## 2. 研究業績 / Research Achievements (April 2022 - March 2023)

### 2. 1 論文・著書 / Journal Articles/Books/Book Chapters

**Journal Articles**


Abe, Y., Liang, N., Teramoto, M., Koarashi, J., Atarashi-Andoh, M., Hashimoto, S. and Tange, T.: Spatial variation in soil respiration rate is controlled by the content of particulate organic materials in the volcanic ash soil under a *Cryptomeria japonica* plantation. Geoderma Regional, 29: e00529, doi: 10.1016/j.geodrs.2022.e00529 (May., 2022)

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Araki, R., Takano, Y., Miyazaki, H., Ii, H. and An, P.: Drought stress alters iron accumulation in Sorghum bicolor seeds. Environmental and Experimental Botany, 204: 105093, doi: 10.1016/j.envexpbot.2022.105093 (Dec., 2022)

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Balla, M. Y., Gorafi, Y. S. A., Kamal, N. M., Abdalla, M. G. A., Tahir, I. S. A. and Tsujimoto, H.: Exploiting wild emmer wheat diversity to improve wheat A and B genomes in breeding for heat stress adaptation. Frontiers in Plant Science, 13: 2405, doi: 10.3389/fpls.2022.895742 (Jul., 2022)

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Berihun, M. L., Tsunekawa, A., Haregeweyn, N., Tsubo, M., Fenta, A. A., Ebabu, K., Sultan, D. and Dile, Y. T.: Reduced runoff and sediment loss under alternative land capability-based land use and management options in a sub-humid watershed of Ethiopia. Journal of Hydrology: Regional Studies, 40: 100998, doi: 10.1016/j.ejrh.2022.100998 (Apr., 2022)

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## 2.2 会議・シンポジウム・学会発表 /Conferences/Symposium/Presentations

**International（国際）**

Ahmed, M. I. Y., Gorafi, Y. S. A., Kamal, N. M., Tahir, I. S. A. and Tsujimoto, H.: Identification of a novel QTL controlling seed dormancy in wheat originated from *Aegilops tauschii*: 2nd International Wheat Congress, China (Sep., 2022)

Balla, M. Y., Gorafi, Y. S. A., Kamal, N. M., Abdalla, M. G. A., Tahir, I. S. A. and Tsujimoto, H.: Exploiting wild emmer wheat diversity to improve wheat A and B genomes in breeding for heat stress adaptation: 2nd International Wheat Congress, China (Sep., 2022)

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Haregeweyn, N., Tsunekawa, A., Tsubo, M., Fenta, A. A., Ebabu, K., Langendoen, E. J., Betemariam, E. and Poesen, J.: A Transdisciplinary Approach to Bridging the Science–Policy–Development Gaps in Sustainable Land Management. AGU Fall Meeting. Chicago, USA (Dec., 2022)

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Itam, M. O. and Tsujimoto, H.: Understanding combined heat and drought tolerance in bread wheat: agronomic and physiological approach. Future Wheat: Resilience and Sustainability, 2nd International Wheat Congress, Beijing China (Sep., 2022)

Kajino, M., Ching, J., Yamaji, K., Ishikawa, R. and

Hayashida,S.: Toward an Accurate Assessment of the Impacts of Crop Residue Burning on Air Quality in Northwestern India. American Geophysical Union Fall Meeting (Dec., 2022)

Kawai, K., Matsui, H., Kimura, R. and Shinoda, M.: High sensitivity of Asian dust emission, transport, deposition, and climate impacts to threshold friction velocity. Japan Geoscience Union Meeting 2022, Chiba (May., 2022)

Kimura, R., Moriyama, M. and Şaylan, L.: Recent aridification of the Mediterranean regions: Case of Türkiye. International Symposium on Agricultural Meteorology 2023, Yamaguchi (Mar., 2023)

Liu, J., Kimura, R. and Wu, J.: Effectiveness of sand fences on preventing wind-blown sand at Tottori Sand Dune. Japan Geoscience Union Meeting 2022, Chiba (May., 2022)

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Weng, Y., Kim, J. S., Mega, R., Tsujimoto, H. and Okamoto, M.: Comprehensive analysis of metabolites in response to drought stress in wheat: 2nd International Wheat Congress, China (Sep., 2022)

