scene-aware dialogue.

- In Applied Sciences:
 - Rodríguez-Cantelar, M., Estecha-Garitagoitia, M., D'Haro, L. F., Matía, F., & Córdoba, R. (2023). Automatic Detection of Inconsistencies and Hierarchical Topic Classification for Open-Domain Chatbots. *Applied Sciences*, 13(16), 9055.² Addressing practical challenges in chatbot development, this work proposes methods for managing topic coherence and detecting inconsistent responses, acknowledging support from the ASTOUND and BEWORD projects.

• In Top Conferences (Selected):

- Romero Mogrovejo, D. O., Lyu, C., Wibowo, H. A., Góngora, S., Mandal, A.,... D'Haro, L. F., et al. (2024). CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark. Advances in Neural Information Processing Systems (NeurIPS) 2024 Track Datasets and Benchmarks (Oral).⁻ A significant contribution presenting a largescale benchmark for evaluating cultural awareness in multimodal models.
- Zhang, C., D'Haro, L. F., Tang, C., Shi, K., Tang, G., & Li, H. (2023).
 xDial-Eval: A Multilingual Open-Domain Dialogue Evaluation Benchmark. *Findings of the Association for Computational Linguistics: EMNLP 2023.*⁷ Further contribution to the crucial area of dialogue evaluation benchmarks, focusing on multilingual capabilities.
- Publications resulting from the International Workshop on Spoken Dialog System Technology (IWSDS), including book chapters and proceedings papers like "Deep AM-FM: Toolkit For Automatic Dialogue Evaluation" (2021) and papers on specific systems like "ToxicBot" (2020) and evaluation methods.

His extensive list of co-authors from diverse institutions worldwide (including UPM, A*STAR, NUS, Google, Apple, Amazon, RWTH Aachen) highlights a strong international collaborative network.⁷ This network, fostered through his international career stages and active participation in community events, undoubtedly enhances the reach, quality, and impact of his research. The consistent publication output in high-quality venues demonstrates sustained productivity and recognition by peers. Many publications directly relate to his leadership roles (e.g., challenge overviews) or introduce novel methods and benchmarks developed within his group, positioning him as a key contributor shaping the field of dialogue systems and evaluation.

6. Relevant Research Projects and Funding

Dr. D'Haro has a strong track record of participating in and leading funded research projects. He has been involved in over 38 projects throughout his career, encompassing European, national, private, and institutional funding sources.³ Notably, he has served as Principal Investigator (PI) on at least 5 research and technology transfer projects prior to his current major initiatives.⁶

His most significant and recent projects, particularly those where he holds a leading role as PI or Coordinator, are highlighted below. Securing funding for these projects, especially at the European level, underscores the competitiveness and perceived impact of his research agenda.

Principal Investigator Roles (Highlighted Recent Projects):

- ASTOUND (Improving social competences of virtual agents through artificial consciousness based on the Attention Schema Theory): Dr. D'Haro serves as both Coordinator and Principal Investigator for this flagship project.[®] Funded by the European Innovation Council (EIC) Pathfinder Challenges program (HORIZON-EIC-2021-PATHFINDERCHALLENGES-01) with Grant ID 101071191, it has a total EU contribution of €3,330,897.50.[®] The project runs from December 1, 2022, to November 30, 2025.[®] As an EU project, it is inherently international. Its ambitious goal is to develop an AI architecture for artificial consciousness based on the Attention Schema Theory and implement it within a conversational agent to improve its social and contextual capabilities.[®] The project involves developing novel evaluation mechanisms for consciousness in humans and machines.²⁰ Publications acknowledging ASTOUND funding demonstrate active research output in areas like dialogue evaluation and chatbot development.¹⁰
- BEWORD: Dr. D'Haro is the Principal Investigator for the BEWORD project, funded by the Spanish Ministry of Science and Innovation (MCIN) / State Research Agency (AEI) under Grant ID PID2021-126061OB-C43, with co-funding from the European Regional Development Fund (ERDF).²⁰ The project duration likely commenced following the 2021 call and is ongoing, as evidenced by funding acknowledgements in publications from 2023 and 2024.¹⁴ While primarily a national (Spanish) project, it benefits from EU co-funding. Based on the acknowledging publications, its focus appears centered on dialogue evaluation, the application and analysis of Large Language Models (LLMs) in dialogue, and potentially aspects of chatbot personalization and consistency.¹⁴ The specific budget is not detailed in the provided sources.
- UPM Seed Project: Dr. D'Haro was the Principal Investigator for an internal seed funding project awarded by Universidad Politécnica de Madrid (UPM), identified by the reference VSEMILLA22LFHE.[∞] Active around 2022, this internal (non-international) grant likely provided initial support for developing ideas or preliminary work related to the larger BEWORD and/or ASTOUND projects. Budget details are not available.

