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東京大学国際高等研究所
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構成的アプローチから人間の社会的認知機能の発達原理を探る，認知発達ロボティクス研究に従事．自他認知や模倣，他者の意図・情動推定，利他的行動などの認知機能が，環境との相互作用を通した感覚・運動信号の予測学習に基づき発達するという仮説を提唱し，計算論的神経回路モデルの設計とそれを実装したロボットの実験によって評価．さらに，自閉スペクトラム症（ASD）などの発達障害者のための自己理解支援システムを開発．ASD 視覚体験シミュレータは発達障害者の未知の世界を解明するものとして高い注目を集める．30 women in robotics you need to know about (2019)，World's 50 Most Renowned Women in Robotics (2020)，35 Women in Robotics Engineering and Science (2022) などに選出．2016 年より CREST「認知ミラーリング」，2021 年より CREST「認知フィーリング」の研究代表者．

職歴

2019 年 4 月–現在	東京大学国際高等研究所ニューロインテリジェンス国際研究機構 特任教授
2017 年 5 月–2019 年 3 月	情報通信研究機構脳情報通信融合研究センター 主任研究員
2009 年 10 月–2017 年 4 月	大阪大学大学院工学研究科 特任准教授
2008 年 2 月–2009 年 9 月	ビーレフェルト大学認知ロボティクス研究所 ポスドク研究員
2006 年 4 月–2008 年 1 月	ビーレフェルト大学テクノロジー学科 ポスドク研究員
2004 年 4 月–2006 年 3 月	情報通信研究機構けいはんな情報通信融合研究センター 専攻研究員
2002 年 11 月–2004 年 3 月	大阪大学大学院工学研究科 産学官連携研究員

兼任

2023 年 10 月–2029 年 9 月	日本学術会議 連携会員
2023 年 4 月–2024 年 3 月	北海道大学人間知・脳・AI 研究教育センター 客員教授
2021 年 4 月–2021 年 9 月	北海道大学人間知・脳・AI 研究教育センター 非常勤講師
2020 年 10 月–2023 年 3 月	東京大学 Beyond AI 研究推進機構 特任教授
2020 年 4 月–2024 年 3 月	国立研究開発法人科学技術振興機構 領域アドバイザー（さきがけ研究領域「信頼される AI の基盤技術」）
2019 年 10 月–2020 年 7 月	ビーレフェルト大学学際融合研究センター フェロー
2018 年 4 月–2019 年 3 月	大阪大学大学院工学研究科 招へい准教授
2017 年 1 月–2018 年 12 月	ビーレフェルト大学認知インタラクション技術研究拠点 客員教授
2009 年 10 月–2016 年 12 月	ビーレフェルト大学認知インタラクション技術研究拠点 客員研究員
2015 年 4 月–2015 年 9 月	京都工芸繊維大学大学院工芸科学研究科 非常勤講師
2003 年 12 月–2004 年 3 月	東京農工大学工学部 非常勤講師

学歴

2004 年 3 月　大阪大学，博士（工学）

> 論文題目：Understanding the Development of Joint Attention from a Viewpoint of Cognitive Developmental Robotics
>
> 論文審査委員：浅田稔 教授（主査），石黒浩 教授, 白井良明 教授

2002 年 10 月　大阪大学大学院工学研究科知能・機能創成工学専攻 博士後期課程単位取得退学

1999 年 3 月　青山学院大学大学院理工学研究科機械工学専攻 博士前期課程修了，修士（工学）

1997 年 3 月　青山学院大学理工学部機械工学科 卒業，学士（工学）

1993 年 3 月　群馬県立高崎女子高等学校普通科 卒業

所属学会

IEEE

日本ロボット学会

日本人工知能学会

日本認知科学会

受賞歴

[1] 35 Women in Robotics Engineering and Science (2022 年 10 月)

[2] IEEE RAS Distinguished Lecturer (2022 年 10 月)

[3] SmartBot Challenge Finalist of the 2022 IEEE International Conference on Development and Learning (2022 年 9 月)

[4] World's 50 Most Renowned Women in Robotics (2020 年 6 月)

[5] 第 33 回人工知能学会全国大会 全国大会優秀賞 (2019 年 11 月)

[6] 30 women in robotics you need to know about (2019 年 10 月)

[7] Best Student Paper Award of the 5th International Conference on Human-Agent Interaction (2017 年 10 月)

[8] 第 30 回人工知能学会全国大会 全国大会優秀賞 (2017 年 5 月)

[9] Babybot Challenge 1st Place Award of the 5th IEEE International Conference on Development and Learning and on Epigenetic Robotics (2015 年 8 月)

[10] ロボカップジャパンオープン 2015 人工知能学会賞 (2015 年 5 月)

[11] 日本認知科学会第 31 回大会 大会発表賞（2014 年 11 月）

[12] 大阪大学総長顕彰 (2014 年 7 月)

[13] Best Paper Research Award of the RAAD Workshop: Robotics in Alpe-Adria-Danube Region (2013 年 9 月)

[14] 大阪大学総長顕彰 (2013 年 8 月)

[15] 人工知能学会研究会優秀賞 (2013 年 6 月)

[16] ロボカップジャパンオープン 2013 ロボカップ研究賞 (2013 年 5 月)

[17] Best Paper Award Finalist of the 16th Annual RoboCup International Symposium (2012 年 6 月)

[18] 日本赤ちゃん学会第 12 回学術集会 最優秀ポスター発表賞 (2012 年 6 月)

[19] ロボカップジャパンオープン 2012 人工知能学会賞 (2012 年 5 月)

[20] Best Paper Award Finalist of the 16th IEEE International Symposium on Robot and Human Interactive Communication (2008 年 8 月)

[21] 日本認知科学会第 22 回大会 大会発表賞 (2005 年 7 月)

学会活動

国際・国内会議実行委員会

[1] Publicity Chair of the IEEE International Conference on Development and Learning (2024)

[2] Expo Co-Chair of the IEEE International Conference on Robotics and Automation (2024)

[3] Bridge Chair of the IEEE International Conference on Development and Learning (2023)

[4] General Chair of the International Symposium on Predictive Brain and Cognitive Feelings (2023)

[5] General Chair of the IEEE International Conference on Development and Learning (2022)

[6] Publicity Chair of the IEEE International Conference on Development and Learning (2021)

[7] General Chair of the 8th International Conference on Human-Agent Interaction (2020)

[8] Publicity Chair of the 10th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (2020)

[9] General Chair of the 5th International Conference on Human-Agent Interaction (2017)

[10] Publicity Chair of the 7th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (2017)

[11] Advisory Board of the 4th International Conference on Human-Agent Interaction (2016)

[12] General Chair of the 11th ACM/IEEE International Conference on Human-Robot Interaction (2016)

[13] Workshops and Tutorials Chair of the 2015 IEEE International Conference on Robotics and Automation (2015)

[14] Special Program Chair of the 23rd IEEE International Symposium on Robot and Human Interactive Communication (2014)

[15] Publication Chair of the 9th ACM/IEEE International Conference on Human-Robot Interaction (2014)

[16] General Chair of the 3rd Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (2013)

[17] Program Chair of the 2nd Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (2012)

[18] Publicity Chair of the 1st Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (2011)

[19] Registration Chair of the 5th ACM/IEEE International Conference on Human-Robot Interaction (2010)

[20] Communication Chair of the 4th IEEE International Conference on Development and Learning (2005)

[21] 第 40 回日本ロボット学会学術講演会 企画副委員長 (2022)

[22] 日本発達神経科学会第 10 回学術集会 大会長 (2021)

[23] 第 44 回日本神経科学大会 実行委員 (2021)

[24] 日本発達神経科学学会第 6 回学術集会 大会長 (2017)

国際・国内会議プログラム委員会

[1] Program Committee of the IEEE International Conference on Development and Learning and on Epigenetic Robotics (2011-now)

[2] Program Committee of the ACM/IEEE International Conference on Human-Robot Interaction (2011-now)

[3] Program Committee of the IEEE International Symposium on Robot and Human Interactive Communication (2016-now)

[4] Program Committee of the IEEE-RAS International Conference on Humanoid Robots (2012-2016)

[5] Program Committee of the IEEE/RSJ International Conference on Intelligent Robots and Systems (2017)

[6] Program Committee of the HRI Pioneers Workshop (2012-2016)

[7] Program Committee of the RO-MAN2015-WS "Emotion for Social Robotics" (2015)

[8] Program Committee of the Annual Meeting of the Cognitive Science Society (2015)

[9] Program Committee of the 1st International Workshop on Emotion for Sociable Agents (2014)

[10] Program Committee of the International Joint Workshop on Advanced Sensing / Visual Attention and Interaction (2013)

[11] Program Committee of the IROS2012-WS "Human Behavior Understanding" (2012)

[12] Program Committee of the WCCI2012 Special Session "Bio-Inspired Developmental Mechanisms" (2012)

[13] Program Committee of the IEEE International Conference on Development and Learning (2006-2010)

[14] Program Committee of the International Conference/Workshop on Epigenetic Robotics (2005-2010)

[15] Program Committee of the HAI (Human-Agent Interaction) Symposium (2011-2012)

[16] Program Committee of the International Workshop on Gaze Sensing and Interactions (2010)

[17] Program Committee of the 3rd International Conference on Human System Interaction (2010)

[18] Program Committee of the International Workshop on Robotics for Young Researchers (2009)

[19] Program Committee of the 4th International Symposium on Imitation in Animals and Artifacts (2007)

[20] Program Committee of the 2006 Robotics: Science and Systems Conference (2006)

その他

[1] Scientific and Industrial Advisory Board of Centre for Tactile Internet with Human-in-the-Loop (CeTI), Dresden University of Technology (2022-now)

[2] Vice Chair of IEEE Cognitive and Developmental Systems Technical Committee (2021-2022)

[3] Special Issues Editor for ACM Transactions on Human-Robot Interaction (2017-now)