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**Domestic（国内）**

Afuape, S. O., Ebem, E. C., David O. Igwe, D. O., and Ubi, B. E.: Combating vitamin A deficiency (VAD) in Nigeria: the bio-fortified sweetpotato development and deployment Approach. Paper presented at the 141st Conference of the Japanese Society of Plant Breeding (JSB) (Held Online) (Mar., 2021)

Ahmed, M. I. Y., Gorafi, Y. S. A., Kamal, N. M., Tahir, I. S. A. and Tsujimoto, H.: Identification of a novel QTL controlling seed dormancy in wheat originated from *Aegilops tauschii*. 日本育種学会第 142 回講演会（北海道帯広市）（2022 年 9 月）

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Berihun, M. L.: Soil Erosion & Opportunities of Soil and Water Conservation Practices for Sediment Control at the Grand Ethiopian Renaissance Dam (GERD. The 27th Colloquium, Arid Land Research Center, Tottori University, Japan (Mar., 2022).

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Ebabu, K., Tsunekawa, A., Haregeweyn, N., Tsubo, M., Adgo, E., Meshesha, D.T., Fenta, A.A., Vanmaercke, M. and Poesen, J.: Land use and management controls on runoff and soil loss responses in the highlands of Ethiopia. Joint Research Symposium organized by Arid Land Research Center. Tottori, Japan (Dec., 2022)

Ebrahimian, H., Heydari, F., Sohrabi, T. and Fujimaki, H.: Forage and grain production of three maize cultivars under surface and subsurface drip irrigation systems (Case study: Karaj, Iran). Annual Meeting of the Japanese Association for Arid Land Studies. Hokkaido, Japan (Jun., 2022)

Edet, O. U. and Ishii, T.: Cowpea speed breeding using regulated growth chamber conditions and seeds of oven-dried immature pods potentially accommodates eight generations per year. The 142th Meeting of the Japanese Society of Breeding. Hokkaido, Japan (Sep., 2022)

Emam, A. I. I., Gorafi, Y. S. A., Ishii, T. and Tsujimoto, H.: Sustainable wheat production under climate change: interventions for increased NUE of Bread Wheat. 第 14 回中国地域育種談話会（山口県山口市）(2022 年 12 月 )

Fenta, A.A., Tsunekawa, A., Haregeweyn, N., Tsubo, M., Yasuda, H., Kawai, T., Berihun, M.L., Ebabu, K., Sultan, D., and Mekuriaw, S.: Developing an integrated framework for better land use and management planning. Joint Research Symposium, Arid Land Research Center. Tottori, Japan (Dec., 2022)

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藤村光希・松尾奈緒子・岩永史子・Toderich, K.・山中典和 : 中央アジアの塩生植物の有機物の炭素・酸素安定同位体比からみた水利用特性 . 第 134 回日本森林学会大会（オンライン鳥取）(2023 年 3 月 )

Gao, Y.・松岡由浩・辻本壽・岸井正浩・佐久間俊・石井孝佳 : パンコムギと野生種タルホコムギ交雑由来の新奇 8 倍性合成コムギの創生 . 日本育種学会第 142 回講演会（北海道帯広市）(2022 年 9 月 )

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妻鹿良亮・金俊植・石井孝佳・田中裕之・安部史高・岡本昌憲 : 成熟途上種子における乾燥ストレスが及ぼす分子 的影響の解析 . 日本育種学会第 142 回講演会（北海道帯広市）（北海道）（2022 年 9 月）

中原浩貴・松添直隆・谷口武士・安萍 : 植物に病害防除効果と耐塩性を付与する細菌菌株の探索．日本土壌微生物学会 2022 年度大会（オンライン）(2022 年 6 月）

中原浩貴・松添直隆・谷口武士・安萍 : 植物に耐塩性と病害抵抗性を誘導する蛍光性 *Pseudomonas* 属細菌の作用機構－耐塩性誘導機構の要因を中心に－．日本砂丘学会第 67 回全国大会（オンライン）(2022 年 9 月）

中原浩貴・松添直隆・谷口武士・安萍 : 植物に耐塩性と病害抵抗性を誘導する蛍光性 *Pseudomonas* 属細菌の作用機構－青枯病防除機構の要因を中心に－．農業生産技術管理学会令和 4 年度大会（オンライン）(2022 年 10 月）

