

**Welding in the World**. [Volume 68, Issue 4](https://links.springernature.com/f/a/W6FlpW_0hZY6Zbfks0gVZw~~/AABE5gA~/RgRn3-KoP0SKaHR0cDovL2xpbmsuc3ByaW5nZXIuY29tL2pvdXJuYWwvNDAxOTQvNjgvND91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) is now available online.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  | | --- | | In this issue | | |  | | --- | |  | | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Editorial | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Editorial: Recent innovations in intelligent welding manufacturing](https://links.springernature.com/f/a/rYOIgc8V-DdlbeJ5J0FpzQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcyOS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | YuMing Zhang, Stephan Egerland | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/rYOIgc8V-DdlbeJ5J0FpzQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcyOS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/rYOIgc8V-DdlbeJ5J0FpzQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcyOS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/GnKc_ZprhoG-oriz11SOSg~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3MjktMT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Artificial neural network-based surface reconstruction model of wire-arc additively manufactured surfaces using discrete cosine transform](https://links.springernature.com/f/a/R3NZJfHOYikDKlfa2BJZVg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Seyed Aref Banaee, Abhay Sharma | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/R3NZJfHOYikDKlfa2BJZVg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/R3NZJfHOYikDKlfa2BJZVg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/hsVZVZ4C3s7EdfF56Dmq4A~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2MjUtMD91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Development of a machine learning model for deviation from trajectory detection in multi-pass TIG welding in a narrow gap](https://links.springernature.com/f/a/2qGIXoqV0zBHW7JSqYoc-g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNi16P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Theo Boutin, Issam Bendaoud, Josselin Delmas, Damien Borel, Cyril Bordreuil | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/2qGIXoqV0zBHW7JSqYoc-g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNi16P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/2qGIXoqV0zBHW7JSqYoc-g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyNi16P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/pib3cet3K8ilI4bUcc6aLQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2MjYtej91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [An adaptive welding method for grooves with position and size errors](https://links.springernature.com/f/a/u6yxJjqwy-ud---FUYqygA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyOS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Wenkai Wang, Yu Shi, Chunkai Li, Yufen Gu, Muzhong Xu, Fengxian Dai | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/u6yxJjqwy-ud---FUYqygA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyOS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/u6yxJjqwy-ud---FUYqygA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYyOS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/RUGLFcsrvBfLC0HFmN4wsA~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2Mjktdz91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Controlling torch height and deposition height in robotic wire and arc additive manufacturing on uneven substrate](https://links.springernature.com/f/a/pzLxyJxa9sPTSJXQAhAENg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMy0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Menghan Shi, Jun Xiong | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/pzLxyJxa9sPTSJXQAhAENg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMy0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/pzLxyJxa9sPTSJXQAhAENg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMy0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/MYHVr2EUvMpHljbYpz7U6g~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2MzMtMD91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Deep-learning based supervisory monitoring of robotized DE-GMAW process through learning from human welders](https://links.springernature.com/f/a/kBELf9hT5j4yi7uO8pkPMQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzNS15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Rui Yu, Yue Cao, Jennifer Martin, Otto Chiang, YuMing Zhang | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/kBELf9hT5j4yi7uO8pkPMQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzNS15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/kBELf9hT5j4yi7uO8pkPMQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzNS15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/b_5UWV1m1F-ZvBxS-1cwVA~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2MzUteT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Monitoring the forming dimensions of components produced by arc-directed energy deposition based on a molten pool’s geometric characteristics](https://links.springernature.com/f/a/fTa4IvZlxMOCTuzd5n826g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MC0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Shengfu Yu, Runzhen Yu, Fangbin Deng, Jia Ren | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/fTa4IvZlxMOCTuzd5n826g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MC0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/fTa4IvZlxMOCTuzd5n826g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MC0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/X4NKDmhMTtpBHdP4cQqU4Q~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NDAtMT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Open Access | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Reinforcement learning as data-driven optimization technique for GMAW process](https://links.springernature.com/f/a/UIz-8VcN_Sz8IVo_rGC3VQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Giulio Mattera, Alessandra Caggiano, Luigi Nele | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/UIz-8VcN_Sz8IVo_rGC3VQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/UIz-8VcN_Sz8IVo_rGC3VQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0MS0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/WQREwnR78uK8ahhEk9Pk5A~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NDEtMD91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Open Access | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Development of electron optical capabilities for manufacturing of large components by electron beam welding](https://links.springernature.com/f/a/LGdDZpfLwWM6rKu4E21rhg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0Ni05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | T. Dutilleul, R. Widdison, W. Kyffin | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/LGdDZpfLwWM6rKu4E21rhg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0Ni05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/LGdDZpfLwWM6rKu4E21rhg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0Ni05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/WYaMnKlNo-pIe9Ek0YJriQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NDYtOT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Fuzzy control of backside weld width in cold metal transfer welding of X65 pipeline in the vertical-up position](https://links.springernature.com/f/a/qgjwR-722q03yoyJZTiyNQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0OS02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Zhijiang Wang, Zhendong Chen, Shaojie Wu, Caiyan Deng, Zhichen Lin | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/qgjwR-722q03yoyJZTiyNQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0OS02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/qgjwR-722q03yoyJZTiyNQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY0OS02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/kAjX4tlVP9h9lnevVut67A~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NDktNj91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Predicting porosity in wire arc additive manufacturing (WAAM) using wavelet scattering networks and sparse principal component analysis](https://links.springernature.com/f/a/AXi0yWXKFcL7jIzPdIikiQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwOS01P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Joselito Yam Alcaraz, Abhay Sharma, Tegoeh Tjahjowidodo | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/AXi0yWXKFcL7jIzPdIikiQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwOS01P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/AXi0yWXKFcL7jIzPdIikiQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwOS01P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/MwJkt-7fE0Bp7S7_OfugfQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3MDktNT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Impact of annotation quality on model performance of welding defect detection using deep learning](https://links.springernature.com/f/a/oG2hDXnmzLOZyRXzLKfbVQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcxMC15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Jinhan Cui, Baoxin Zhang, Xiaopeng Wang, Juntao Wu, Jiajia Liu, Yan Li, Xiong Zhi, Wenpin Zhang, Xinghua Yu | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/oG2hDXnmzLOZyRXzLKfbVQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcxMC15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/oG2hDXnmzLOZyRXzLKfbVQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcxMC15P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/J43mgkZEXK9DvQQmfdEccw~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3MTAteT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Dynamic penetration prediction based on continuous video learning](https://links.springernature.com/f/a/vCO2k5vSWC7rOe42T0PqKg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0NS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Zhuang Zhao, Peng Gao, Jun Lu, Lianfa Bai | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/vCO2k5vSWC7rOe42T0PqKg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0NS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/vCO2k5vSWC7rOe42T0PqKg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0NS0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/B3vzOzkDZgdOQy9fFhSZ5g~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3NDUtMT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Topical Collection | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Residual Swin transformer-based weld crack leakage monitoring of pressure pipeline](https://links.springernature.com/f/a/H9Liyo-X12hTmW6YYEx9kw~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMi0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Jing Huang, Zhifen Zhang, Rui Qin, Yanlong Yu, Yongjie Li, Guangrui Wen, Wei Cheng, Xuefeng Chen | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/H9Liyo-X12hTmW6YYEx9kw~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMi0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/H9Liyo-X12hTmW6YYEx9kw~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTYzMi0xP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/5J5IOqZv4lwjXMSkDhgX3w~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2MzItMT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Heat input control in horizontal lap joint welding through active wire preheating in GMAW-P](https://links.springernature.com/f/a/72nTphLXJoYXd0QWpNsQJg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY1NC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Fernando Matos Scotti, Maximilian Pudenz, Sarah Perrin, Erwan Siewert, Jean Pierre Bergmann | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/72nTphLXJoYXd0QWpNsQJg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY1NC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/72nTphLXJoYXd0QWpNsQJg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY1NC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/9pZfFHN_YTVqokC1-EkbSg~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NTQtOT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Open Access | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Process parameters and their effect on metal transfer in gas metal arc welding: a driving force perspective](https://links.springernature.com/f/a/eVb3Df4NOIVmPjeqZ9ruGg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3MC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Yuriko