[4] Vice Chair of IEEE Autonomous Mental Development Technical Committee (2012-2013)

[5] IEEE CIS Technical Committee on Cognitive and Developmental Systems / Autonomous Mental Development (2011-now)

[6] IEEE RAS Technical Committee on Cognitive Robotics (2014-now)

[7] Steering Committee of Human-Robot Interaction (2014-now)

[8] Steering Committee of Human-Agent Interaction (2016-2018)

[9] Review Editor of Frontiers in Neurorobotics (2011-now)

[10] Review Editor of Frontiers in Robotics and AI: Humanoid Robotics (2014-now)

[11] Scientific Organizing Committee and Local Organizing Committee of ISSA Summer School (2017)

[12] Scientific and Usage Advisory Board for EARS (Embodied Audition for RobotS) project (2014-now)

[13] Organizer of IROS2023 Workshop on World Models and Predictive Coding in Cognitive Robotics (2023)

[14] Organizer of ALIFE2023 Workshop on Cognitive feelings: Towards multi-disciplinary approaches for realizing artificial systems with cognitive capacities (2023)

[15] Organizer of IROS2022 Women in Engineering Forum (2022)

[16] Organizer of ICDL2022 Workshop on "Neurodiversity of cognitive feelings" (2022)

[17] Organizer of Online Lecture Series "Developing Minds" (2021-now)

[18] Organizer of the ICDL2021 Workshop on "Spatio-temporal Aspects of Embodied Predictive Processing" (2021)

[19] Organizer of the ICDL-EpiRob2018 Workshop on "Understanding Developmental Disorders: From Computational Models to Assistive Technology" (2018)

[20] Organizer of the HAI2017 Workshop on "Representation learning for human and robot cognition" (2017)

[21] Organizer of the IROS2016 Workshop on "Bio-inspired Social Robot Learning in Home Scenarios" (2016)

[22] Organizer of the ICAR2015 Workshop on "Robot Learning: Bottom-up and top-down development of robot skills" (2015)

[23] Organizer of the HRI2015 Workshop on "Cognition: A Bridge between Robotics and Interaction" (2015)

[24] Organizer of the HRI2014 Workshop on "HRI: a bridge between Robotics and Neuroscience" (2014)

[25] Organizer of the IJCNN2014 Special Session "Cognition and Development" (2014)

[26] Organizer of the ICDL-EpiRob2013 Special Session "Constructive Developmental Science: Two Endeavors toward Understanding Human Development" (2013)

[27] Organizer of the Humanoids2012 Workshop on "Can developmental robotics yield human-like cognitive abilities?" (2012)

[28] Organizer of the Workshop on Robot Anthropology (2012)

[29] Organizer of the IROS Workshop on "Cognitive Neuroscience Robotics" (2011-2013)

[30] Organizer of the Bielefeld-Osaka Workshop on Cognition and Robotics (2011)

[31] Organizer of the ICDL-EpiRob2011 Special Session "How can human scaffolding support robots learning?" (2011)

[32] Organizer of the HRI2011 Workshop on "The role of expectations in intuitive human-robot interaction" (2011)

[33] Organizer of the Bielefeld-Osaka Workshop (2010)

[34] 日本ロボット学会 代議員 (2021-2025)

[35] さきがけ「信頼される AI の基盤技術」領域アドバイザー (2020-2022)

[36] 日本発達神経科学会 理事 (2017-now)

[37] 脳と心のメカニズム 計画委員 (2017-now)

[38] 日本ロボット学会展開セッション「GCOE 認知脳理解に基づく未来工学創成」オーガナイザ (2010-2013)

[39] 日本ロボット学会展開セッション「構成論的発達科学―胎児からの発達原理の解明に基づく発達障害のシステム的理解―」オーガナイザ (2013)

[40] 日本赤ちゃん学会第 13 回学術集会シンポジウム「構成（論）的発達科学の新展開」オーガナイザ (2013)

競争的資金

代表

[1] 戦略的創造研究推進事業（CREST）“知覚と感情を媒介する認知フィーリングの原理解明”（課題番号：JP-MJCR21P4），2021.10-2027.3.
研究経費：123,000,000 円（総額 274,000,000 円）

[2] 科学研究費補助金 基盤研究（S）“脳の一般原理に基づく認知機能の多様性発生機序の理解と発達障害者支援”（研究課題番号：21H05053），2021.7-2026.3.
研究経費：80,500,000 円（総額 145,500,000 円）

[3] 科学研究費補助金 基盤研究（A）“予測符号化理論に基づく自己認知の多様性発生機序のシステム的理解”（研究課題番号：21H04884），2021.4-2025.3.
研究経費：21,700,000 円（総額 32,300,000 円）（基盤研究（S）採択のため 2021 年 7 月終了）

[4] Beyond AI 研究推進機構 “AI ×発達障害当事者研究：計算論的神経科学による認知個性の顕在化”, 2020.7-2023.3.
研究経費：54,400,000 円（総額 59,500,000 円）

[5] 戦略的創造研究推進事業（CREST）“認知ミラーリング：認知過程の自己理解と社会的共有による発達障害者支援”（課題番号：JPMJCR16E2），2016.12-2022.3.
研究経費：139,600,000 円（総額 300,000,000 円）

[6] 科学研究費補助金及び学術研究助成基金助成金 若手研究（A）“発達的制約を利用した自他認知からの心の理論の獲得：構成的手法による研究”（研究課題番号：25700027），2013.4-2016.3.
研究経費：18,800,000 円

[7] 科学研究費補助金 新学術領域研究（研究領域提案型）（計画研究）“社会的認知発達モデルとそれに基づく発達障害者支援システム構成論”（研究課題番号：24119003），2012.6-2017.3.
研究経費：85,300,000 円（総額 191,700,000 円）

[8] 学術研究助成基金助成金 挑戦的萌芽研究 “共感覚を利用したマルチモーダルな情動抽出”（研究課題番号：24650083），2012.4-2014.3.
研究経費：3,000,000 円

[9] Research Grant provided by Research Institute for Cognition and Robotics, Bielefeld University “Designing Human-Robot Interaction based on / toward Understanding Parent-Infant Interaction”, 2008-2011.
Budget: EUR39,300（異動のため 2009 年 9 月終了）

分担

[1] ムーンショット型研究開発事業 “多様なこころを脳と身体性機能に基づいてつなぐ「自在ホンヤク機」の開発”（研究課題番号：JPMJMS2292），2022.9-2027.3.
研究経費：89,000,000 円（代表：筒井健一郎）

[2] 科学研究費補助金 基盤研究（S）“個別的育児支援手法の創出を導く養育者—乳児の動態とその多様性創発原理の解明”（研究課題番号：21H04981），2021.7-2026.3.
研究経費：31,000,000 円（代表：明和政子）

[3] 科学研究費補助金 基盤研究（A）“身体感覚を軸とした養育者—乳児の動態とその多様性創発原理の解明”（研究課題番号：21H04895），2021.4-2025.3.
研究経費：6,900,000 円（代表：明和政子）（基盤研究（S）採択のため 2021 年 7 月終了）

[4] 科学研究費補助金 基盤研究（A）“ヘッドマウントディスプレイを用いた視知覚矯正・補助フレームワークの構築”（研究課題番号：18H04116），2018.4-2022.3.
研究経費：7,400,000 円（代表：清川清）

[5] 革新的イノベーション創出プログラム（COI STREAM）（サテライト）“脳の個性を生かした子どもの健やかなこころの育成：特異から得意へのパラダイムシフト”, 2014.4-2022.3.
研究経費：12,308,000 円（代表：三邉義雄）

[6] 科学研究費補助金 新学術領域研究（研究領域提案型）（総括班）"構成論的発達科学 ―胎児からの発達原理の解明に基づく発達障害のシステム的理解―"（研究課題番号：24119001），2012.6-2017.3. 研究経費：3,460,000 円（代表：國吉康夫）

[7] 科学研究費補助金 特別推進研究 "神経ダイナミクスから社会的相互作用に至る過程の理解と構築による構成的発達科学"（研究課題番号：24000012），2012.5-2017.3. 研究経費：8,500,000 円（代表：浅田稔）

[8] 研究拠点形成事業 ―A. 先端拠点形成型―"認知脳理解に基づく未来工学創成のための競創的パートナーシップ"，2012.4-2017.3. 研究経費：5,000,000 円（代表：浅田稔）

[9] 科学研究費補助金 基盤研究（A）"非意識下プロセスにおけるワーキングメモリの脳内機構：意識下と麻酔下との比較"（研究課題番号：23240036），2011.4-2016.3. 研究経費：1,200,000 円（代表：苧阪満里子）

[10] 科学研究費補助金 基盤研究（S）"構成的手法による身体バブリングから社会性獲得にいたる発達過程の理解と構築"（研究課題番号：22220002），2010.4-2015.3. 研究経費：16,450,000 円（代表：浅田稔）（特別推進研究に移行のため 2012 年 6 月終了）

研究業績

最新リスト： https://developmental-robotics.jp/publications/

Google Scholar: https://scholar.google.co.jp/citations?user=HqTUx7YAAAAJ&hl=en
(Citations: 2298, h-index: 25, i10-index: 54)

原著論文

[1] Tatsuya Daikoku, Shinichiro Kumagaya, Satsuki Ayaya, and **Yukie Nagai**, "Non-autistic persons modulate their speech rhythm while talking to autistic individuals," PLoS ONE, 18(9):e0285591, September 2023.

[2] Masaki Tsujita, Miho Homma, Shin-ichiro Kumagaya, and **Yukie Nagai**, "Comprehensive intervention for reducing stigma of autism spectrum disorders: Incorporating the experience of simulated autistic perception and social contact," PLoS ONE, 18(8):e0288586, August 2023.

[3] Melisa Idil Sener, **Yukie Nagai**, Erhan Oztop, and Emre Ugur, "Exploration With Intrinsic Motivation Using Object-Action-Outcome Latent Space," IEEE Transactions on Cognitive and Developmental Systems, 15(2):325-336, June 2023.