中原浩貴・森太郎・松崎弘美・近藤謙介・松添直隆 : 青枯病菌の表現型変異株によるトマトの病害防御関連遺伝子の発現誘導．日本生物環境工学会 2022 年福岡大会（福岡）（2022 年 9 月）

小野輝久・岸井正浩・平井優美・辻本壽・岡本昌憲 : オオハマニンニク染色体添加系統パンコムギにおけるメタボローム解析 . 第 17 回ムギ類研究会（茨木県 つくば市）（2022 年 12 月）

櫻井建吾・戸田悠介・藤佑志郎・大森良弘・山崎裕司・

高橋宏和・高梨秀樹・津田麻衣・平井優美・辻本壽・中園幹生・藤原徹・加賀秋人・岩田洋佳：ダイズ干ばつ実験で取得された高次元・多環境マルチオミクスデータ解析に基づく形質と環境間の遺伝相関の推定 . 日本育種学会第 142 回講演会（北海道帯広市）（2022 年 9 月）

Şaylan, L.: Agricultural meteorology, climate change and agricultural interaction. (in Turkish) at TURAM, Istanbul. (within the scope of the Erasmus) (May., 2022).

鈴木康平・小長谷有紀・渡邊三津子・上條隆志・山中典和：モンゴル・ウランバートル周辺における 1960 年代と 2020 年代の森林分布範囲の比較 . 関東森林学会大会（オンライン東京）（2022 年 9 月）

Tahir, I.S.A., Gorafi, Y.S.A. and Tsujimoto, H.: Wheat improvement for dry and heat-prone environments: Integrated collaborative approaches for breeding climate-smart varieties. Joint Research Symposium, Arid Land Research Center. Tottori, Japan (Dec., 2022).

竹田佳生・Osman, S. O. M.・只野翔太・深内百合子・山崎裕司・Saad, A. S. I.・Tahir, I. S. A.・辻本壽・明石欣也：FTIR ケモメトリックスと化学的分画によるコムギの高温応答プロファイリング . 日本農芸化学会中四国支部第 62 回例会（オンライン開催）（2022 年 6 月）

竹田佳生・Osman, S.・只野翔大・深内百合子・山崎裕司・Saad, A. S.・Tahir, I. S. A.・辻本壽・明石欣也：FTIR 計量化学と化学的分画によるコムギの高温応答プロファイリング . 第 39 回日本植物バイオテクノロジー学会（大阪府堺市）（2022 年 9 月）

竹田佳生・Osman, S.・只野翔大・山崎友渡・Saad, A. S.・Tahir, I. S. A.・辻本壽・明石欣也：FTIR ケモメトリックスによるコムギ高温応答の解析 . 第 64 回日本植物生理学会（宮城県仙台市）（2023 年 3 月）

樽谷 英賢・マリエンティ テティ・岡本 龍史・高澤 瑞希・辻本 壽・石井 孝佳 : イネーコムギ雑種植物の多様性の解析 . 日本育種学会第 142 回講演会（北海道帯広市）（2022 年 9 月）

樽谷 英賢・マリエンティ テティ・岡本 龍史・高澤 瑞希・辻本 壽・石井 孝佳 : 顕微授精法で作成したイネコムギ（Oryzawheat）の多様性の解析 . 第 14 回中国地域育種談話会（山口県山口市）（2022 年 12 月）

Teramoto, M., Liang, N., Sun, L., Kondo, T., Koarashi, J. Atarashi-andoh, M., Takagi, M., Yamanaka, N., Hirano, T., Takagi, K., Ishida, S., Ichii K., Takahashi, Y. and Hu, R.: Factors of spatial variation in soil CH4 uptake rate in forests in Western Honshu. Japan Geoscience Union Meeting 2022, Makuhari (May., 2022)［寺本宗正・梁乃申・孫力飛・近藤俊明・小嵐淳・安藤麻里子・高木正博・山中典和・平野高司・高木健太郎・石田祐宣・市井和仁・高橋善幸・ホルチャ：中国地方の森林土壌におけるメタン吸収速度の空間変動要因 . 日本地球惑星科学連合 2022 年大会（幕張）（2022 年 5 月）］