Table: Prestigious Research Projects (Last 5 Years)

Proj ect Title	Role	Fun ding Prog ram /	Grant ID	Budg et (EU/T otal)	Dur atio n	Intern ation al	Focus Area	Refer ence(s)
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		Age ncy						
AST OUN D	Coor dinat or & PI	EU Horiz on EIC Pathf inder Chall enge s	1010711 91	€3,33 0,897. 50	Dec 202 2 – Nov 202 5	Yes (EU)	AI Consciou sness, Dialogue Systems, Attention Schema Theory	11
BEW ORD	ΡI	MCI N/AE I (Spai n) + ERD F (EU)	PID2021 - 126061 OB-C43	Not Specif ied	Pos t- 202 1 (On goin g 202 3- 24)	Natio nal (Spai n) + EU fundin g	Dialogue Evaluatio n, LLMs, Personali zation (Inferred)	14
UPM See d Proj ect	PI	UPM (Inter nal)	VSEMIL LA22LF HE	Not Specif ied	~20 22	No	Seed funding (related to BEWORD /ASTOUN D)	26

The leadership demonstrated in securing and managing these projects, particularly the highly competitive EIC Pathfinder grant for ASTOUND, highlights Dr. D'Haro's capability to define and execute ambitious, high-impact research agendas. The direct link between these funded projects and his recent publication output confirms their productivity and contribution to advancing knowledge in his core research areas.

7. Industry Collaboration and Knowledge Transfer

Dr. D'Haro's career includes several instances of collaboration with industry and activities aimed at knowledge transfer, demonstrating the practical relevance and potential application of his research.

Key contributions and activities include:

• **Patent Generation:** Dr. D'Haro is a co-inventor on a patent originating from his visiting researcher period at **AT&T Research Labs**.^e The patent, titled "Multimodal interface for searching multimedia content" (US Patent App. 11/866,323, published 2009), represents a formal piece of intellectual property developed in collaboration with a major industrial entity.^e This signifies early success in translating research ideas into potentially commercializable technology.

- Software Licensing: During his tenure as a Research Scientist at A*STAR in Singapore, his work resulted in one software license.[®] While specific details of the software are not provided in the sources, this represents another formal mechanism of technology transfer from a research institution.
- **Registered Software:** He is also credited with one registered software program, although further details are unavailable.⁶
- Industry Challenge Advising (Amazon Alexa Prize): Dr. D'Haro has served as the Faculty Advisor for UPM student teams participating in the high-profile Amazon Alexa Prize Socialbot Grand Challenge, specifically for Team Genuine2 in SGC4 (circa 2020) and Team THAURUS in SGC5 (circa 2023).⁶ This role involves direct engagement with a leading industry platform and its associated challenges, guiding students in developing state-of-the-art conversational AI systems and fostering skills highly relevant to industry needs.
- Research Collaboration (Co-authorship): His publication record includes collaborations with researchers affiliated with major technology companies such as Google, Apple, and Amazon, among others.^a This co-authorship indicates ongoing research alignment and knowledge exchange with industry R&D leaders.

Activity Type	Partner/Conte xt	Role	Period	Description	Reference(s)
Competition Advising	Amazon Alexa Prize SGC5	Faculty Advisor (THAURU S Team)	~2023	Guided UPM student team in developing an advanced, multimodal social chatbot using Amazon's platform and APIs, competing internationall y.	19
Competition Advising	Amazon Alexa Prize SGC4	Faculty Advisor (Genuine2 Team)	~2020	Guided UPM student team in the previous iteration of the Alexa Prize	6

Table: Prestigious Industry Collaborations/Knowledge Transfer (Last 5 Years)

				Socialbot Grand Challenge.	
Implied Collaboratio n	Google, Apple, Amazon, etc.	Co-author	Ongoin g	Research collaboration s evidenced by co- authored publications with researchers affiliated with major technology companies.	8

While the available information does not detail recent, large-scale contracted projects with industry where Dr. D'Haro served as PI, his career demonstrates a consistent interface with industry. This ranges from early formal IP generation (AT&T patent) and technology transfer (A*STAR license) to more recent engagement through advising student teams in major industry-sponsored competitions (Alexa Prize) and maintaining collaborative research links evidenced by co-publications. These activities highlight the practical relevance of his research and contribute to bridging the gap between academic innovation and industrial application.

8. Postgraduate Student Supervision

Mentorship and the training of new researchers are integral parts of an academic career. Dr. D'Haro actively engages in the supervision of postgraduate students, particularly at the doctoral level. As per the specific request to list only completed theses:

- Dr. D'Haro successfully co-directed the following PhD thesis:
 - o Student: Christian Raúl Salamea Palacios 6
 - Thesis Title: Diseño y Evaluación de Técnicas de Reconocimiento de Idioma Mediante la Fusión de Información Fonotáctica y Acústica (Design and Evaluation of Language Recognition Techniques through the Fusion of Phonotactic and Acoustic Information) 44
 - o Defense Date: October 1, 2018 44
 - o Institution: Universidad Politécnica de Madrid (UPM)
 - o Co-Director: Prof. Ricardo de Córdoba Herralde 44
 - Current Position (if known): Dr. Salamea Palacios appears to be actively involved in research and affiliated with Universidad Politécnica Salesiana (UPS) in Ecuador, based on recent coauthorships and profile information.⁸

Successfully guiding a doctoral student to completion demonstrates effective mentorship in research. Dr. D'Haro is also currently co-supervising three additional PhD students: Zhang Chen at the National University of Singapore (NUS), and Mario Rodríguez-Cantelar and Marcos Estecha-Garitagoitia at UPM.⁶ The productivity of these ongoing students is suggested by their co-

authorship on recent publications, often related to Dr. D'Haro's funded projects.² This ongoing supervision activity, both locally at UPM and internationally, reflects his continued commitment to training the next generation of researchers in his field.

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