[4] Anja Philippsen and **Yukie Nagai**, "A predictive coding account for cognition in human children and chimpanzees: A case study of drawing," IEEE Transactions on Cognitive and Developmental Systems, 14(4):1306-1319, December 2022.

[5] Anja Philippsen, Sho Tsuji, and **Yukie Nagai**, "Quantifying developmental and individual differences in spontaneous drawing completion among children," Frontiers in Psychology, 13:783446, November 2022.

[6] Maria Tsfasman, Anja Philippsen, Carlo Mazzola, Serge Thill, Alessandra Sciutti, and **Yukie Nagai**, "The world seems different in a social context: A neural network analysis of human experimental data," PLoS ONE, 17(8):e0273643, August 2022.

[7] Anja Philippsen, Sho Tsuji, and **Yukie Nagai**, "Simulating Developmental and Individual Differences of Drawing Behavior in Children Using a Predictive Coding Model," Frontiers in Neurorobotics, 16:856184, June 2022.

[8] Jyh-Jong Hsieh, **Yukie Nagai**, Shin-ichiro Kumagaya, Satsuki Ayaya, and Minoru Asada, "Atypical Auditory Perception Caused by Environmental Stimuli in Autism Spectrum Disorder: A Systematic Approach to the Evaluation of Self-Reports," Frontiers in Psychiatry, 13:888627, June 2022.

[9] Junko Matsuzaki, Kuriko Kagitani-Shimono, Sho Aoki, Ryuzo Hanaie, Yoko Kato, Mariko Nakanishi, Aika Tatsumi, Koji Tominaga, Tomoka Yamamoto, **Yukie Nagai**, Ikuko Mohri, and Masako Taniike, "Abnormal cortical responses elicited by audiovisual movies in patients with autism spectrum disorder with atypical sensory behavior: A magnetoencephalographic study," Brain and Development, 44(2):81-94, February 2022.

[10] M. Yunus Seker, Alper Ahmetoglu, **Yukie Nagai**, Minoru Asada, Erhan Oztop, and Emre Ugur, "Imitation and mirror systems in robots through Deep Modality Blending Networks," Neural Networks, 146:22-35, February 2022.

[11] Karl Friston, Rosalyn J. Moran, **Yukie Nagai**, Tadahiro Taniguchi, Hiroaki Gomi, and Josh Tenenbaum, "World model learning and inference," Neural Networks, 144:573-590, December 2021.

[12] Takato Horii and **Yukie Nagai**, "Active Inference Through Energy Minimization in Multimodal Affective Human-Robot Interaction," Frontiers in Robotics and AI, 8:684401, November 2021.

[13] Tatsuya Daikoku, Qi Fang, Tomohito Hamada, Youichi Handa, and **Yukie Nagai**, "Importance of environmental settings for the temporal dynamics of creativity," Thinking Skills and Creativity, 41:100911, September 2021.

[14] Serkan Bugur, Erhan Oztop, **Yukie Nagai**, and Emre Ugur, "Effect regulated projection of robot ' s action space for production and prediction of manipulation primitives through learning progress and predictability-based exploration," IEEE Transactions on Cognitive and Developmental Systems, 13(2):286-297, June 2021.

[15] Tatsuya Daikoku, Geraint A. Wiggins, and **Yukie Nagai**, "Statistical Properties of Musical Creativity: Roles of Hierarchy and Uncertainty in Statistical Learning," Frontiers in Neuroscience, 15:640412, April 2021.

[16] Anja Philippsen and **Yukie Nagai**, "Deficits in Prediction Ability Trigger Asymmetries in Behavior and Internal Representation," Frontiers in Psychiatry, 11:564415, November 2020.

[17] Yuji Kawai, Yuji Oshima, Yuki Sasamoto, **Yukie Nagai**, and Minoru Asada, "A Computational Model for Child Inferences of Word Meanings via Syntactic Categories for Different Ages and Languages," IEEE Transactions on Cognitive and Developmental Systems, 12(3):401-416, September 2020.

[18] Jason Orlosky, Konstantinos Theofilis, Kiyoshi Kiyokawa, and **Yukie Nagai**, "Effects of Throughput Delay on Perception of Robot Teleoperation and Head Control Precision in Remote Monitoring Tasks," PRESENCE: Virtual and Augmented Reality, 27(2):226-241, February 2020.

[19] Pablo Lanillos, Daniel Oliva, Anja Philippsen, Yuichi Yamashita, **Yukie Nagai**, and Gordon Cheng, "A review on neural network models of schizophrenia and autism spectrum disorder," Neural Networks, 122:338-363, February 2020.

[20] Fabio Vannucci, Alessandra Sciutti, Hagen Lehman, Giulio Sandini, **Yukie Nagai**, and Francesco Rea, "Cultural differences in speed adaptation in human-robot interaction tasks," Paladyn, Journal of Behavioral Robotics, 10(1):256-266, August 2019.

[21] Mert Imre, Erhan Oztop, **Yukie Nagai**, and Emre Ugur, "Affordance-based altruistic robotic architecture for human-robot collaboration," Adaptive Behavior, 27(4):223-241, August 2019.

[22] Beata J. Grzyb, **Yukie Nagai**, Minoru Asada, Allegra Cattani, Caroline Floccia, and Angelo Cangelosi, "Children's scale errors are a natural consequence of learning to associate objects with actions: A computational model," Developmental Science, 22(4):e12777, July 2019.

[23] Sho Aoki, Kuriko Kagitani-Shimono, Junko Matsuzaki, Ryuzo Hanaie, Mariko Nakanishi, Koji Tominaga, **Yukie Nagai**, Ikuko Mohri, and Masako Taniike, "Lesser suppression of response to bright visual stimuli and visual abnormality in children with autism spectrum disorder: a magnetoencephalographic study," Journal of Neurodevelopmental Disorders, 11:9, June 2019.

[24] **Yukie Nagai**, "Predictive learning: its key role in early cognitive development," Philosophical Transactions of the Royal Society B: Biological Sciences, 374(1771):20180030, March 2019.

[25] Takato Horii, **Yukie Nagai**, and Minoru Asada, "Modeling Development of Multimodal Emotion Perception Guided by Tactile Dominance and Perceptual Improvement," IEEE Transactions on Cognitive and Developmental Systems, 10(3):762-775, September 2018.

[26] Jun-Cheol Park, Dae-Shik Kim, and **Yukie Nagai**, "Learning for Goal-Directed Actions Using RNNPB: Developmental Change of "What to Imitate"," IEEE Transactions on Cognitive and Developmental Systems, 10(3):545-556, September 2018.

[27] Francisco Cruz, Sven Magg, **Yukie Nagai**, and Stefan Wermter, "Improving interactive reinforcement learning: What makes a good teacher?," Connection Science, 30(3):306-325, September 2018.

[28] Yuji Kawai, **Yukie Nagai**, and Minoru Asada, "Prediction Error in the PMd As a Criterion for Biological Motion Discrimination: A Computational Account," IEEE Transactions on Cognitive and Developmental Systems, 10(2):237-249, June 2018.

[29] Jimmy Baraglia, Maya Cakmak, **Yukie Nagai**, Rajesh P. N. Rao, and Minoru Asada, "Efficient human-robot collaboration: When should a robot take initiative?," The International Journal of Robotics Research, 36(5-7):563-579, June 2017.

[30] Takato Horii, **Yukie Nagai**, and Minoru Asada, "Imitation of human expressions based on emotion estimation by mental simulation," Paladyn. Journal of Behavioral Robotics, 7(1):40-54, December 2016.

[31] Jimmy Baraglia, **Yukie Nagai**, and Minoru Asada, "Emergence of Altruistic Behavior Through the Minimization of Prediction Error," IEEE Transactions on Cognitive and Developmental Systems, 8(3):141-151, September 2016.

[32] **長井志江**, "認知発達の原理を探る：感覚・運動情報の予測学習に基づく計算論的モデル," ベビーサイエンス, 15:22-32, 2016 年 3 月.

[33] **長井志江**, "【回答】認知発達の原理を探る：感覚・運動情報の予測学習に基づく計算論的モデル," ベビーサイエンス, 15:37-45, 2016 年 3 月.

[34] Hiroshi Fukuyama, Shibo Qin, Yasuhiro Kanakogi, **Yukie Nagai**, Minoru Asada, and Masako Myowa-Yamakoshi, "Infant's action skill dynamically modulates parental action demonstration in the dyadic interaction," Developmental Science, 18(6):1006-1013, November 2015.

[35] Emre Ugur, **Yukie Nagai**, Erol Sahin, and Erhan Oztop, "Staged Development of Robot Skills: Behavior Formation, Affordance Learning and Imitation with Motionese," IEEE Transactions on Autonomous Mental Development, 7(2):119-139, June 2015.

[36] Emre Ugur, **Yukie Nagai**, Hande Celikkanat, and Erhan Oztop, "Parental scaffolding as a bootstrapping mechanism for learning grasp affordances and imitation skills," Robotica, 33(5):1163-1180, June 2015.

[37] 河合祐司, 大嶋悠司, 笹本勇輝, **長井志江**, 浅田稔, "幼児の統語発達モデル: 日本語，英語，中国語の言語構造を反映した統語範疇の獲得過程," 認知科学, 22(3):475-479, 2015 年 9 月.

[38] **Yukie Nagai** and Katharina J. Rohlfing, "Computational Analysis of Motionese Toward Scaffolding Robot Action Learning," IEEE Transactions on Autonomous Mental Development, 1(1):44-54, May 2009.

[39] **長井志江**, "ポピュレーション符号化を利用した自他の動き等価性の早期発見による共同注意の学習," 日本ロボット学会誌, 25(5):727-737, 2007 年 7 月.