辻本壽・田中裕之・笠谷信明：タルホコムギ由来の休眠性と高分子量グルテニン遺伝子 Glu-D1d 遺伝子をパンコムギ品種「農林 61 号」に導入した系統の開発 . 第 17 回ムギ類研究会（茨城県つくば市）（2022 年 12 月）

Ubi, B. E. and Ishii, T.: Testing herbicide entry depth as a non-destructive method for in situ root phenotyping of cowpea under a sandy field soil condition. Paper presented at the 2021 Joint Research Symposium, Arid Land Research Center, Tottori University (Dec., 2021)

Ubi, B. E.: How shall we use the ALRC sandy field for root phenotyping? Case study with 400 Asian cowpea accessions. Presentation at the 28th Colloquium of the Arid Land Research Center, Tottori (Held Online) (Aug., 2022)

Ubi, B. E. and Ishii, T.: Establishment of a non-destructive evaluation method for root zone elongation of cowpea (Vigna unguiculata L. Walp.) in Tottori sandy field. Paper presented at the 142nd Conference of the Japanese Society of Plant Breeding (JSB) held at Obihiro University of Agriculture and Veterinary Medicine, Hokkaido (Sep., 2022)

Weng, Y.・金俊植・妻鹿良亮・辻本壽・岡本昌憲：コムギにおける乾燥ストレス応答に対する代謝産物の包括的解析 . 植物化学調節学会第 57 回大会（福井県）（2022 年 11 月）

Wu, J., Kurosaki, Y., Sekiyama, T.T.. and Maki, T.: Effects of non-photosynthetic vegetation cover on dust occurrence in the Gobi region. Japan Geoscience Union Meeting 2022 (JpGU2022). Chiba (In Person) & Online (May., 2022)

吉岡勇人・戸田悠介・藤佑志郎・大森良弘・市橋泰範・臼井絵里香・熊石妃恵・佐藤匠・小堀峻吾・加賀秋人・山崎裕司・高橋宏和・高梨秀樹・津田麻衣・石森元幸・辻本壽・中園幹生・平井優美・藤原徹・岩田洋佳：マルチオミクスデータを用いた植物微生物相互作用のモデリング . 日本育種学会第 142 回講演会（北海道帯広市）（2022 年 9 月）

**Invited Lectures（招待講演）**

**International（国際）**

Tsujimoto, H.: Food and Nutrition Security under Climate Crisis through Genetic Resources Expansion in Wheat. International Conference on Food and Nutritional Security (iFANS-2023)(Mohali, India)(Jan., 2023)

**Domestic（国内）**

Ebrahimian, H.: Irrigation Management. International training on Ecology and Environmental Protection: International Platform for Dryland Research and Education (IPDRE), Tottori University. Tottori, Japan (Nov., 2022)

石井孝佳 : 染色体脱落の克服による遺伝資源概念の拡張 . 第 17 回ムギ類研究会（茨城県つくば市）(2022 年 12 月）

Şaylan, L.: Assessment of the possible effects of global warming on Türkiye's (Turkey`s) climate, agriculture and water. Mediterranean Island Societies in Climate Change and Globalization". Mediterranean Study Group, Hitotsubashi University, Tokyo, Japan (Apr., 2023)

Şaylan, L.: Micrometeorological and agrometeorological studies in Turkey, University of Helsinki, COST project STSM (Sep., 2022)

Şaylan, L: Effects of climate change on agriculture: Thrace. 5 June 2022, Çorlu Chamber of Commerce and Industry Meeting Hall, Thrace Platform event, Türkiye (Jun., 2022).

Şaylan, L.: Introduction to Measurement Principles. Summer School COST FAIRNESS Training Program. Volos, Greece (Jun., 2022).