Sato, Yosuke Ogino, Tomokazu Sano | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/eVb3Df4NOIVmPjeqZ9ruGg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3MC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/eVb3Df4NOIVmPjeqZ9ruGg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3MC05P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/bCItkyP18vewW5N7ovfeCQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NzAtOT91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Open Access | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [In situ measurement of hydrogen concentration in steel using laser-induced breakdown spectroscopy (LIBS)](https://links.springernature.com/f/a/pejax42qPlLI6Y3a6UXgdQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3Ny0yP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | L. Quackatz, A. Griesche, J. Nietzke, T. Kannengiesser | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/pejax42qPlLI6Y3a6UXgdQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3Ny0yP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/pejax42qPlLI6Y3a6UXgdQ~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyMy0wMTY3Ny0yP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/UdCRulCVkNBTje-NnPWpsQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjMtMDE2NzctMj91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Probing dimensional consistency during multi-track multi-layer gas metal arc directed energy deposition of aluminium alloys](https://links.springernature.com/f/a/CrXB4cpNEDg73x_OJyrxgg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY4NS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | P. K. Chaurasia, B. K. Barik, A. Das, S.-F. Goecke, A. De | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/CrXB4cpNEDg73x_OJyrxgg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY4NS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/CrXB4cpNEDg73x_OJyrxgg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY4NS13P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/EsI8N6hrtrgjIcu33wTwNg~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE2ODUtdz91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Effect of solution heat treatment on the microstructure and mechanical properties of laser melting deposited GH 5188 superalloy](https://links.springernature.com/f/a/ExY4_XEGYxyb630XMWX53g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5NS04P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Yan Wang, Wei Liu, Shuai Huang, Chao Gao, Neng Li, Huaping Xiong | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/ExY4_XEGYxyb630XMWX53g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5NS04P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/ExY4_XEGYxyb630XMWX53g~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5NS04P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/WhBN6kbQ1KP2aLguHF5e6Q~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE2OTUtOD91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [The mechanism of element inhomogeneity in TW-DED-arc fabricated γ-TiAl alloy](https://links.springernature.com/f/a/Ssm2ksi_X4V3p3HfkIPuOg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5Ny02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Jianwen Xin, Fang Li, Dongsheng Wu, Chen Shen, Hisaya Komen, Manabu Tanaka, Xueming Hua | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/Ssm2ksi_X4V3p3HfkIPuOg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5Ny02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/Ssm2ksi_X4V3p3HfkIPuOg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTY5Ny02P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/esNHOPSD_I7tNFnwR2VRIQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE2OTctNj91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | | Open Access | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [Efficient bead-on-plate weld model for parameter estimation towards effective wire arc additive manufacturing simulation](https://links.springernature.com/f/a/mBfFr7VDWtmdIT2kEyEkdg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwMC0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Dominic Strobl, Jörg F. Unger, Chady Ghnatios, Alexander Klawonn, Andreas Pittner, Michael Rethmeier, Annika Robens-Radermacher | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/mBfFr7VDWtmdIT2kEyEkdg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwMC0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/mBfFr7VDWtmdIT2kEyEkdg~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTcwMC0wP3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/XClOTZR6KXgBIHtFWFHQMg~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3MDAtMD91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | Research Paper | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | [An RBF neural network–based parameter tuning for an ADRC regulator of electrode wire feed mechanism: arc welding applications](https://links.springernature.com/f/a/1-yh9QM6VgmsEXJ0OT06FA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0Mi00P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) | | Badreddine Babes, Amar Boutaghane, Abdelmalek Reddaf, Mounir Boudjerda, Hichem Amar, Noureddine Hamouda, Sherif S. M. Ghoneim | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | | [**» Abstract**](https://links.springernature.com/f/a/1-yh9QM6VgmsEXJ0OT06FA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0Mi00P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce)    [**» Full text HTML**](https://links.springernature.com/f/a/1-yh9QM6VgmsEXJ0OT06FA~~/AABE5gA~/RgRn3-KoP0SbaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9hcnRpY2xlLzEwLjEwMDcvczQwMTk0LTAyNC0wMTc0Mi00P3V0bV9zb3VyY2U9dG9jJnV0bV9tZWRpdW09ZW1haWwmdXRtX2NhbXBhaWduPXRvY180MDE5NF82OF80JnV0bV9jb250ZW50PWV0b2Nfc3ByaW5nZXJfMjAyNDAzMjJXA3NwY0IKZfyoXf1lU4XM2lISY3dzLWFuYkBjd3MtYW5iLmN6WAQAAAce) [**» Full text PDF**](https://links.springernature.com/f/a/VvHHVZI3GT5L8wmlHzCMIQ~~/AABE5gA~/RgRn3-KoP0SfaHR0cHM6Ly9saW5rLnNwcmluZ2VyLmNvbS9jb250ZW50L3BkZi8xMC4xMDA3L3M0MDE5NC0wMjQtMDE3NDItND91dG1fc291cmNlPXRvYyZ1dG1fbWVkaXVtPWVtYWlsJnV0bV9jYW1wYWlnbj10b2NfNDAxOTRfNjhfNCZ1dG1fY29udGVudD1ldG9jX3NwcmluZ2VyXzIwMjQwMzIyVwNzcGNCCmX8qF39ZVOFzNpSEmN3cy1hbmJAY3dzLWFuYi5jelgEAAAHHg~~) | | | | |