[40] **Yukie Nagai**, Minoru Asada, and Koh Hosoda, "Learning for joint attention helped by functional development," Advanced Robotics, 20(10):1165-1181, September 2006.

[41] **長井志江**, "共同注意発達における動き情報の役割：構成論的理解," 認知科学, 13(3):480-483, 2006 年 9 月.

[42] **長井志江**, 細田耕, 森田章生, 浅田稔, "視覚注視と自己評価型学習の機能に基づくブートストラップ学習を通した共同注意の創発," 人工知能学会論文誌, 19(1):10-19, 2004 年 1 月.

[43] **Yukie Nagai**, Koh Hosoda, Akio Morita, and Minoru Asada, "A constructive model for the development of joint attention," Connection Science, 15(4):211-229, December 2003.

[44] 細田耕, **長井志江**, 浅田稔, "共同注意発現のためのブートストラップ," 電子情報通信学会技術研究報告：ニューロコンピューティング, 103(392):25-30, 2003 年 10 月.

[45] **長井志江**, 浅田稔, 細田耕, "ロボットと養育者の相互作用に基づく発達的学習モデルによる共同注意の獲得," 人工知能学会論文誌, 18(2):122-130, 2003 年 3 月.

国際会議（査読付きフルペーパー）

[1] Jiarui Li, Michiko Matsunaga, Masako Myowa, and **Yukie Nagai**, "Recurrence Plot Analysis of Mother-Child Autonomic Nervous System Predict Mother's Stress," in Proceedings of the 2023 IEEE International Conference on Development and Learning, accepted, November 9-11, 2023.

[2] Ming Li, Jiarui Li, Dan Zhang, and **Yukie Nagai**, "Prosody-Based Vocal Emotional Alignment in Infant-Caregiver Interaction," in Proceedings of the 2023 IEEE International Conference on Development and Learning, accepted, November 9-11, 2023.

[3] Marco Gabriele Fedozzi, **Yukie Nagai**, Francesco Rea, and Alessandra Sciutti, "The Shape of Time: Exploring Temporal Representation in Neural Processes for Multimodal Action Prediction," in Proceedings of the 9th Workshop on Artificial Intelligence and Cognition, September 14-15, 2023.

[4] Jiarui Li, Marisa Casillas, Sho Tsuji, and **Yukie Nagai**, "Multi-scale analysis of vocal coordination in infant-caregiver daily interaction," in Proceedings of the 2022 IEEE International Conference on Development and Learning, 164-169, September 12-15, 2022. **(SmartBot Challenge Finalist)**

[5] Naoto Yoshida, Tatsuya Daikoku, **Yukie Nagai**, and Yasuo Kuniyoshi, "Embodiment Perspective of Reward Definition for Behavioral Homeostasis," in Proceedings of the NeurIPS 2021 Workshop on Deep Reinforcement Learning, December 13, 2021.

[6] Anja Philippsen, Sho Tsuji, and **Yukie Nagai**, "Picture completion reveals developmental change in representational drawing ability: An analysis using a convolutional neural network," in Proceedings of the 10th IEEE International Conference on Development and Learning and on Epigenetic Robotics, October 26-30, 2020.

[7] Stefan Heinrich, Tayfun Alpay, and **Yukie Nagai**, "Learning Timescales in Gated and Adaptive Continuous Time Recurrent Neural Networks," in Proceedings of the 2020 IEEE International Conference on Systems, Man, and Cybernetics, 2662-2667, October 11-14, 2020.

[8] Anja Philippsen and **Yukie Nagai**, "A predictive coding model of representational drawing in human children and chimpanzees," in Proceedings of the 9th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 171-176, August 19-22, 2019.

[9] Daniel Oliva, Anja Philippsen, and **Yukie Nagai**, "How development in the Bayesian brain facilitates learning," in Proceedings of the 9th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 253-259, August 19-22, 2019.

[10] Anja Philippsen and **Yukie Nagai**, "Understanding the cognitive mechanisms underlying autistic behavior: a recurrent neural network study," in Proceedings of the 8th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 84-90, September 16-20, 2018.

[11] Yihan Zhang and **Yukie Nagai**, "Proprioceptive Feedback Plays a Key Role in Self-Other Differentiation," in Proceedings of the 8th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 133-138, September 16-20, 2018.

[12] Ahmet E. Tekden, Emre Ugur, **Yukie Nagai**, and Erhan Oztop, "Modeling the Development of Infant Imitation using Inverse Reinforcement Learning," in Proceedings of the 8th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 155-160, September 16-20, 2018.

[13] Serkan Bugur, **Yukie Nagai**, Erhan Oztop, and Emre Ugur, "A Computational Model For Action Prediction Development," in Proceedings of the ICDL-EpiRob 2018 Workshop on Continual Unsupervised Sensorimotor Learning, September 17, 2018.

[14] Takato Horii, **Yukie Nagai**, and Minoru Asada, "Active Perception based on Energy Minimization in Multimodal Human-robot Interaction," in Proceedings of the 5th International Conference on Human-Agent Interaction, 103-110, October 17-20, 2017. **(Best Student Paper Award)**

[15] Konstantinos Theofilis, Jason Orlosky, **Yukie Nagai**, and Kiyoshi Kiyokawa, "Panoramic View Reconstruction for Stereoscopic Teleoperation of a Humanoid Robot," in Proceedings of the IEEE-RAS 16th International Conference on Humanoid Robots, 242-248, November 15-17, 2016.

[16] Thomas Hermann, Jiajun Yang, and **Yukie Nagai**, "EmoSonics - Interactive Sound Interfaces for the Externalization of Emotions," in Proceedings of the 11th Audio Mostly: A Conference on Interaction with Sound, 61-68, October 4-6, 2016.

[17] Jorge L. Copete, **Yukie Nagai**, and Minoru Asada, "Motor development facilitates the prediction of others' actions through sensorimotor predictive learning," in Proceedings of the 6th IEEE International Conference on Development and Learning and on Epigenetic Robotics, September 19-22, 2016.

[18] Jimmy Baraglia, Maya Cakmak, **Yukie Nagai**, Rajesh Rao, and Minoru Asada, "Initiative in Robot Assistance during Collaborative Task Execution," in Proceedings of the 11th ACM/IEEE International Conference on Human-Robot Interaction, 67-74, March 7-10, 2016.

[19] Lars Schillingmann and **Yukie Nagai**, "Yet Another Gaze Detector: An Embodied Calibration Free System for the iCub Robot," in Proceedings of the 15th IEEE-RAS International Conference on Humanoid Robots, 8-13, November 3-5, 2015.

[20] **Yukie Nagai** and Minoru Asada, "Predictive Learning of Sensorimotor Information as a Key for Cognitive Development," in Proceedings of the IROS 2015 Workshop on Sensorimotor Contingencies for Robotics, October 2, 2015.

[21] Oskar Palinko, Alessandra Sciutti, Lars Schillingmann, Francesco Rea, **Yukie Nagai**, and Giulio Sandini, "Gaze Contingency in Turn-Taking for Human Robot Interaction: Advantages and Drawbacks," in Proceedings of the 24th IEEE International Symposium on Robot and Human Interactive Communication, 369-374, August 31-September 4, 2015.

[22] Jimmy Baraglia, Jorge L. Copete, **Yukie Nagai**, and Minoru Asada, "Motor Experience Alters Action Perception Through Predictive Learning of Sensorimotor Information," in Proceedings of the 5th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 63-69, August 13-16, 2015. **(Babybot Challenge 1st Place Award)**

[23] **Yukie Nagai**, Takakazu Moriwaki, and Minoru Asada, "Influence of Excitation/Inhibition Imbalance on Local Processing Bias in Autism Spectrum Disorder," in Proceedings of the 37th Annual Meeting of the Cognitive Science Society, 1685-1690, July 23-25, 2015.

[24] Lars Schillingmann, Joseph M. Burling, Hanako Yoshida, and **Yukie Nagai**, "Gaze is not Enough: Computational Analysis of Infant's Head Movement Measures the Developing Response to Social Interaction," in Proceedings of the 37th Annual Meeting of the Cognitive Science Society, 2104-2109, July 23-25, 2015.

[25] Takato Horii, **Yukie Nagai**, Lorenzo Natale, Francesco Giovannini, Giorgio Metta, and Minoru Asada, "Compensation of Tactile Hysteresis using Gaussian Process with Sensory Markov Property," in Proceedings of the 14th IEEE-RAS International Conference on Humanoid Robots, ThuI2-2.16, November 2014.

[26] Yuji Kawai, Yuji Oshima, Yuki Sasamoto, **Yukie Nagai**, and Minoru Asada, "Computational model for syntactic development: Identifying how children learn to generalize nouns and verbs for different languages," in Proceedings of the 4th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 78-84, October 2014.

[27] Yuji Kawai, Minoru Asada, and **Yukie Nagai**, "A model for biological motion detection based on motor prediction in the dorsal premotor area," in Proceedings of the 4th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 241-247, October 2014.

[28] Jimmy Baraglia, **Yukie Nagai**, and Minoru Asada, "Prediction Error Minimization for Emergence of Altruistic Behavior," in Proceedings of the 4th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 273-278, October 2014.

[29] Jorge L. Copete, **Yukie Nagai**, and Minoru Asada, "Development of goal-directed gaze shift based on predictive learning," in Proceedings of the 4th IEEE International Conference on Development and Learning and on Epigenetic Robotics, 334-339, October 2014.

[30] Jun-Cheol Park, Dae-Shik Kim, and **Yukie Nagai**, "Developmental Dynamics of RNNPB: New Insight about Infant Action Development," in Proceedings of the 13th International Conference on Simulation of Adaptive Behavior, 144-153, July 2014.

[31] Emre Ugur, **Yukie Nagai**, and Erhan Oztop, "Affordance based imitation bootstrapping with motionese," in Proceedings of the International Workshop on Developmental Social Robotics, 9-14, November 2013.