辻本壽・柴博史・河野洋治・渡辺信：植物拠点アライアンス PSCA ～植物科学を推進する共同利用・共同研究連合．日本育種学会大 86 回大会シンポジウム「使おう！植物学を支える研究プラットフォーム」(京都府京都市）(2022 年 9 月）

辻本壽：鳥取砂丘から世界へ．繊維学会秋期研究発表会（鳥取県鳥取市）(2022 年 11 月）

辻本壽：世界最大の食糧問題：「小麦」から紐解く食べ物の未来．ライフ大学（オンライン）(2022 年 11 月）

山中典和 : 乾燥地研究センターが取り組む SDGs. 日本安全学教育研究会第 16 回研究会 (鳥取) (2022 年 11 月）

## 2.3 報告書 / Reports

Saylan, L. and Altinbas, N.: Analysis of Carbon Exchange on Plant Surfaces by Micrometeorological Method, TGA-2018-41667G. Istanbul Technical University Scientific Research report. doi: N/A (Sep., 2022)

## 2.4 公開セミナー／ Open Seminar

**1) Open seminar**

1. **データ駆動型農業は発展途上国の農業を変革するか？－ CIAT の取組みと今後の展望**
   **【Will Data-Driven Agriculture Transform Agriculture in Developing Countries?- CIAT's Approach and Future Prospect】(Aug. 31, 2022)**
   Manabu Ishitani　石谷　学
   Senior Researcher, CIAT, Colombia
   コロンビア・国際熱帯農業研究所・主任研究員

2. **AI とセンサーは農業にどのような変革をもたらすのか？育種業から垂直農法まで、ユースケースで答える**
   **【How are AI and sensors revolutionizing the agricultural landscape? Answers in use cases, from breeding industry to vertical farming】(Oct. 21, 2022)**
   Alexis Comar
   CEO & Founder, HIPHEN

**2) Colloquium**

**28th Colloquium (Aug. 25, 2022)**

**(1) How shall we use the ALRC sandy field for root phenotyping? Case study with 400 Asian cowpea accessions**
Benjamin Ewa UBI
Visiting Professor, Arid Land Research Center, Tottori University
鳥取大学乾燥地研究センター・客員教授

**(2) A Few Words about Atmospheric Aerosols**
Pingpui Ching　程　炳沛
Specially Appointed Assistant Professor, Arid Land Research Center, Tottori University
鳥取大学乾燥地研究センター・特命助教

**29th Colloquium (Mar. 10, 2023)**

**(1) Determination of leaching depth using a numerical simulation model of salt movement**
Hamed Ebrahimian Taleshi
Visiting Associate Professor, Arid Land Research Center, Tottori University
鳥取大学乾燥地研究センター・客員准教授

**(2) 土壌微生物群集の視点から生態系の成り立ちを探る**
Kazuo Isobe　磯部　一夫
Visiting Associate Professor, Arid Land Research Center, Tottori University
鳥取大学乾燥地研究センター・客員教授

## 2. 5　受賞・特許

**受賞**

賞の名称：日本生物環境工学会 2022 年福岡大会ポスター賞優秀賞
受賞者：中原浩貴・森　太郎・松崎弘美・近藤謙介・松添直隆
受賞年月日：2022 年 9 月 8 日
授与団体：日本生物環境工学会
研究タイトル：青枯病菌の表現型変異株によるトマトの病害防御関連遺伝子の発現誘導

賞の名称：2021 年学術功績賞
受賞者：Levent Şaylan
受賞年月日：2022 年 6 月
授与団体：イスタンブール工科大学

賞の名称：優秀発表賞
受賞者:高 燕･松岡 由浩･辻本 壽･岸井 正浩･佐久間 俊･石井 孝佳
受賞年月日：2022 年 10 月 1 日
授与団体：日本育種学会
研究タイトル：パンコムギと野生種タルホコムギ交雑由来の新奇 8 倍性合成コムギの創生

賞の名称：優秀発表賞
受賞者：樽谷 英賢・マリエンティ テティ・岡本 龍史・高澤 瑞希・辻本 壽・石井 孝佳
受賞年月日：2022 年 12 月 11 日
授与団体：中国地区育種談話会
研究タイトル：顕微授精法で作成したイネコムギ（Oryzawheat）の多様性の解析

賞の名称：鳥取大学・科学研究業績表彰
受賞者：谷口武士
受賞年月日：2023 年 3 月 6 日
授与団体：鳥取大学
研究タイトル：菌根菌の優占度がモンゴルの草地管理の鍵であることが生態系の多機能性指標から示された