[32] Emre Ugur, **Yukie Nagai**, and Erhan Oztop, "Parental scaffolding as a bootstrapping mechanism for learning grasp affordances and imitation skills," in Proceedings of the 22nd International Workshop on Robotics in Alpe-Adria-Danube Region, September 2013. **(Best Paper Research Award)**

[33] Takato Horii, **Yukie Nagai**, and Minoru Asada, "Touch and Emotion: Modeling of developmental differentiation of emotion lead by tactile dominance," in Proceedings of the 3rd IEEE International Conference on Development and Learning and on Epigenetic Robotics, August 2013.

[34] Jimmy Baraglia, **Yukie Nagai**, and Minoru Asada, "Action Understanding using an Adaptive Liquid State Machine based on Environmental Ambiguity," in Proceedings of the 3rd IEEE International Conference on Development and Learning and on Epigenetic Robotics, August 2013.

[35] Anja K. Philippsen, Kai A. Mismahl, Britta Wrede, and **Yukie Nagai**, "Cross-Cultural Recognition of Auditive Feedback Using Echo State Networks," in Proceedings of 24. Konferenz zur Elektronischen Sprachsignalverarbeitung, March 2013.

[36] **Yukie Nagai**, Akiko Nakatani, Shibo Qin, Hiroshi Fukuyama, Masako Myowa-Yamakoshi, and Minoru Asada, "Co-Development of Information Transfer within and between Infant and Caregiver," in Proceedings of the 2nd IEEE International Conference on Development and Learning and on Epigenetic Robotics, November 2012.

[37] Minoru Asada, **Yukie Nagai**, and Hisashi Ishihara, "Why not artificial sympathy?," in Proceedings of the International Conference on Social Robotics, 278-287, October 2012.

[38] Yuji Kawai, **Yukie Nagai**, and Minoru Asada, "Perceptual Development Triggered by its Self-Organization in Cognitive Learning," in Proceedings of the 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems, 5159-5164, October 2012.

[39] Yuji Kawai, Jihoon Park, Takato Horii, Yuji Oshima, Kazuaki Tanaka, Hiroki Mori, **Yukie Nagai**, Takashi Takuma, and Minoru Asada, "Throwing Skill Optimization through Synchronization and Desynchronization of Degree of Freedom," in Proceedings of the 16th Annual RoboCup International Symposium, June 2012. **(Research Award of the RoboCup Japan Open, Best Paper Award Finalist)**

[40] Emre Ugur, Hande Celikkanat, Erol Sahin, **Yukie Nagai**, and Erhan Oztop, "Learning to Grasp with Parental Scaffolding," in Proceedings of the 11th IEEE-RAS International Conference on Humanoid Robots, 480-486, October 2011.

[41] **Yukie Nagai**, Yuji Kawai, and Minoru Asada, "Emergence of Mirror Neuron System: Immature vision leads to self-other correspondence," in Proceedings of the 1st Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics, August 2011.

[42] Marc Kammer, Marko Tscherepanow, Thomas Schack, and **Yukie Nagai**, "A Perceptual Memory System for Affordance Learning in Humanoid Robots," in T. Honkela, W. Duch, M. A. Girolami, and S. Kaski, editors, International Conference on Artificial Neural Networks, Lecture Notes in Computer Science, 6792:349-356, June 2011.

[43] Go Tanaka, **Yukie Nagai**, and Minoru Asada, "Bottom-up Attention Improves Action Recognition Using Histograms of Oriented Gradients," in Proceedings of the 12th IAPR Conference on Machine Vision Applications, 467-470, June 2011.

[44] **Yukie Nagai**, Akiko Nakatani, and Minoru Asada, "How a robot's attention shapes the way people teach," in Proceedings of the 10th International Conference on Epigenetic Robotics, 81-88, November 2010.

[45] **Yukie Nagai**, "Stability and Sensitivity of Bottom-Up Visual Attention for Dynamic Scene Analysis," in Proceedings of the 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems, 5198-5203, October 2009.

[46] **Yukie Nagai**, "From Bottom-Up Visual Attention to Robot Action Learning," in Proceedings of the 8th IEEE International Conference on Development and Learning, June 2009.

[47] Anna-Lisa Vollmer, Katrin S. Lohan, Kerstin Fischer, **Yukie Nagai**, Karola Pitsch, Jannik Fritsch, Katharina J. Rohlfing, and Britta Wrede, "People Modify Their Tutoring Behavior in Robot-Directed Interaction for Action Learning," in Proceedings of the 8th IEEE International Conference on Development and Learning, June 2009.

[48] **Yukie Nagai** and Katharina J. Rohlfing, "Parental Action Modification Highlighting the Goal versus the Means," in Proceedings of the 7th IEEE International Conference on Development and Learning, August 2008.

[49] **Yukie Nagai**, Claudia Muhl, and Katharina J. Rohlfing, "Toward Designing a Robot that Learns Actions from Parental Demonstrations," in Proceedings of the 2008 IEEE International Conference on Robotics and Automation, 3545-3550, May 2008.

[50] Claudia Muhl, **Yukie Nagai**, and Gerhard Sagerer, "On Constructing a Communicative Space in HRI," in KI 2007: Advances in Artificial Intelligence (30th Annual German Conference on AI), J. Hertzberg, M. Beetz, and R. Englert (Eds.), Springer, 264-278, September 2007.

[51] Claudia Muhl and **Yukie Nagai**, "Does Disturbance Discourage People from Communicating with a Robot?" in Proceedings of the 16th IEEE International Symposium on Robot and Human Interactive Communication, 1137-1142, August 2007. **(Best Paper Award Finalist)**

[52] **Yukie Nagai** and Katharina J. Rohlfing, "Can Motionese Tell Infants and Robots "What to Imitate"?" in Proceedings of the 4th International Symposium on Imitation in Animals and Artifacts, 299-306, April 2007.

[53] **Yukie Nagai**, "Learning to Comprehend Deictic Gestures in Robots and Human Infants," in Proceedings of the 14th IEEE International Workshop on Robot and Human Interactive Communication, 217-222, August 2005.

[54] **Yukie Nagai**, "The Role of Motion Information in Learning Human-Robot Joint Attention," in Proceedings of the 2005 IEEE International Conference on Robotics and Automation, 2081-2086, April 2005.

[55] **Yukie Nagai**, "Joint Attention Development in Infant-like Robot based on Head Movement Imitation," in Proceedings of the Third International Symposium on Imitation in Animals and Artifacts, 87-96, April 2005.

[56] **Yukie Nagai**, Koh Hosoda, and Minoru Asada, "Joint Attention Emerges through Bootstrap Learning," in Proceedings of the 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems, 168-173, October 2003.

[57] **Yukie Nagai**, Koh Hosoda, and Minoru Asada, "How does an infant acquire the ability of joint attention?: A Constructive Approach," in Proceedings of the 3rd International Workshop on Epigenetic Robotics, 91-98, August 2003.

[58] **Yukie Nagai**, Koh Hosoda, Akio Morita, and Minoru Asada, "Emergence of Joint Attention based on Visual Attention and Self Learning," in Proceedings of the 2nd International Symposium on Adaptive Motion of Animals and Machines, SaA-II-3, March 2003.

[59] **Yukie Nagai**, Minoru Asada, and Koh Hosoda, "Developmental Learning Model for Joint Attention," in Proceedings of the 2002 IEEE/RSJ International Conference on Intelligent Robots and Systems, 932-937, October 2002.

[60] **Yukie Nagai**, Minoru Asada, and Koh Hosoda, "A Developmental Approach Accelerates Learning of Joint Attention," in Proceedings of the 2nd International Conference on Development and Learning, 277-282, June 2002.

[61] Ken Tomiyama and **Yukie Nagai**, "Distributed Management System with Hierarchical Structure for a Group of Mobile Robots," in Proceedings of the 2nd International Workshop on Advanced Mechatronics, 230-235, December 1997.

解説・総説

[1] **長井志江**, "自由エネルギー原理と認知発達ロボティクス," 人工知能, 38(6):826-832, 2023 年 11 月.

[2] **長井志江**, "ロボティクスによる神経多様性の理解と支援," 科学, 93(1):41-46, 2022 年 12 月.

[3] Alessandra Sciutti, Pablo Barros, Ginevra Castellano, and **Yukie Nagai**, "Editorial: Affective shared perception," Frontiers in Integrative Neuroscience, 16:1024267, September 2022.

[4] **Yukie Nagai**, "Developmental vs. evolutionary origin of cooperation," ベビーサイエンス, 18:12-13, 2019 年 3 月.

[5] **長井志江**, "理解から支援へ：発達障害を見える化する認知ミラーリング," ヒューマンインタフェース学会誌, 21(1):5-10, 2019 年 2 月.

[6] **長井志江**, "ASD 視覚体験シミュレータ 〜当事者視点から理解する自閉スペクトラム症の困難さ〜," 特別支援教育研究, 734:23-25, 2018 年 10 月.

[7] 國吉康夫, **長井志江**, 小西行郎, 明和政子, 熊谷晋一郎, 大村吉幸, 金沢星慶, "構成論的発達科学 − 胎児からの発達原理の解明に基づく発達障害のシステム的理解 −," ベビーサイエンス, 17:10-21, 2018 年 3 月.

[8] **長井志江**, "認知ミラーリング：認知過程の自己理解と社会的共有による発達障害者支援," 生体の科学, 69(1):63-67, 2018 年 2 月.

[9] **長井志江**, "ASD 視覚体験シミュレータ," 「臨床心理学」増刊第 9 号「みんなの当事者研究」, 192-196, 2017 年 8 月.

[10] **長井志江**, "計算論的視点から見た感覚・運動統合の重要性と残された課題," ベビーサイエンス, 16:50-51, 2017 年 3 月.

[11] **長井志江**, 堀井隆斗, "予測学習に基づく情動の計算論的モデル," 人工知能, 31(5):694-701, 2016 年 9 月.

[12] **長井志江**, "自閉スペクトラム症の特異な視覚世界を再現する知覚体験シミュレータ," 精神看護, 19(1):59-63, 2016 年 1 月.

[13] **長井志江**, "認知発達ロボティクスから探る「感性」の発達 – 人と感性を共有するロボットを目指して–," 感性工学, 13(4):195-199, 2015 年 12 月.

[14] **長井志江**, "ロボットは乳幼児研究の謎を解き明かせるか," ベビーサイエンス, 6:42-43, 2007 年 1 月.

[15] **長井志江**, "ロボットで探る視線理解の発達," 発達, 27(107):60-66, 2006 年 7 月.

書籍

[1] **長井志江**, "発達障害を見える化する AI," AI から読み解く社会–権力化する最新技術, 東京大学 B'AI グローバル・フォーラム, 板津木綿子, 久野愛（編）, 東京大学出版会, 2023 年 3 月.

[2] **長井志江**, "発達ロボティクス," ロボット工学ハンドブック（第 3 版）, 日本ロボット学会（編）, コロナ社, 2023 年 3 月.

[3] **Yukie Nagai**, "Social Cognition," Cognitive Robotics, A. Cangelosi and M. Asada (Eds.), MIT Press, May 2022.

[4] **Yukie Nagai**, "Predictive Coding for Cognitive Development," Encyclopedia of Robotics, M. H. Ang, O. Khatib, and B. Siciliano (Eds.), Springer, May 2021.

[5] **長井志江**, "8.8 予測符号化に基づくロボットの認知発達," AI 事典 第 3 版, 中島秀之他（編）, 近代科学社, 222-224, 2019 年 12 月.

[6] **Yukie Nagai**, "Mechanism for Cognitive Development," Cognitive Neuroscience Robotics: A: Synthetic Approaches to Human Understanding, M. Kasaki, H. Ishiguro, M. Asada, M. Osaka, and T. Fujikado (Eds.), Springer, 51-72, May 2016.

[7] **長井志江**, "感覚・運動情報の予測学習に基づく社会的認知機能の発達," ロボットと共生する社会脳：神経社会ロボット学, 苧阪直行（編）, 新曜社, 211-242, 2015 年 12 月.

[8] Yuji Kawai, Jihoon Park, Takato Horii, Yuji Oshima, Kazuaki Tanaka, Hiroki Mori, **Yukie Nagai**, Takashi Takuma, and Minoru Asada, "Throwing Skill Optimization through Synchronization and Desynchronization of Degree of Freedom," Lecture Notes in Computer Science, RoboCup 2012: Robot Soccer World Cup XVI, X. Chen, P. Stone, L. E. Sucar, and T. v. d. Zant (Eds.), Springer, 7500:178-189, 2013.

[9] Noriaki Mitsunaga, **Yukie Nagai**, Tomohiro Ishida, Taku Izumi, and Minoru Asada, "BabyTigers 2001: Osaka Legged Robot Team," Lecture Note in Artificial Intelligence, RoboCup 2001: Robot Soccer World Cup V, A. Birk, S. Coradeschi, and S. Tadokoro (Eds.), Springer, 685-688, August 2002.

[10] Noriaki Mitsunaga, **Yukie Nagai**, and Minoru Asada, "BabyTigers: Osaka Legged Robot Team," Lecture Note in Artificial Intelligence, RoboCup 2000: Robot Soccer World Cup IV, P. Stone, T. Balch, and G. K. Kraetzschmar (Eds.), Springer, 631-634, June 2001.

国際会議 招待講演

[1] **Yukie Nagai**, "TBD," The 27th Annual Meeting of the Association for the Scientific Study of Consciousness, Tokyo, Japan, July 2-5, 2024.

[2] **Yukie Nagai**, "Predictive Processing: Illuminating and Modeling Cognitive Development," The IEEE World Congress on Computational Intelligence, Yokohama, Japan, June 30-July 5, 2024.

[3] **Yukie Nagai**, "TBD," The IEEE International Conference on Development and Learning, Austin, TX, USA, May 20-23, 2024.

[4] **Yukie Nagai**, "Predictive Processing for Robot Learning: What can we learn from cognitive science?," CoRL 2023 Workshop on Bridging the Gap between Cognitive Science and Robot Learning in the Real World: Progresses and New Directions, Atlanta, GA, USA, November 6, 2023.

[5] **Yukie Nagai**, "Predictive Coding Account for Neurodiverse Minds," The 46th Annual Meeting of the Japan Neuroscience Society, Sendai, Japan, August 1-4, 2023.

[6] **Yukie Nagai**, "Predictive Coding Theory for Social Intelligence," RSS 2023 Workshop on Social Intelligence in Humans and Robots, Daegu, Korea, July 10, 2023.

[7] **Yukie Nagai**, "AI for Understanding Human Intelligence," UTokyo Global Unit Courses, Tokyo, Japan, June 19-30, 2023.

[8] **Yukie Nagai**, "Predictive Coding and Social Cognition," ICRA 2023 Workshop on Cognitive Modeling in Robot Learning for Adaptive Human-Robot Interactions, London, UK, June 2, 2023.

[9] **Yukie Nagai**, "Altered Predictive Processing in Neurodiverse Minds," IRCN Computational Psychiatry Workshop, Tokyo, Japan, March 31, 2023.

[10] **Yukie Nagai**, "Stereotyped Minds and Diverse Minds," Tokyo College Lecture, Tokyo, February 20, 2023.

[11] **Yukie Nagai**, "Embodiment as a Key to Realize "Beyond AI"," The 3rd International Symposium of the Institute for AI and Beyond, Tokyo, February 17, 2023.

[12] **Yukie Nagai**, "Predictive Coding Account for Cognitive Development," IRCN-iPlasticity International Symposium, Tokyo, Japan, January 10-11, 2023.

[13] **Yukie Nagai**, "Predictive Brain in Humans and Robots," Latin American Summer School on Cognitive Robotics, Santiago, Chile, January 3-6, 2023.

[14] **Yukie Nagai**, "Predictive Coding for Cognitive Development in Humans and Robots," Workshop on the Ecology of Open-Ended Skill Acquisition, Bordeaux, France, December 7, 2022.

[15] **Yukie Nagai**, "Cognitive Developmental Robotics," ShanghAI Lectures 2022, Online, November 24, 2022.

[16] **Yukie Nagai**, "Developmental Machine Learning: Robots that learn like human children," IROS 2022 Workshop on Trends and Advances in Machine Learning and Automated Reasoning for Intelligent Robots and Systems, Kyoto, Japan, October 27, 2022.

[17] **Yukie Nagai**, "Emergence of Social Cognition Through Open-Ended Predictive Learning," IROS 2022 Workshop on Lifelong Learning of High-level Cognitive and Reasoning Skills, Kyoto, Japan, October 23, 2022.

[18] **Yukie Nagai**, "Robots as Mirrors of Human Mind," Mind and Matter Talks 2022, University of Helsinki, Finland, October 14, 2022. (Online)

[19] **Yukie Nagai**, "Robotics for Understanding and Assisting Neurodiversity," The International Symposium on Robotics Research, Geneva, Switzerland, September 25-30, 2022.

[20] **Yukie Nagai**, "How to Build Developing Minds," Seminar Series at Honda Research Institute Europe, Offenbach, Germany, September 21, 2022.

[21] **Yukie Nagai**, "AI as a Tool for Investigating Human Intelligence," The 5th Advanced Course on Data Science & Machine Learning, Castelnuovo Berardenga, Tuscany, Italy , August 22-26, 2022.

[22] **Yukie Nagai**, "Predictive Brain and Its Disorders: A computational approach to understanding early cognitive development," SFB-TRR 135 - Retreat, Ebsdorfergrund, Germany, July 18-21, 2022.

[23] **Yukie Nagai**, "Cognitive Developmental Robotics: An embodied computational approach to neuroscience," Nencki School of Ideas in Neuroscience, Warsaw, Poland, July 3-8, 2022.

[24] **Yukie Nagai**, "How to Build Developing Minds," Japanese-German Conference "Artificial Intelligence and the Human - Cross-Cultural Perspectives on Science and Fiction," Berlin, Germany, May 11-13, 2022. **(Keynote talk)**

[25] **Yukie Nagai**, "Developmental Diversity in Drawing: Robots vs. Children," AI and Society Series: Robotics and Embodiment, Online, April 12, 2022.

[26] **Yukie Nagai**, "AI for Understanding Human Intelligence," The 2nd International Symposium of the Institute for AI and Beyond, Tokyo, February 12, 2022. (Online)

[27] **Yukie Nagai**, "Predictive Processing in the Brain: Computational Models of Cognitive Development and Disorders," The 8th Baltic-Nordic Summer School on Neuroscience and Neuroinformatics, Stockholm, Sweden, September 21-25, 2021. (Online)

[28] **Yukie Nagai**, "Robots as Mirrors of Human Cognition," The 30th IEEE International Conference on Robot and Human Interactive Communication, Vancouver, Canada, August 8-12, 2021. (Online) **(Keynote talk)**

[29] **Yukie Nagai**, "Predictive Coding in Autism Spectrum Disorder: New insights from computational studies," The 44th Annual Meeting of the Japan Neuroscience Society / The 1st CJK International Meeting, Kobe, Japan, July 28-31, 2021.