**特許**

特許番号：2022−110405（出願番号）
特許権者：鳥取大学
発明者：エディット オフィオング ウクポング・石井孝佳
発明の名称：ササゲの栽培世代促進方法
出願日：2022 年 7 月 8 日

## 2.5 Honors and Awards/ Patent

**Awards**

Name of Prize: The Japanese Society of Agricultural, Biological and Environmental Engineers and Scientists, 2022 Fukuoka Conference, Best Poster Award
Name of Recipient: Nakahara H., Mori T., Matsusaki H., Kondo K., Matsuzoe N.
Date: Sep. 8, 2022
Name of Offering Organization: The Japanese Society of Agricultural, Biological and Environmental Engineers and Scientists
Research Title: Induction of expression of plant disease defense-related genes in tomato by the phenotypic conversion mutant of Ralstonia solanacearum

Name of Prize: Istanbul Technical University, Academic Performance Awards, 2021 Publication Performance Evaluations
Name of Recipient: Levent Şaylan
Date: Jun., 2022
Name of Offering Organization: Istanbul Technical University

Name of Prize: Good presentation award
Name of Recipient: Gao, Y., Matsuoka, Y., Tsujimoto, H., Kishii, N., Sakuma, S., Ishii, T.
Date: Oct. 1, 2022
Name of Offering Organization: Japanese Breeding Society
Research Title: Production of a novel synthetic octaploid wheat from bread wheat and Ae. tauschii hybrids.

Name of Prize: Good presentation award
Name of Recipient: Tarutani, H., Maryenti, T., Okamoto, T., Takasawa, M., Tsujimoto, H., Ishii, t.
Date: Dec. 11, 2022
Name of Offering Organization: Chugoku regional breeding community
Research Title: Diversity of oryzawheat produced via IVF method

Name of Prize: Tottori University Scientific Research Performance Award
Name of Recipient: Takeshi Taniguchi
Date: Mar. 6, 2023
Name of Offering Organization: Tottori University
Research Title: Dominance of arbuscular mycorrhizal fungi is key for Mongolian steppe management under livestock grazing, as indicated by ecosystem multifunctionality

**Patent**

Edet, O. U. and Ishii, T.: Cowpea speed breeding using regulated growth chamber, P2022-002 (Jun., 2022)

特許出願番号：特願 2022-184512
特許出願日：令和 4 年（2022 年）11 月 18 日
発明の名称：小型飛砂風向計測装置及びそれを用いた飛砂風向計測システム