[30] **Yukie Nagai**, "Visual Hyper- and Hypo-sensitivity in ASD: Environmental and Neural Causes for Atypical Perception," International Conference on Applications of Virtual Reality in Autism Research, Glasgow, UK, May 12-14, 2021. (Online) **(Keynote talk)**

[31] **Yukie Nagai**, "Predictive Coding Account of Cognitive Development: Toward Development of Decision Making," Tenth International Symposium on Biology of Decision Making, Paris, France, May 10-12, 2021. (Online)

[32] **Yukie Nagai**, "AI for Understanding and Assisting Human Intelligence," The University of Tokyo B'AI Global Forum "AI and Society", Tokyo, April 22, 2021. (Online)

[33] **Yukie Nagai**, "Roles of Embodiment in Cognitive Development," International Workshop on Embodied Intelligence, Cambridge, UK, March 24-26, 2021. (Online)

[34] **Yukie Nagai**, "Robot Intelligence Inspired by Human Intelligence," IEEE International Conference on Intelligence and Safety for Robotics, Nagoya, Japan, March 4-6, 2021. (Online) **(Keynote talk)**

[35] **Yukie Nagai**, "Predictive Coding: A Unified Theory for Human and Robot Cognitive Development," Seminar Series on Cognitive Robotics at Queen Mary University of London, London, UK, February 5, 2021. (Online)

[36] **Yukie Nagai**, "Computational modeling of cognitive development based on predictive coding," Leap Brainstorm, January 20, 2021. (Online)

[37] **Yukie Nagai**, "Does Predictive Coding Provide a Unified Theory of Artificial Intelligence?," International Joint Conference on Artificial Intelligence - Pacific Rim International Conference on Artificial Intelligence, Yokohama, Japan, January 7-15, 2021. (Online)

[38] **Yukie Nagai**, "Cognitive Development Based on Predictive Coding," Workshop on "Neural Control: From Data to Machines", Göttingen, Germany, November 5 - December 17, 2020. (Online)

[39] **Yukie Nagai**, "Artificial Intelligence as a Mirror of Human Intelligence," 2nd French-German-Japanese Symposium on Human-centric Artificial Intelligence, Tokyo, Japan, November 16-20, 2020. (Online)

[40] **Yukie Nagai**, "Development of Perception, Action, and Learning Based on Predictive Coding," ICDL-EpiRob 2020 Workshop on Affective Shared Perception, Valparaiso, Chile, October 30, 2020. (Online)

[41] **Yukie Nagai**, "Cognitive Development in Humans and Robots: New Insights into Intelligence," 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems, Las Vegas, USA, October 25-November 25, 2020. (Online) **(Plenary talk)**

[42] **Yukie Nagai**, "Cognitive Development Based on Predictive Coding," International Symposium on Artificial Intelligence and Brain Science, Tokyo, Japan, October 10-12, 2020. (Online)

[43] **Yukie Nagai**, "Cognitive development based on predictive coding," Cross Roads #16, Tokyo, September 25, 2020. (Online)

[44] **Yukie Nagai**, "Typical and Atypical Consciousness Based on Predictive Coding," Consciousness Club, Tokyo, January 17, 2020.

[45] **Yukie Nagai**, "Predictive Coding as a Computational Theory for Open-Ended Cognitive Development," IROS 2019 Workshop on Open-Ended Learning for Object Perception and Grasping: Current Successes and Future Challenges, Macau, China, November 8, 2019.

[46] **Yukie Nagai**, "The Now and Future of Cognitive Developmental Robotics," The Third Conference on Robot Learning, Osaka, Japan, October 30-November 1, 2019. **(Keynote talk)**

[47] **Yukie Nagai**, "[Lecture 1] Beyond self: From non-social to social development in robots; [Lecture 2] Atypical self: A computational account for developmental disorder," Autumn School of German Scientific Priority Program on "The Active Self", Herrsching, Germany, October 23-27, 2019.

[48] **Yukie Nagai**, "An interdisciplinary approach to human and robot cognition," CITEC Conference "Cognitive Interaction Technology meets AI", Bielefeld, Germany, October 24-25, 2019.

[49] **Yukie Nagai**, "What robots tell us about human cognition: Predictive coding theory," Opening Conference of ZiF research group "Situation models: Interfacing perception and memory for cognitive behavior", Bielefeld, Germany, October 9-11, 2019.

[50] **Yukie Nagai**, "Where do social difficulties come from?: Predictive coding account for autism," HAI 2019 Workshop on Clinical Use of Technology for Individuals with Autism Spectrum Disorder, Kyoto, Japan, October 6, 2019.

[51] **Yukie Nagai**, "AI that simulates and assists people with autism spectrum disorder," Nature Conference on "AI & Robotics", Shenzhen, China, September 2-3, 2019.

[52] **Yukie Nagai**, "Predictive coding account for emotion," ICDL-EpiRob 2019 Workshop on Naturalistic Non-Verbal and Affective Human-Robot Interactions, Oslo, Norway, August 19, 2019.

[53] **Yukie Nagai**, "Cognitive Development in Robots: A unified theory based on predictive coding," The 8th International Conference on Biomimetic and Biohybrid Systems, Nara, Japan, July 9-12, 2019. **(Plenary talk)**

[54] **Yukie Nagai**, "Predictive Learning as a Computational Principle for Early Cognitive Development," The Fourth International Workshop on Intrinsically Motivated Open-ended Learning, Frankfurt, Germany, July 1-3, 2019.

[55] **Yukie Nagai**, "What Robotics Tells About Human Development and Its Disorders," RSS 2019 Workshop on Women in Robotics V, Freiburg, Germany, June 23, 2019.

[56] **Yukie Nagai**, "Computational Models of Predictive Coding for Robot Cognitive Development," RSS 2019 Workshop on Advances in Neuro-Robotics, Freiburg, Germany, June 22, 2019.

[57] **Yukie Nagai**, "Predictive coding account for social cognitive development and its disorders," Marcus Wallenberg International Symposium on Affective and Developmental Processes in Cognitive and Autonomous Systems - Augmenting Deep Learning using Neural Dynamics and Predictive Coding, Gothenburg, Sweden, May 6-7, 2019.

[58] **Yukie Nagai**, "Development of social cognition in robots," Behaviors.ai 2nd Annual Workshop, Lyon, France, April 10, 2019.

[59] **Yukie Nagai**, "Development of social cognition in robots," JST-CREST / IEEE-RAS Spring School on "Social and Artificial Intelligence for User-Friendly Robots", Shonan Village, Japan, March 17-24, 2019.

[60] **Yukie Nagai**, "Cognitive Mirroring: A Computational Approach to Understanding and Assisting Autism Spectrum Disorder," The 2nd Workshop on Social Robots in Therapy and Care, Daegu, Korea, March 11, 2019.

[61] **Yukie Nagai**, "Computational Models of Predictive Coding for Social Cognitive Development in Robots," The 4th Joint UAE Symposium on Social Robotics, Abu Dhabi and Al Ain, UAE, February 3-6, 2019.

[62] **Yukie Nagai**, "Predictive Learning: A computational theory of social cognitive development," International Research Center for Neurointelligence (IRCN) 2nd International Symposium, Tokyo, Japan, December 17, 2018.

[63] **Yukie Nagai**, "Cognitive Mirroring: Computational Approach to Developmental Disorders," Artificial Intelligence - International Research and Applications: 1st Japanese-German-French DWIH Symposium, Tokyo, Japan, November 21-22, 2018.

[64] **Yukie Nagai**, "Predictive Learning: Neuro-inspired mechanism for social cognitive development in robots," The 4th Congress on Robotics and Neuroscience, Valparaíso, Chile, November 15-17, 2018.

[65] **Yukie Nagai**, "Biologically-inspired cognitive architecture for human-robot collaboration," IROS 2018 Workshop on Human-Robot Cooperation and Collaboration in Manipulation: Advancements and Challenges, Madrid, Spain, October 5, 2018.

[66] **Yukie Nagai**, "The self-other within predictive learning," IROS 2018 Workshop on the utility of body, interaction and self learning in robotics, Madrid, Spain, October 1, 2018.

[67] **Yukie Nagai**, "Where and Why Infants Look: A computational account for the development of visual attention," ICDL-EpiRob 2018 Workshop on Active Vision, Attention, and Learning, Tokyo, Japan, September 17, 2018.

[68] **Yukie Nagai**, "Impact of Social Interaction on Affordance Learning," The 1st International Workshop on Computational Models of Affordance in Robotics, Pittsburgh, USA, June 30, 2018.

[69] **Yukie Nagai**, "Robots that Learn to Interact with Others Like Infants," University of Twente, Enschede, Netherlands, February 22, 2018.

[70] **Yukie Nagai**, "Predictive Learning: A computational theory that accounts for social cognitive development," Paderborn University, Paderborn, Germany, February 20, 2018.

[71] **Yukie Nagai**, "Predictive Learning: A computational theory that accounts for social cognitive development," Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, February 16, 2018.

[72] **Yukie Nagai**, "Predictive Learning: Computational theory that solves the puzzle of cognitive development," The 1st International Symposium on Systems Intelligence Division, Osaka, January 20-21, 2018.

[73] **Yukie Nagai**, "Mental Simulation Based on Crossmodal Learning," ICDL-EpiRob2017 Workshop on Computational Models for Crossmodal Learning, Lisbon, Portugal, September 18, 2017.

[74] **Yukie Nagai**, "Development of Social Self through Predictive Learning," ICDL-EpiRob2017 Workshop on the Development of the Self: from self-perception to interaction under uncertainty, Lisbon, Portugal, September 18, 2017.

[75] **Yukie Nagai**, "Predictive Coding for Robot Cognition," International Symposium on Neuroscience of Consciousness: Beyond NCC, Chiba, Japan, July 24, 2017.

[76] **Yukie Nagai**, "Computational models for cognitive development," ISSA Summer School 2017, Osaka, May 22-June 2, 2017.

[77] **Yukie Nagai**, "Predictive Learning: A Computational Account for Social Cognitive Development," Lorentz Center Workshop "Perspectives on Developmental Robotics", Leiden, the Netherlands, May 15-19, 2017.

[78] **Yukie Nagai**, "Cognitive Mirroring: Computational Approach to Understanding and Assisting Autism Spectrum Disorder," International Symposium on Constructive Approach to Cognitive Development and Disorders, Bielefeld University, Bielefeld, Germany, March 13, 2017.