## 2. 6　外部資金 / External Funds

令和 4 年度科学研究費補助金／ Grants-in-Aid for Scientific Research in FY2022

| 研究種目<br>Research Categories | 研究代表者<br>Principal Investigator | 研究課題名<br>Research Title | |
|---|---|---|---|
| 基盤研究（B）<br>Scientific Research(B) | 木村　玲二<br>Kimura, Reiji | 乾燥地における土地劣化計測システムとモニタリング手法の開発<br>Development of observation and monitoring system for land degradation in arid regions | |
| | | 研究分担者<br>Co-Investigators | 森山　雅雄（長崎大学）<br>松島　大　（千葉工業大学）<br>Moriyama, Masao (Nagasaki University)<br>Matsushima, Dai (Chiba Institute of Technology) |
| | 辻本　壽<br>Tsujimoto, Hisashi | 高度高温耐性コムギ育種のための野生 4 倍性コムギの遺伝資源発掘と集積効果の研究<br>Studies on gene mining and pyramiding of wild tetraploid wheat for super heat tolerant bread wheat breeding | |
| | | 研究分担者<br>Co-Investigators | 宇部　尚樹（富山県立大学）<br>山崎　裕司（東京大学）<br>ヤシル・ゴラフィ（鳥取大学）<br>Ube, Naoki (Toyama Prefectural University)<br>Yamasaki Yuji(The University of Tokyo)<br>Yasir Serag Alnor Mohammed Gorafi (Tottori University) |
| | 黒崎　泰典<br>Kurosaki, Yasunori | ダストの視点から見た地球人間圏：ダストモデル精度向上のための広域枯れ草量推定<br>The geo-anthrosphere from a perspective of dust: broad-area estimation of dead vegetation amount to improve the accuracy of numerical dust model | |
| | | 研究分担者<br>Co-Investigators | 石塚　正秀（香川大学）<br>関山　剛（気象庁）<br>大黒　俊哉（東京大学）<br>Ishizuka Masahide (Kagawa University)<br>Sekiyama, Tsuyoshi (Japan Meteorological Agency)<br>Okuro, Toshiya (The University of Tokyo) |
| 基盤研究（C）<br>Scientific Research(C) | Fenta, Ayele Almaw | A novel downscaling-integration approach of satellite rainfall estimates for accurate river flow prediction | |
| | 石井　孝佳<br>Ishii, Takayoshi | イネ科亜科間交雑での染色体脱落：動原体の多様性理解<br>Chromosome elimination in subspecies distance cross in grass species: analysis in centromere diversity | |
| | 寺本　宗正<br>Teramoto, Munemasa | 海岸砂丘における海浜植物種別および群落スケールの $CO_2$ フラックス特性の解明<br>Characteristics of $CO_2$ fluxes related to plant species and communities in a coastal dune ecosystem | |
| | 谷口　武士<br>Taniguchi, Takeshi | 根部内生微生物群集の形成プロセスを介した乾燥地植物の適応度向上に関する研究<br>Research on improvement of dryland plant adaptability through the community assembly process of root endophytic microbes | |
| 若手研究<br>Early-Career Scientists | 劉　佳啓<br>Liu, Jiaqi | 草本の幾何学的特性による飛砂抑制評価システムの開発<br>Develop a new wind erosion assessment system based on geometric characteristics of plants | |
| 研究活動スタート支援<br>Research Activity Start-up | 寺本　宗正<br>Teramoto, Munemasa | 乾燥地における放牧が土壌からの $CO_2$ 排出量におよぼす影響の評価<br>Evaluation of the influence of grazing on soil $CO_2$ efflux in arid land | |
| 特別研究員奨励費<br>JSPS Research Fellows | 中原　浩貴<br>Nakahara, Hiroki | 非病原性細菌による植物への病害抵抗性と耐塩性の誘導モデルの構築<br>Development of induction models for disease resistance and salinity tolerance in plants by avirulent bacteria | |

| 研究種目<br>Research Categories | 研究代表者<br>Principal Investigator | 研究課題名<br>Research Title | |
|---|---|---|---|
| 国際共同研究加速基金（国際共同研究強化（B））<br>Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)) | 藤巻　晴行<br>Fujimaki, Haruyuki | 土壌塩分輸送シミュレーションモデルを用いた除塩用水量の最適化<br>Determination of leaching depth using a numerical simulation model of salt movement | |
| | | 研究分担者<br>Co-Investigators | トデリッチ　クリスティーナ（鳥取大学）<br>齊藤　忠臣　（鳥取大学）<br>大西　純也　（国際農林水産業研究センター）<br>實野　雅太　（東京農業大学）<br>Toderich, Kristina (Tottori University)<br>Saito, Tadaomi (Tottori University)<br>Onishi, Junya (Japan International Research Center for Agricultural Sciences)<br>Jitsuno, Masataka (Tokyo University of Agriculture) |
| | 恒川　篤史<br>Tsunekawa, Atsushi | 青ナイル上流域の貯水池への土砂堆積リスクに及ぼす気候変動の影響<br>Climate change impact on sedimentation risk of reservoirs in the Upper Blue Nile Basin | |