[79] **Yukie Nagai**, "Predictive learning: Its key role in cognitive development," The 3rd International Symposium on Cognitive Neuroscience Robotics: Toward Constructive Developmental Science, Osaka, Japan, December 11-13, 2016.

[80] **Yukie Nagai**, "Predictive Learning: A Computational Theory for Cognitive Development," Lecture at Radboud University, Nijmegen, Netherlands, November 10, 2016.

[81] **Yukie Nagai**, "Learning with motionese: Human-robot interaction inspired by caregiver-infant interaction," IROS 2016 Workshop on Human-Robot Collaboration: Towards Co-Adaptive Learning Through Semi-Autonomy and Shared Control, Daejeon, Korea, October 10, 2016.

[82] **Yukie Nagai**, "From cognition to social interaction based on predictive learning," IROS 2016 Workshop on Bio-inspired Social Robot Learning in Home Scenarios, Daejeon, Korea, October 10, 2016.

[83] **Yukie Nagai**, "Predictive learning: A unified theory for cognitive development," International Workshop on Robotics in the 21st century: Challenges and Promises, Volpriehausen, Germany, September 25-28, 2016.

[84] **Yukie Nagai**, "A Computational Approach to Predictive Learning Account for Cognitive Development," ICDL-EpiRob 2016 Workshop on Predictive Processing and Infant Development: The Current State-of-the-art, Cergy-Pontoise, France, September 19, 2016.

[85] **Yukie Nagai**, "Predictive learning for robot cognition," EuroScience Open Forum "Cognition in humans and robots," Manchester, UK, July 23-27, 2016.

[86] **Yukie Nagai**, "Intention reading and collaboration based on mirror neuron system," HRI 2016 Workshop on Intention Recognition in Human-Robot Interaction, Christchurch, New Zealand, March 7, 2016.

[87] **Yukie Nagai**, "Emergence of mirror neuron system through predictive learning," The 2nd International Symposium on Cognitive Neuroscience Robotics: Before and Beyond Mirror Neurons, Osaka, Japan, February 23, 2016.

[88] **Yukie Nagai**, "How ASD sees the world: Computational approaches to understanding atypical perception," International Workshop on Cognitive Development for Friendly Robots and Rehabilitation, Genoa, Italy, December 2-3, 2015.

[89] **Yukie Nagai**, "Predictive Learning of Sensorimotor Information as a Key for Cognitive Development," Humanoids 2015 Workshop on Towards Intelligent Social Robots - Current Advances in Cognitive Robotics, Seoul, Korea, November 3, 2015.

[90] **Yukie Nagai**, "Predictive learning as a key for cognitive development: New insights from developmental robotics," EAP CogSci 2015 Symposium on Cognitive Development and Architectures for Cognitive Robotics, Turin, Italy, September 25-27, 2015.

[91] **Yukie Nagai**, "Emergence of self awareness in robot based on predictive learning," ISSA Summer School, Kobe, Japan, August 10, 2015.

[92] **Yukie Nagai**, "Predictive Learning of Sensorimotor Information as a Key for Cognitive Development," ICAR 2015 Workshop on Robot Learning: Bottom-up and top-down development of robot skills, Istanbul, Turkey, July 31, 2015.

[93] **Yukie Nagai**, "Predictive Learning of Sensorimotor Information as a Key for Cognitive Development," Open Lecture on Cognitive Interaction Design, Kyoto Institute of Technology, Kyoto, Japan, July 12, 2015.

[94] **Yukie Nagai**, "Predictive Learning as a Key for Cognitive Development: New Insights from Developmental Robotics," Workshop on Cognitive Science and Robotics: New Approaches to Human Cognition and Robotics, University of Houston, Houston, USA, March 23, 2015.

[95] **Yukie Nagai**, "Prediction Error Minimization: An Underlying Mechanism for the Emergence of Behavioral Coordination," HRI 2015 Workshop on Behavior Coordination between Animals, Humans and Robots, Portland, USA, March 2, 2015.

[96] **Yukie Nagai**, "Predictive Learning as a Key for Cognitive Development," International Workshop on Cognitive Neuroscience Robotics, Osaka, Japan, December 2014.

[97] **Yukie Nagai**, "Predictive Learning as a Key for Cognitive Development: New Insight from Developmental Robotics," Plymouth University CRNS Seminars, Plymouth, UK, October 2014.

[98] **Yukie Nagai**, "Predictive Learning as a Key for Cognitive Development: New Insight from Developmental Robotics," Heriot-Watt University's MACS Computer Science Seminar Series, Edinburgh, UK, October 2014.

[99] **Yukie Nagai**, "What can robotics teach us about infant development?: Contingency learning as a key for cognitive development," Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany, July 2014.

[100] **Yukie Nagai**, "Computational Methods to Analyze the Dynamics of Infant-Caregiver Interaction," ICIS 2014 Pre-Conference on Head-Mounted Eye Tracking, Berlin, Germany, July 2014.

[101] **Yukie Nagai**, "An Interaction-Based Development of Human-Robot Joint Attention and Self/Other Cognition," International Conference: Going Beyond the Laboratory - Ethical and Societal Challenges for Robotics, Delmenhorst, Germany, February 2014.

[102] **Yukie Nagai**, "What can robotics teach us about self-other recognition?," CiNet Friday Lunchtime Seminar Series, CiNet, Osaka, Japan, January 2014.

[103] **Yukie Nagai**, "Designing Teachable Robots: How to take multidimensionality of mind perception into account?," IROS 2013 Workshop on Towards Social Humanoid Robots: What makes interaction human-like?, Tokyo, Japan, November 2013.

[104] **Yukie Nagai**, "Contingency as a key for cognitive development: From self-other recognition to joint attention," IROS 2013 Workshop on Cognitive Robotics Systems: Replicating Human Actions and Activities, Tokyo, Japan, November 2013.

[105] **Yukie Nagai**, "Development of Self through Other: Emergence of Mirror Neuron System and Social Interaction," RobotDoc International Conference on Development of Cognition, Osaka, Japan, August 2013.

[106] **Yukie Nagai**, "Developmental Robotics to Investigate Interpersonal Coordination," CogSci 2013 Workshop on Embodied Approaches to Interpersonal Coordination: Infants, Adults, Robots, and Agents, Berlin, Germany, July 2013.

[107] **Yukie Nagai**, "How social interaction shapes the way robots learn," HRI 2013 Workshop on Collaborative Manipulation: New Challenges for Robotics and HRI, Tokyo, Japan, March 2013.

[108] **Yukie Nagai**, "Can Robots Learn to Communicate like Infants?," Houston University, Houston, TX, USA, November 2012.

[109] **Yukie Nagai**, "The Importance of Starting Small in Robot Learning: Lessons from Human Intelligence," The 15th International Conference on Artificial Intelligence: Methodology, Systems, Applications, Varna, Bulgaria, September 2012.

[110] **Yukie Nagai**, "How Interaction Shapes the Way Robots Learn," AIMSA 2012 Workshop on Advances in Robot Learning and Human-Robot Interaction, Varna, Bulgaria, September 2012.

[111] **Yukie Nagai**, "Robots That Learn to Communicate with Humans," Workshop on Intelligent Human-Machine Collaboration, The National Academy of Sciences, Washington DC, USA, June 2012.

[112] **Yukie Nagai**, "Reading Intentions from Motionese: Analyzing and Designing Caregiver-Infant Interaction," Workshop on "Reading intentions: From children to robots," Lund, Sweden, March 2012.

[113] **Yukie Nagai**, "Mutual Shaping between Caregivers' Scaffolding and Infants' Development: New Insights from Cognitive Developmental Robotics," The 12th Winter Workshop on Mechanism of Brain and Mind, Rusutsu Resort Hotel, Hokkaido, Japan, January 2012.

[114] **Yukie Nagai**, "What Should Robots Learn from Caregiver-Infant Interaction?," ShanghAI Lecture, October 2011.

[115] **Yukie Nagai**, "The Role of Maturational Constraints in Infant Development," AGAI Club, Bielefeld University, Germany, June 2011.

[116] **Yukie Nagai**, "My Research Stay in Bielefeld," Forschungsfoerderung im deutsch-japanischen Austausch, Japan Week, Bielefeld University, Germany, June 2011.

[117] **Yukie Nagai**, "Researchers' Life in Osaka," All about Osaka University, Japan Week, Bielefeld University, Germany, June 2011.

[118] **Yukie Nagai**, "How a robot's attention shapes the way people teach: Bottom-up vs. top-down attention," CoR-Lab colloquium, Bielefeld University, Germany, October 2010.

[119] **Yukie Nagai**, "Investigating Pedagogy by Modeling Infant Visual Attention," Workshop at the Annual Meeting of the Cognitive Science Society 'Intuitive Pedagogical Reasoning: An Interdisciplinary Workshop,' Amsterdam, Netherland, July 2009.

[120] **Yukie Nagai**, "A Developmental Approach to Robot Action Learning," Cognitive Sciences Brown Bags, University of Zurich, Switzerland, December 2008.

[121] **Yukie Nagai**, "Visual Action Structuring by Motionese," Workshop on 'Intermodal Action Structuring,' Bielefeld, Germany, July 2008.

[122] **Yukie Nagai**, "Human-Robot Communications: A Constructivist Approach to Understanding the Human Communication Mechanism," INPRO Kolloquium, Berlin, Germany, June 2006.

[123] **Yukie Nagai**, "The Role of Movement in the Development of Joint Attention: A Robotic Approach," in Proceedings of the 15th International Conference on Infant Studies, Kyoto, Japan, June 2006.

[124] **Yukie Nagai**, "Robots that learn to establish joint visual attention," PRI Cooperative Research Workshop "Gaze, Joint Attention, and Theory of Mind," Aichi, Japan, August 2005.

[125] **Yukie Nagai**, "Cognitive Developmental Modeling of Joint Attention," International Workshop on Processes of Communication, Bielefeld, Germany, February 2005.