他機関からの研究分担者／ Co-Investigator

| 研究種目<br>Research categories | 研究分担者<br>Co-Investigator | 研究課題名<br>Research Title | 研究代表者<br>Principal Investigator |
|---|---|---|---|
| 基盤研究（A）<br>Scientific Research(A) | 黒崎　泰典<br>Kurosaki, Yasunori | 東アジアを越境するバイオエアロゾル：日本本土への拡散・沈着とその生体影響の評価<br>Long-range transported bioaerosols over East Asia: Dispersion and deposition processes of airborne microorganisms influencing on human healths | 牧　輝弥（近畿大学）<br>Maki, Teruya (Kindai University) |
| | 藤巻　晴行<br>Fujimaki, Haruyuki | メソスケール物理探査実験技術の開発と深層地盤環境動態の制御に基づく学習への適用<br>Development of meso-scale experimental technologies of physical sensing and its application on learning based on controlling the dynamism of deep-ground environments | 黒田　清一郎（農業・食品産業技術総合研究機構）<br>Kuroda Seiichiro<br>（National Agriculture avd Food Research Organization） |
| 基盤研究（B）<br>Scientific Research(B) | 藤巻　晴行<br>Fujimaki, Haruyuki | 農業工学とコロイド化学の融合を基軸とする土壌・水環境保全技術の展開<br>Development in soil and water technology with integrating agricultural engineering and colloid science | 小林　幹佳（筑波大学）<br>Kobayashi, Motoyoshi<br>(University of Tsukuba) |
| | 中原　浩貴<br>Nakahara, Hiroki | クエン酸＋鉄溶液を利用した土壌伝染性病害「青枯病」の防除法の開発<br>Development of control method of soilborne disease "bacterial wilt disease" using citric acid + iron solution | 松添　直隆（熊本県立大学）<br>Matsuzoe, Naotaka<br>(Prefectural University of Kumamoto) |
| | 寺本　宗正<br>Teramoto, Munemasa | 温暖化がモンゴル寒冷乾燥地の放牧地生態系に与える影響<br>Effects of global warming on rangeland ecosystems in cold drylands of Mongolia | 衣笠　利彦（鳥取大学）<br>Kinugasa, Toshihiko<br>(Tottori University) |
| | 辻本　壽<br>Tsujimoto, Hisashi | 強化学習に基づく「先読み」を用いた小規模・高効率ゲノミック選抜法の開発と実装<br>Development and implementation of a small-scale and highly efficient genomic selection method using "look-ahead" based on reinforcement learning | 岩田　洋佳（東京大学）<br>Iwata Hiroyoshi<br>(The University of Tokyo) |
| | 谷口　武士<br>Taniguchi, Takeshi | 樹木・林床植生系の菌根タイプの多様性を考慮した森林の土壌窒素動態メカニズムの解明<br>Clarification of mechanisms of soil nitrogen dyanamics considering mycorrizal type of trees-understory vegetation system | 福澤　加里部（北海道大学）<br>Fukuzawa Karibu<br>(Hokkaido University) |

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|---|---|---|---|
| 基盤研究（C）<br>Scientific Research(C) | 劉　佳啓<br>Liu, Jiaqi | ソーラーシェアリングにおける太陽光パネル群周囲のダイナミックな風の流れの解明<br>Elucidation of dynamic wind flow around photovoltaic panels in agrivoltaic system | 田川 公太朗（鳥取大学）<br>Tagawa, Kotaro<br>(Tottori University) |
| 挑戦的研究（萌芽）<br>Challenging Research (Exploratory) | 石井　孝佳<br>Ishii, Takayoshi | 交雑受精卵の作出およびゲノム動態制御による C3-C4 光合成細胞質置換<br>C3-C4 cytoplasmic swapping by production of cross-fertilized eggs and control of genome dynamics | 岡本　龍史（東京都立大学）<br>Okamoto, Takashi<br>(Tokyo Metropolitan University) |
| | 石井　孝佳<br>Ishii, Takayoshi | 冷凍保存可能な花粉を活用した新奇ゲノム編集技術の開発<br>Genome editing technology utilizing cryopreservable pollen | 吉田　健太郎（京都大学）<br>Yoshida, Kentaro<br>(Kyoto University) |
| 国際共同研究加速基金（国際共同研究強化（B））<br>Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)) | 石井　孝佳<br>辻本　壽<br>Ishii, Takayoshi<br>Tsujimoto, Hisashi | 日本のコムギ研究リソースと国際農業研究機関の連結による新遺伝資源創出と育種展開<br>New genetic resource development and advanced breeding through connecting the Japanese wheat research resources to a renowned international agricultural research institute | 松岡 由浩（神戸大学）<br>Matsuoka, Yoshihiro<br>(Kobe University) |
| | 谷口　武士<br>Taniguchi, Takeshi | 塩生植物－微生物共生系を用いた高機能なファイトレメディエーションの創出<br>Development of highly functional phytoremediation technology using halophytic plant-microbe symbiosis | 片岡　良太（山梨大学）<br>Kataoka, Ryota (University of Yamanashi) |